

# The Role of External Factors on Actual Technology Use of Omni Channel Applications

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**Abstract:** This study aims to analyse the role of external factors (Job Relevance and Computer Self-Efficacy) on Actual Technology Use of Omni Channel Applications (WhatsApp Business) in MSMEs in Sukabumi based on the concept of Technology Acceptance Model (TAM). Quantitative research methods are carried out using the basic Technology Acceptance Model (TAM) variables. The analysis was conducted using SEM-PLS. The sample set was 200 MSMEs in Sukabumi. Non-probability sampling techniques with purposive sampling were used for sampling. The findings in this study are the existence of the Omni Channel application (WhatsApp Business) has been accepted by MSME in Sukabumi. This is evident from the direct and indirect effects of all variables involved in Actual Technology Use. The role of Job Relevance and Computer Self Efficacy variables also have a positive and significant influence on Perceived Ease of Use and Perceived Usefulness of respondents.

**Keywords:** Omni Channel; MSMEs; Attitude; Technology Acceptance Model.

**Abstrak:** Penelitian ini memiliki tujuan untuk menganalisis peran faktor eksternal (Job Relevance dan Computer Self Efficacy) terhadap Actual Technology Use Aplikasi Omni Channel (WhatsApp Business) pada UMKM di Sukabumi berdasarkan konsep Technology Acceptance Model (TAM). Metode penelitian kuantitatif dilakukan dengan menggunakan variabel-variabel dasar Technology Acceptance Model (TAM). Analisis dilakukan dengan menggunakan SEM-PLS. Sampel yang digunakan sebanyak 200 UMKM di Sukabumi. Teknik non-probability sampling dengan purposive sampling digunakan untuk pengambilan sampel. Temuan dalam penelitian ini adalah keberadaan aplikasi Omni Channel (WhatsApp Business) telah diterima oleh UMKM di Sukabumi. Hal ini terlihat dari pengaruh langsung dan tidak langsung dari semua variabel yang terlibat dalam Actual Technology Use. Peran variabel Job Relevance dan Computer Self Efficacy juga memberikan pengaruh positif dan cukup signifikan terhadap Perceived Ease of Use dan Perceived Usefulness dari responden.

**Kata Kunci:** Omni Channel; UMKM; Sikap; Technology Acceptance Model.

## INTRODUCTION

The presence of MSMEs in Indonesia is quite decisive in the economic landscape, until 2023 according to a press release from the Coordinating Ministry for Economic Affairs of the Republic of Indonesia (Limanseto, 2023). The MSME segment has contributed to the Gross Domestic Product (GDP) of 61 per cent, (IDR 9,580 trillion), and contributed to employment of 97 per cent of the total work force across Indonesia. The government is endeavouring to prioritize the empowerment of MSMEs to rise and recover following the pandemic. One of the programs launched is the *Gerakan Nasional Bangga Buatan Indonesia* (Gernas BBI), which aims to increase digitalization. (onboarding) for



offline MSME in Indonesia (Limanseto, 2021). The go digital program not only includes the introduction and use of social media as marketing media, non-cash transaction methods but also includes how MSMEs can manage their business more efficiently.

Today, the development of digitalization or often called going digital, especially for the MSME sector, has been running even though it still needs much improvement, this is mainly in terms of the readiness of human resources who are ready for digital technology (Dhiman et al., 2023). The existence of digitalization is inevitable where digital transformation can be said to be a change in work patterns using digital technology at all levels of life which has social, economic and cultural political implications (Omol, E. J. (2024). In Indonesia itself, the significant impact of the digital economy is quite felt, as evidenced by the emergence of various start-up companies in the digital field, making it the leading country in ASEAN in the development of digital companies. This impact can be felt in the economic sector if it can be accompanied by an increase in people's adaptation to digitalization (Hadiono & Santi, 2020)

Currently, the Coordinating Ministry for Economic Affairs is trying to make this happen. The target of achieving 30 million MSME players to go digital by 2024 has been launched. This condition is very optimistic considering that in 2023, 27 million MSME players in Indonesia have gone digital (Situmorang, 2023). Meanwhile, data from the Central Bureau of Statistics regarding e-commerce shows an e-commerce growth rate of 4.460 per cent in 2022 or approximately 2,995,986 businesses. Most of these businesses that have gone digital use the internet for internal business communication and marketing.

However, so far it turns out that the data obtained shows that there are still many businesses that have not gone digital with the main reasons being more comfortable selling directly, not interested or not knowing (Kusumatriana et al., 2023a; Bayu, 2022). This is the biggest obstacle for the go digital program to realize its target. Digital literacy is critical as a catalyst for this go digital program (Nur Samsul Bahri et al., 2021). Digital literacy can be defined as the capacity to access, evaluate, and employ data from various digital sources effectively and responsibly (Sunuantari et al., 2021). In the context of MSMEs, digital literacy includes various skills such as utilizing social media for marketing, using e-commerce applications to reach a wider market, and analysing digital data to make the right business decisions (Erlanitasari et al., 2020). Even in its development, going digital is not only about the application of digital marketing but has also penetrated multi-channel digital marketing to the application of Omni Channel (Sari Purba et al., 2023). Until 2023, according to the 2023 e-commerce statistics (Kusumatriana et al., 2023b), only 4.420 per cent of e-commerce have received digital literacy, most of them from the private sector.

Sukabumi is a region located in West Java, Indonesia, boasting a population of approximately 2 million. This district sustains a varied economy, with numerous sectors contributing to its expansion. One significant sector is Micro, Small and Medium Enterprises (MSMEs), which constitute an essential part of the region's economy. Based on the Ministry of Cooperatives and SMEs, there are over 100,000 MSMEs in Sukabumi, employing roughly 450,000 individuals. However, the performance of MSMEs in Sukabumi is not always consistent, and many factors can affect their sustainability. MSMEs in Sukabumi city are experiencing rapid growth. In 2019 there were 47,872 businesses which increased to 60,865 businesses in 2023, or 20 per cent in 5 years (*Proyeksi Jumlah Usaha Mikro Kecil Menengah (UMKM) Berdasarkan Kabupaten/Kota Di Jawa Barat*, 2023). However, there is an interesting thing that based on data collection conducted by LKP Bumi Kreatif Institut, which is an educational institution that



specializes in fostering and increasing the capacity of MSMEs in the Sukabumi region, in 2022 to 355 MSMEs. It was found that the number of MSMEs during the pandemic has increased in number, but in terms of sales value or turnover has decreased by 11 per cent in 2020 and 7 per cent in 2021 even though these MSMEs have gone digital and have been touched by digital literacy. This problem is quite interesting to study considering the growth in the number of MSMEs during the pandemic. However, this increase was not accompanied by an increase in MSME turnover because of the go digital program. This also happened in the post-pandemic period.

In practice, from the findings in the field, it is found that MSMEs implement the Omni Channel strategy by using the WhatsApp's Business platform. Apart from the reason that this platform is free of charge and easy to use. The existence of features that have been integrated between channels, although simple, is enough to accommodate the needs of MSMEs at their current business level. WhatsApp Business is part of the omnichannel strategy (Arif Lubis et al., 2023a). Omnichannel itself is a marketing and sales strategy that integrates various communication channels to provide a consistent experience to customers.

In this research, the role of Job Relevance and Computer Self Efficacy variables in the external factors of the TAM model that were not explored by prior studies is included and discussed further. The existence of Job Relevance and Computer Self Efficacy is highly relevant to the existence of MSMEs as the object of investigation (Dhiman et al., 2023). This research also refers to the theme of Digital Economy which focuses on analyzing the behavior of MSMEs that have gone digital to support the government's MSME Go Digital initiative.

This research contributes to the government and MSME coaches to be able to improve the performance of going digital through the objectives of this study. Where the objectives to be achieved are to analyse the role of external factors (Job Relevance and Computer Self-Efficacy) on Actual Technology Use of Omni Channel Applications (WhatsApp's Business) both directly and indirectly in MSMEs in Sukabumi based on the concept of the Technology Acceptance Model (TAM). The final goal to be achieved is to determine the object's acceptance of the application they use so that in the end the proper implementation recommendations can be obtained for the object to be applied (Mehta & Pradan, 2024) and (Permadi et al., 2023). The formulation of the problem in this research is how the influence of external factors in the form of Job Relevance and Computer Self-Efficacy of MSME participants in Sukabumi, both directly and indirectly, on the Omni Channel applications they utilize, in this case the WhatsApp Business Platform, as a go online strategy.

Research on omni channel marketing and its impact on MSMEs has not been so much researched. Research on omni channels is more on objects in the non-MSME sector. Some research on omni channels in MSMEs regarding business sustainability using omni channel strategies in MSMEs after the pandemic has been carried out (Arif Lubis et al., 2023b), while the impact of omni-channels on the craft industry sector was studied (Putri Ayu Yulisa & Dudi Permana, 2020), and omni channel research has been conducted in the literature (Shankar & Kushwaha, 2021). Meanwhile, the Technology Acceptance Model (TAM) method is widely utilized to examine user behavior towards technology. Some investigations employ this method related to the usage of the web or specific applications such as QRIS applications. (Wulansari et al., 2024), in ecommerce (Chen et al., 2024), or in academic systems (Gupta & Yadav, 2022). The study of omni channels with TAM has



only been conducted empirically (Song & Jo, 2023) which examines interest in using omni channels through the Technology Acceptance Model and Theory of Planned Behaviour approaches. Research on the behaviour of using omni channels in MSMEs, especially based on TAM, is a novelty because so far it has never been studied either through a qualitative or quantitative approach. With this research, a holistic picture of the behaviour of using omni channels in MSMEs can be obtained, especially regarding the role of individual and social factors in influencing the behaviour and use of omni channel applications, in this case in the form of the WhatsApp's Business application.

## **THEORETICAL REVIEW**

**Technology Acceptance Model (TAM).** The Technology Acceptance Model (TAM) was initially introduced by Fred D. Davis in 1989 through his publication (Davis & Granić, 2024). The model he presented aims to predict the use of an application through individual attitudes. The Perceived Ease of Use and Perceived Usefulness variables are novel variables that differentiate from the preceding theory, namely Theory of Reasoned Action (TRA). This theory is widely employed to examine individual behavior towards an action. It is said that Perceived Ease of Use and Perceived Usefulness are determinants of individual attitudes towards a technology-related product. This attitude can further lead to the intention to use the technology product. The TAM model is widely utilized to research Omni Channel (Song & Jo, 2023), and regarding the acceptance of the use of e-commerce websites and internet banking (Le et al., 2020), Academy information systems in higher education (Permadi et al., 2023), as well as in several other areas where there are parallels in the model where there are Perceived Ease of Use and Perceived Usefulness variables that are utilized.

In fact, TAM has been utilized to represent the reciprocal relationship between external variables that influence the acceptance of technology by users and the factors that influence the actual behavior. However, because the TAM concept is based on individual beliefs, this model ultimately has limitations. Namely the absence of social influence within it. External factors that affect Perceived Ease of Use and Perceived Usefulness are studied in more depth by Davis (Davis & Granić, 2024). Attitude variables were removed, and subjective norms variables were added to the TAM 2 concept as part of social influence. The external variables of TAM 2 incorporate social sway process and identical tool process. Social process elements include subjective norms, voluntariness, and image, while identical tool process encompasses job relevance, output quality, and result demonstrability (Song & Jo, 2023). In TAM 3, the addition of external variables that affect perceived usefulness has been proposed (Venkatesh et al., 2022). Some other studies that use external factors include research on digital lending (Yadav & Shanmugam, 2024) where the external factor variables employed are perceived security and perceived risk as the principal factors influencing the intention to use digital lending. Meanwhile, research on external factors that influence the use of e-learning results in variables that influence including system quality, user-friendliness, satisfaction, content quality, and self-efficacy as well as technical assistance, a security, privacy, and anxiety (Abdul Cader, 2022). The other research in term of the development and digitization of the MSMEs ecosystem (Victorina Rosette Mantik et al., 2024) used external factors such as Self-Efficacy and Technology Adoption when implementing the integration of two technology models,



namely task-technology fit (TTF) and technology acceptance (TAM), in their business activities.

**Job Relevance.** Job Relevance is the extent to which a person believes that the target system applies to his job (Venkatesh et al., 2022). Meanwhile in terms of technology and work, the Technology Acceptance Model (TAM) (Venkatesh et al., 2022) also underscores the importance of perceived job relevance to the acceptance of a technology. Job relevance can be defined as the degree to which an individual believes that a system or technology can support the tasks associated with his job. The higher the perceived job relevance of technology, the greater the likelihood that the person will use the technology in their duties, TAM explains. HR research on Employee's Intentions to Use HR Analytics (Dhiman et al., 2023) discovered that perceived utility is significantly impacted by social influence and job relevance. These findings have implications for theory, managers and international human resource managers.

**Computer Self Efficacy.** Computer Self Efficacy is a concept related to a person's conviction in their capability to utilize computers or computer-based technology in completing tasks. This concept is an adaptation of the self-efficacy theory first presented by psychologist Albert Bandura, which states that individuals' beliefs in their aptitudes affect their actions, performance and the outcomes they achieve. In computer research, computer self-efficacy measures an individual's confidence in their ability to operate and use technology-based software or systems. The research on shifting toward technology-based second language (L2) pedagogy (Y. Wang et al., 2024) it was found that students' achievement emotions and technological self-efficacy were significant predictors of their technology acceptance. Meanwhile, a study on University Students' Intentions to Utilize Metaverse-Based Learning Platforms showed that the impact of perceived ease of use on metaverse adoption intentions was not significant. In addition, it was found that personal innovativeness, computer self-efficacy, and perceived cyber risk strongly influence perceived usefulness and perceived ease of use (Al-Adwan et al., 2023).

**The Effect of Job Relevance on Perceived Usefulness.** Job relevance is a very important factor in influencing perceived usefulness, mainly because it describes the extent to which the technology utilized is considered appropriate or relevant to the user's job tasks. Job relevance is seen from the extent to which the technology assists individuals in completing their work. If the technology is considered relevant to job tasks, then individuals will tend to find it more useful (Venkatesh et al., 2022). Another study on immersive virtual reality (iVR) training incorporates learning systems that involve the factors of perceived usefulness and job relevance as predictors of intention to utilize in the selection of immersive iVR application features. It was found that there is a direct impact of job relevance on perceived usefulness. It was also found that there is an indirect impact of job relevance on intention to utilize through perceived usefulness (Travaglini et al., 2023). It was found that perceived usefulness was significantly impacted by social influence and job relevance. However, perceived enjoyment was not found to be significant with perceived ease of use in a study that examined the influence of job relevance, self-efficacy, social influence and perceived enjoyment to gauge adoption intention of HR analytics (Dhiman et al., 2023). The premise to analyze the relationship between these two variables are as follow:

**H1:** Job Relevance has a significant positive effect on Perceived Usefulness.



**The Effect of Job Relevance on Perceived Ease of Use.** Job relevance refers to the extent to which individuals see technology as relevant to their job tasks, while Perceived Ease of Use measures individuals' perceptions that the technology is easy to use. Research Venkatesh et al. (2022) suggests that when technology is perceived as relevant to work, users may be more motivated to understand and learn to use the technology. So, it can be concluded that job-relevant technology is likely to be seen as easier to use because users are more motivated to overcome barriers to its use. Study by Dwivedi et al. (2019) supported this research, where job relevance was found to have an indirect influence on Perceived Ease of Use through increased learning motivation and perceived performance. Job relevance elevates an individual's desire to use technology, which in turn will enhance the perception that the technology is easy to utilize. Other findings, AlNasrallah & Saleem (2022) Concerning the digitalization of accounting in an emerging market indicates that the perceived ease of use directly and indirectly affects intention to use e-accounting through perceived usefulness. Job relevance and organizational support are observed to function as moderators for perceived usefulness and the intention to use e-accounting when considered individually. Nevertheless, job relevance turns into a minor moderator when organizational support is present. The hypothesis to examine the association between these two variables are as follow:

**H2:** Job Relevance has a significant positive effect on Perceived Ease of Use.

**The Effect of Computer Self Efficacy on Perceived Usefulness.** Computer Self-Efficacy is the confidence a person has in their capability to utilize computers or technology. Individuals with strong Computer Self-Efficacy will be more assured in tackling technology-related issues. Simultaneously, Perceived Usefulness refers to a person's belief that utilizing specific technologies will enhance their productivity, efficiency, or performance in the workplace. The findings from a study on the ongoing use of an e-learning system by employees in software companies indicate that the connections among perceived usefulness and behavioral intentions, perceived ease of use and behavioral intention, and self-efficacy and behavioral intention are all mediated by the e-learner's satisfaction. Research by Scherer et al. (2019) indicated that people with high Computer Self-Efficacy are likely to perceive technology as easier to use. This enhances their view of technology's utility, as user-friendliness can lead to greater performance efficiency and effectiveness. The hypothesis for analyzing the connection between these two variables is as follows:

**H3:** Computer Self Efficacy has a significant positive effect on Perceived Usefulness.

**The Effect of Computer Self Efficacy on Perceived Ease of Use.** In his research by Scherer et al. (2019) Computer Self-Efficacy has a notable impact on Perceived Ease of Use. This study indicates that educators with strong confidence in their tech skills are more likely to embrace digital technology and perceive it as user-friendly in the learning process. Studies on the application of Learning Management Systems (LMS) in education revealed that computer self-efficacy and Subjective Norm influence perceived usefulness and perceived ease of use. Additionally, it appears that perceived ease of use and perceived usefulness influence behavioral intentions to utilize, particularly in relation to technology in education and learning (Usman et al., 2020). Research in a similar field Chahal (2022),



regarding the adoption of e-learning among college students in India, obtained the results of external variables related to computers and internet related self-efficacy significantly influenced the perceived usefulness, perceived ease of use, and student attitudes regarding the use of e-learning. The hypothesis to examine the relationship between these two variables are as follow:

**H4:** Computer Self Efficacy has a significant positive effect on Perceived Ease of Use.

**The Effect of Perceived Ease of Use on Perceived Usefulness.** As per TAM, Perceived Ease of Use signifies an individual's belief that employing the technology demands minimal effort. Conversely, Perceived Usefulness refers to the degree to which an individual thinks that the technology will enhance their performance. Early studies by Davis & Granić (2024) found that Perceived Ease of Use affects Perceived Usefulness because ease of use can improve the user experience, thereby increasing their perception of the usefulness of the technology. Research by Scherer et al. (2019) In technology education, research indicates that Perceived Ease of Use significantly affects Perceived Usefulness concerning teachers' use of digital technology. When educators consider the technology straightforward to use, they generally view it as more beneficial for instruction and learning. The research further affirms that enhancing the user-friendliness of technology will directly elevate users' perception of its usefulness. The hypothesis for investigating the connection between these two variables is as follows:

**H5:** Perceived Ease of Use has a significant positive effect on Perceived Usefulness.

**The Effect of Perceived Usefulness on Attitude Toward Using Technology.** Studies conducted by Davis & Granić (2024) that introduced TAM indicated that Perceived Usefulness is the primary factor influencing Attitude Toward Using Technology. Davis contends that when individuals perceive a technology as beneficial, they will cultivate a favorable attitude towards it. Thus, it ultimately impacts the general acceptance and utilization of technology. Research on the use of technological tools by senior or older adults Liesa-Orús et al. (2023) emphasize that the perceived simplicity of using technology positively influences the perceived utility of these resources. It is equally true that the perceived usefulness of technology has an indirect impact on the intention to use these resources, evident in the development of a favorable attitude towards utilizing these digital tools. The hypothesis for investigating the connection between these two variables is as follows:

**H6:** Perceived Usefulness has a significant positive effect on Attitude Toward Using Technology.

**The Effect of Perceived Usefulness on Behavioural Intention to Use.** Study by Sudhashini Nair et al. (2024) shows A perceived usefulness directly influences the behavioral intention to use. Individuals who believe that utilizing mobile banking services will simplify their financial transactions are more inclined to plan on using the service. In this context, Perceived Usefulness is the primary element that promotes technology usage due to the tangible advantages recognized by users. Early research Davis & Granić (2024), which underpins TAM, discovered that Perceived Usefulness significantly affects



Behavioural Intention to Use. Users who believe that the technology enhances their productivity or efficiency will be more inclined to plan to use the technology going forward. In TAM, Perceived Usefulness is frequently regarded as the primary predictor of Behavioural Intention to Use, surpassing perceived ease of use. The hypothesis to explore the connection between these two variables is as follows:

**H7:** Perceived Usefulness has a significant positive effect on Behavioural Intention to Use.

**The Effect of Perceived Ease of Use on Attitude Toward Using Technology.** The study by Toros et al. (2024) regarding the views of refreshment students engaged in active learning about technology demonstrated that Perceived Usefulness influences these students' attitudes towards technology, while Perceived Ease of Use serves as a mediator for usability's impact on their attitudes, ultimately enhancing their intention to continuously use the service. Perceived Ease of Use influences Attitude Toward Using Technology in two ways. Initially, user-friendly technology will alleviate anxiety and uncertainty, fostering favorable attitudes. Secondly, simplicity of use will hasten the mastery of the technology, enhancing user comfort and encouraging greater acceptance of it (Venkatesh et al., 2022). The hypothesis to explore the connection between these two variables is as follows:

**H8:** Perceived Ease of Use has a significant positive effect on Attitude Toward Using Technology.

**The Effect of Attitude Toward Using Technology on Behavioural Intention to Use.** Research by Scherer et al. (2019) on technology education found that teachers' attitudes towards the use of digital technology strongly influence their intention to continue using the technology in learning. Teachers who have a positive attitude towards the ease of use of educational technology are more likely to intend to use the technology in the future. It was found that Perceived Usefulness affects the attitude of Refreshment students towards the use of technology and Perceived Ease of Use plays a role in mediating the effect of usability on perceived attitudes in research on the attitude of refreshment students who are active learners towards the use of technology. This emphasizes the importance of a good user experience in forming a positive attitude towards new technology (Toros et al., 2024). The hypothesis to examine the relationship between these two variables are as follows:

**H9:** Attitude Toward Using Technology has a significant positive effect on Behavioural Intention To Use.

**The Effect of Behavioural Intention to Use on Actual Technology Use.** Initial studies conducted by Venkatesh et al. (2022) indicates that Behavioural Intention to Use is a significant predictor of Actual Technology Use. Individuals with a strong commitment to utilizing technology are more inclined to adopt it. This model highlights that favorable attitudes and user-friendliness of technology will enhance intentions and consequently boost the actual utilization of a technology. Research on the effectiveness of AI in e-commerce and its application by entrepreneurs to reach business objectives revealed that



Subjective Norms positively influence Perceived Usefulness and Pursued Ease of Use, trust positively affects Pursued Ease of Use, and Pursued Ease of Use positively impacts both Perceived Usefulness and attitude toward use. Notable outcomes were achieved indicating that the intention to use behaviorally influences the actual utilization of AI technology (Wang et al., 2023). The hypothesis to examine the relationship between these two variables are as follows:

**H10:** Behavioural Intention to Use has a significant positive effect on Actual Technology Use.

**Indirect Effect of Job Relevance and Computer Self Efficacy on TAM Variables.** When technology is perceived as job-relevant and applicable, Attitude Toward Using Technology is also positively influenced (Davis & Granić, 2024). Users with high perceptions of the relevance of technology to work will have a more positive attitude because they feel the technology helps their work (Venkatesh et al., 2022). Users' trust in their capability to utilize the technology also influences their perspective on it

When they feel assured, they are more inclined to possess a favorable view of the technology, which consequently boosts the Behavioral Intention to Use (Scherer et al., 2019). Perceived Usefulness significantly impacts Behavioural Intention to Use directly, as outlined in the TAM model. Individuals who believe that technology will enhance their performance are more inclined to intend to utilize it. Moreover, Perceived Usefulness influences Behavioural Intention via Attitude Toward Using Technology (Scherer et al., 2019).

When users have a positive attitude towards technology because they feel the technology is useful, their intention to use technology will be stronger. Thus, indirectly, Perceived Usefulness influences Actual Technology Use via Behavioural Intention to Use. Individuals who perceive technology as beneficial are more likely to intend to use it, which subsequently forecasts its actual usage (Dwivedi et al., 2019). Perceived Ease of Use additionally influences Attitude Toward Using Technology indirectly via Perceived Usefulness. When technology is user-friendly, individuals are more inclined to see it as beneficial, which enhances their positive views about the technology.

Perceived Ease of Use influences Behavioural Intention to Use directly as well as indirectly via Perceived Usefulness (Cader, 2022). Users who perceive technology as user-friendly are more inclined to intend to use it, particularly if they also regard the technology as advantageous to them. The indirect influence of Perceived Ease of Use on Actual Technology Use takes place via Behavioural Intention to Use (Venkatesh et al., 2022). When users perceive the technology as user-friendly, they will intend to utilize it. Ultimately, it influences the practical application of technology.

The impact of Attitude Toward Using Technology on Actual Technology Use is mediated by the Behavioural Intention to Use variable (Scherer et al., 2019; Venkatesh et al., 2022; Wang et al., 2023). Within the TAM framework, the Attitude Toward Using Technology affects Behavioural Intention to Use, which subsequently forecasts actual technology usage (Venkatesh et al., 2022). This phenomenon can be understood as users with a favorable outlook on technology are more inclined to possess a strong intention to utilize it, and this intention ultimately results in tangible behavior, specifically the adoption of the technology. The hypothesis for exploring the connection between these two variables is as follows:



**H11:** Computer Self Efficacy affects Attitude Toward Using Technology through Perceived Ease of Use.

**H12:** Job Relevance affects Attitude Toward Using Technology Perceived Ease of Use.

**H13:** Computer Self Efficacy affects Attitude Toward Using Technology through Perceived Usefulness.

**H14:** Job Relevance affects Attitude Toward Using Technology through Perceived Usefulness.

**H15:** Perceived Ease of Use affects Attitude Toward Using Technology through Perceived Usefulness.

**H16:** Perceived Ease of Use affects Behavioural Intention through Attitude Toward Using Technology.

**H17:** Perceived Usefulness affects Behavioural Intention through Attitude Toward Using Technology

**H18:** Job Relevance affects Behavioural Intention through Perceived Usefulness.

**H19:** Perceived Ease of Use affects Behavioural Intention through Perceived Usefulness.

**H20:** Computer Self Efficacy affects Perceived Usefulness through Perceived Ease of Use.

**H21:** Job Relevance affects Perceived Usefulness through Perceived Ease of Use.

**H22:** Attitude Toward Using Technology affects Actual Technology Use through Behavioural Intention.

**Research Model.** Based on the hypotheses developed in this study, the research model is shown **Figure 1**.



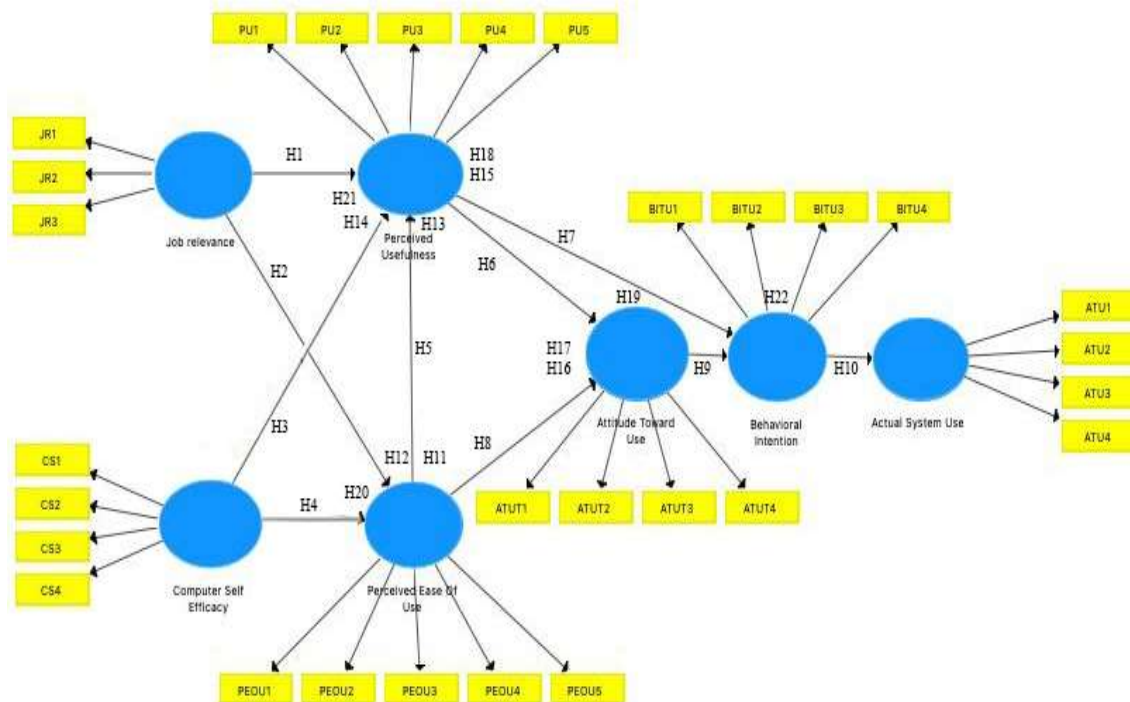


Figure 1. Research Model

## METHODS

The sample obtained was 200 MSMEs based on the SEM PLS sample size requirement between 30 to 100. The sampling method employed in this study is non-probability sampling utilizing a purposive sampling approach. The sample criteria set are MSMEs in Sukabumi that have received training on Omni Channel and have used the application (WhatsApp's Business) for at least 3 months in their business. Questionnaires were distributed offline to every MSME in Sukabumi for data collection. A total of 200 respondents completed the research questionnaire, all of whom met the sample criteria necessary for the study. The questionnaire included screening questions, supporting questions, respondent data and questions per indicator. Questionnaires for questions per indicator were made using a Likert scale to determine the responses of respondents to a study. The Likert scale measures the attitudes, opinions, and perceptions of designated respondents. In this research, seven variables were utilized which are: Job Relevance (**JR**), Computer Self-Efficacy (**CS**), Perceived Ease of Use (**PEOU**), Perceived Usefulness (**PU**), Attitude Toward of Using Technology (**ATUT**), Behavioural Intention to Use (**BITU**), and Actual Technology Usage (**ATU**).

This study will employ three steps of analysis to examine the data. The initial phase involves assessing the outer model by performing a convergent validity test to determine how well the indicator items relate to the construct they represent, a discriminant validity test to confirm that distinct constructs measure separate entities, and a one-dimensionality test to verify that each indicator measures only a single construct. Subsequently, the inner model is assessed by examining the coefficient of determination to quantify the portion of variance in the dependent variable that the independent variables can elucidate; and



evaluating predictive relevance to determine how effectively the model can forecast the dependent variable. Lastly, hypothesis testing is conducted, involving Direct path assessment to evaluate the significance of the direct relationship between variables and Mediation Test to examine the mediation effect between independent and dependent variables via mediator variables. All these evaluations were performed utilizing Partial Least Squares (PLS) with Smart PLS 3.2 software.

## RESULTS

The acquired sample consisted of 200 MSMEs, aligning with the SEM PLS sample size criteria of 30 to 100. This study employs a non-probability sampling technique utilizing purposive sampling methods. The established criteria for the sample are MSMEs in Sukabumi that have undergone Omni Channel training and have utilized the application (WhatsApp Business) for a minimum of 3 months in their operations. Data gathering was done by handing out questionnaires in person to every MSME in Sukabumi. A total of 200 respondents completed the research questionnaire, all of whom met the sample criteria applicable to the study. The survey contained screening questions, follow-up questions, respondent information, and questions for each indicator. Questionnaires for each indicator were created utilizing a Likert scale to assess the responses of participants in a study. The Likert scale is utilized to assess the attitudes, opinions, and perceptions of the designated respondents

**Table 1.** Demographic Profile of Respondents

Question	Answer		Per centage "Yes"	Per centage "No"
	Yes	No		
Have business legality	162	38	81	19
Have you used paid promotion	29	171	15	86
Have you ever been or are you currently being financed by a bank or similar institution?	38	162	19	81

Line of Business	Total	Per centage
Food and Beverage	153	77
Crafts and Creative Industries	21	11
Fashion	13	7
Care and Beauty	2	1
Agribusiness	2	1
Travel and Tourism	0	0
Automotive	0	0
Services	8	4
others	1	1

Year Started Business	Total	Per centage
Before 2015	36	18
2016 to 2019	48	24
2020 to 2024	116	58



Estimated Annual Turnover	Total	Per centage
Less than 100,000,000	176	88
100.000.001 less than 200,000,000	13	7
200.000.001 less than 300,000,000	5	3
More than 300,000,000	6	3

Marketing Channel	Total	Per centage
Offline Store	137	31
Marketplace (Bukalapak, Tokopedia, Shopee, Lazada, Blibli etc)	52	12
Social commerce (Tiktok)	37	8
Media Social (WA, Facebook, Instagram)	156	36
Website	8	2
Go food, grab food, shopee food, etc)	19	4
Tiering Customer (Agen, Reseller, Drop shipper)	30	7

Payment Channel	Total	Per centage
Cash	186	35
COD	90	17
Bank Transferred	152	29
E-wallet	28	5
QRIS	51	10
(by Marketplace)	20	4

Delivery Channel	Total	Per centage
COD	140	29
Ojek online (Gojek, Gocar, Maxim, etc)	99	21
Currier (JNE, JNT, SiCepat, etc)	91	19
Take it by themself	152	32

Benefits of Digitalization that you have implemented in your business	Total	Per centage
Promotion	186	31
Selling	172	29
Finding Seller/material	56	9
Taking care of licenses	60	10
payment	47	8
Information search and product research	48	8
Listing service	27	5

The Legality of the Business	Total	Per centage
PIRT	52	17
Halal Certificate	37	12



HAKI	156	51
Others	8	3

Source: Primary Data Processed (2024)

From the profile above, **Table 1** it can be concluded that the sample is in accordance with the set criteria where all of them are MSMEs in Sukabumi, have participated in internet/digital marketing training, have more than one sales channel and know/use the Omni Channel (WAG) application before. Most respondents 81 per cent have business legality, mainly PIRT, and IPR. Of the total respondents, only 19 per cent have received external funding. Respondents have also benefited from this digitization for promotional purposes (31 per cent) and product sales (29 per cent).

Of the 200 respondents, the majority have a culinary business 77 per cent, of which 58 per cent started a business between 2020 to 2024, with a turnover of under 100 million per year (88 per cent), respondents use most sales channels with multi-channels in addition to offline stores (31 per cent) also use social media (36 per cent). Meanwhile, many payment channels still use cash (35 per cent) followed by transfers (29 per cent). Moreover, the delivery channel used by the majority is still using COD directly.

**Outer Model Evaluation.** Evaluation of the Outer model is carried out by validity test, discriminant validity test and one-dimensionality test. Construct validity testing is carried out by referring to the factor loading value. The factor loading value is the correlation of the statement items with the measured constructs. The criteria for testing convergent validity are considered valid if the factor loading indicator exceeds 0.700; however, values below 0.700 (ranging from 0.410 to 0.690) should still be acknowledged but require further assessment by examining Composite Reliability and AVE. **Table 2**, semua konstruk dalam model penelitian ini memiliki nilai AVE lebih dari 0,500. This signifies that every construct can account for over 50 per cent of the variance in its indicators.

**Table 2.** Testing Research Instruments

Construct	Indicator	Loading-factor	AVE	Composite Reliability	Decision
JR	JR1	0.845	0.793	0.920	Valid
	JR2	0.913			Valid
	JR3	0.911			Valid
CS	CS1	0.808	0.500	0.744	Valid
	CS2	0.754			Valid
	CS3	*0.528 <sup>b</sup>			Valid
PEOU	PEOU1	0.703	0.709	0.924	Valid
	PEOU2	0.829			Valid
	PEOU3	0.868			Valid
	PEOU4	0.903			Valid
	PEOU5	0.892			Valid
PU	PU1	0.925	0.838	0.963	Valid
	PU2	0.908			Valid
	PU3	0.888			Valid
	PU4	0.931			Valid



	PU5	0.924			Valid
	ATUT1	0.833			Valid
ATUT	ATUT2	0.908	0.785	0.936	Valid
	ATUT3	0.920			Valid
	ATUT4	0.882			Valid
	BITU1	0.769			Valid
BITU	BITU2	0.897	0.738	0.918	Valid
	BITU3	0.905			Valid
	BITU4	0.858			Valid
	ATU1	0.956			Valid
ATU	ATU2	0.945	0.897	0.972	Valid
	ATU3	0.965			Valid
	ATU4	0.921			Valid

Note: b is factor loading value less than 0.700

Source: Data Processed by SmartPLS 3.2.9

Discriminant validity is conducted to evaluate indicators that assess a construct distinctively from other constructs. An indicator of a construct is said to be valid if the Root AVE value of each construct is higher when measuring the construct compared to other constructs using the Fornell-Larcker criteria. Based on the results of testing discriminant validity with the Fornell-Larcker criteria, **Table 3** The root AVE value for each construct is greater than that of the other constructs, indicating that the discriminant validity test is satisfied.

In this research, composite reliability was utilized for testing reliability. Composite Reliability is viewed as a better metric than Cronbach alpha in SEM-PLS because it takes into account indicator weights and offers a more precise assessment of the construct's internal reliability. In this research, composite reliability was utilized for testing reliability. Composite Reliability is viewed as a better metric than Cronbach alpha in the SEM-PLS framework since it takes into account indicator weights and offers a more precise evaluation of the construct's internal reliability.

**Table 3.** Diskriminant Validity Testing

	ATU	ATUT	BITU	CSE	JR	PEOU	PU
ATU	<b>0.947</b>						
ATUT	0.447	<b>0.886</b>					
BITU	0.381	0.767	<b>0.859</b>				
CSE	0.277	0.367	0.345	<b>0.707</b>			
JR	0.379	0.625	0.623	0.302	<b>0.890</b>		
PEOU	0.338	0.618	0.706	0.404	0.572	<b>0.842</b>	
PU	0.251	0.701	0.669	0.284	0.608	0.733	<b>0.915</b>

Source: Data Processed by SmartPLS 3.2.9

**Inner Model Evaluation.** The next stage will be testing the structural model (inner model) which can unite several latent variables with analysis of the coefficient of determination and measurement of predictive relevance. The two metrics utilized in



assessing the inner model are the coefficient of determination ( $R^2$ ) and the predictive relevance measure ( $Q^2$ ). The R-Square ( $R^2$ ) test is performed to assess the relationship between the independent and dependent variables. If the  $R^2$  score is 0.750, it shows a strong model, if  $R^2$  has a score of 0.500, it shows moderate strength and if  $R^2$  has a score of 0.250, it shows weak strength. **Table 4**, show the coefficient of determination ( $R^2$ ), In this study, the data produced ranges from 0.144 to 0.624. These findings reflect the extent to which the independent variables influence the dependent variable. The lowest value shown by  $R^2$  of Actual Technology Use (ATU) is 0.144, this means that the variable is only determined 14.400 per cent by Behavioural Intention (BITU).

In contrast, 85.500 per cent of the variable is influenced by other factors that are not accounted for in the model. The maximum  $R^2$  value for Behavioural Intention (BITU) is 0.624, indicating that 62.400 per cent of the variable is influenced by Attitude Toward Using Technology (ATUT) and Perceived Usefulness (PU), with the remainder being determined by other factors (**Table 4**). The predictive relevance value ( $Q^2$ ) of this analysis's results is 0.960. This suggests that a value nearing 1 implies the model has a strong predictive relevance in capturing the relationship between the variables in the model.

**Table 4.** Inner Model Evaluation

Constructs	$R^2$	$R^2$ Adjusted
Actual Technology Use (ATU)	0.144	0.139
Attitude Toward Using Technology (ATUT)	0.515	0.510
Behavioral Intention (BI)	0.624	0.620
Perceived Ease of Use (PEU)	0.386	0.380
Perceived Usefulness (PU)	0.592	0.586
$Q^2 = 1 - (1-0.144) * (1-0.515) * (1-0.624) * (1-0.386) * (1-0.592)$		
<b><math>Q^2 = 0.960</math></b>		

Source: Data Processed by SmartPLS 3.2.9

**Hypothesis Testing.** This research includes 22 hypotheses that examine the relationships among the variables present in the model. Among the 22 hypotheses, 10 focus explicitly on the direct impact between variables. Simultaneously, the other 12 hypotheses are employed to examine the influence of mediating variables.

**Table 5.** Hypothesis Testing (Direct Effect)

		Sample Mean (M)	T Statistics ( O/STDEV )	P-Value	
<b>H1</b>	JR -> PU	0.283	3.376	0.001	Support
<b>H2</b>	JR -> PEU	0.497	7.208	0.000	Support
<b>H3</b>	CSE -> PU	-0.034	0.535	0.593	No
<b>H4</b>	CSE -> PEU	0.268	3.718	0.000	Support
<b>H5</b>	PEU -> PU	0.588	5.571	0.000	Support
<b>H6</b>	PU -> ATUT	0.529	5.781	0.000	Support
<b>H7</b>	PU -> BI	0.261	4.031	0.000	Support
<b>H8</b>	PEU -> ATUT	0.237	2.594	0.010	Support
<b>H9</b>	ATU -> BI	0.588	8.653	0.000	Support
<b>H10</b>	BI -> ATU	0.383	5.759	0.000	Support

Source: Data Processed by SmartPLS 3.2.9



**Table 5** indicates that the T-Statistic test was performed to assess the significance of the relationship between the independent variable and the dependent variable. Additionally, the T-Table is used to compare the T-Count value to establish the level of significance. The T-Table can be identified using the significance level of 0.050, derived from the formula  $df = \text{number of samples} - \text{number of variables}$ . Upon performing the calculation, the T-Table score is 1.985, derived from the formula  $df$  of 100 minus 5, resulting in 95, which is then linked to a significance level (P-Value) of 0.050 or 5 per cent

From the results of the analysis in **Table 6**. It is determined that 10 hypotheses yield a result indicating a positive and significant impact between the variables. The Attitude Toward Using Technology variable demonstrates the largest direct effect on Behavioural Intention with an impact of 0.588, whereas the Perceived Ease of Use variable has the smallest effect on Attitude Toward Using Technology with a value of 0.237. A contrary outcome is demonstrated by one hypothesis, specifically that the Computer Self-Efficacy variable does not have a direct and significant impact on Perceived Usefulness

Regarding the indirect effect among variables (mediation), the findings indicate that only the Perceived Usefulness variable is unable to mediate the indirect connection between Computer Self Efficacy and Attitude Toward Using Technology. The indirect effect with the most significant value is produced by the effect of the Perceived Usefulness variable on Behavioural Intention through Attitude Toward Using Technology of 0.310. While the most negligible indirect effect of 0.061 is produced by the variable Computer Self Efficacy on Attitude Toward Using Technology via Perceived Ease of Use.

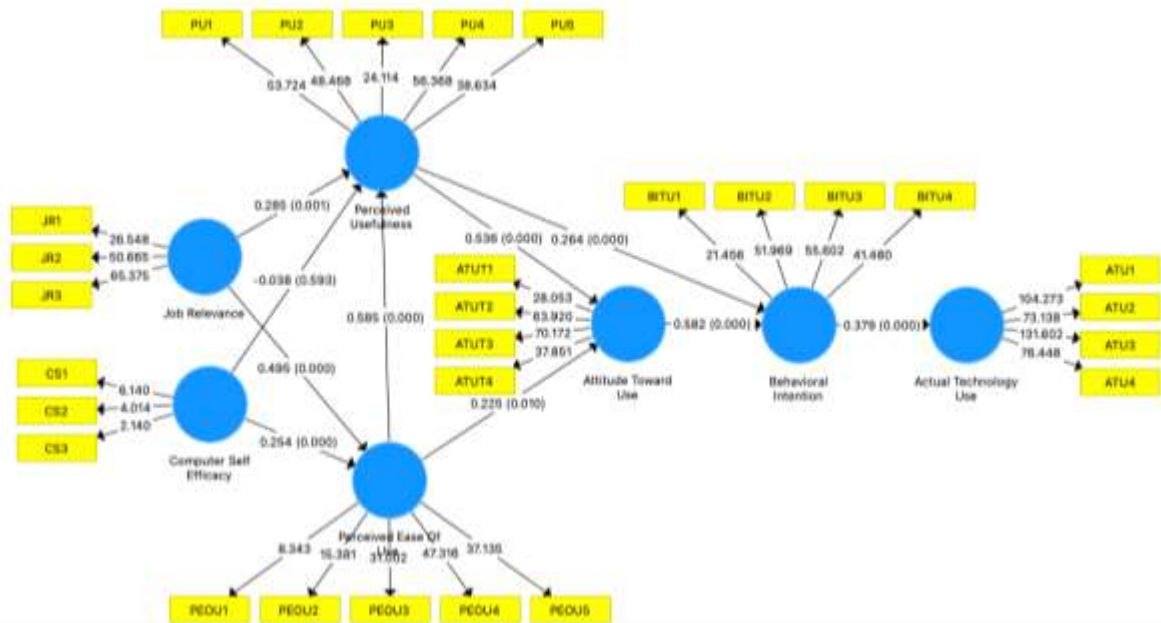
**Table 6.** Hypothesis Testing (Indirect Effect)

		Sample Mean (M)	T Statistics ( O/STDEV )	P-Value	
H11	CSE -> PEU -> ATUT	0.061	2.471	0.014	Support
H12	JR -> PEU -> ATUT	0.121	2.030	0.043	Support
H13	CSE -> PU -> ATUT	-0.018	0.543	0.587	No
H14	JR -> PU -> ATUT	0.153	2.488	0.013	Support
H15	PEU -> PU -> ATUT	0.309	4.343	0.000	Support
H16	PEU -> ATUT -> BI	0.140	2.381	0.018	Support
H17	PU -> ATUT -> BI	0.310	4.814	0.000	Support
H18	JR -> PU -> BI	0.074	2.536	0.012	Support
H19	PEU -> PU -> BI	0.154	3.159	0.002	Support
H20	CSE -> PEU -> PU	0.157	3.008	0.003	Support
H21	JR -> PEU -> PU	0.291	4.702	0.000	Support
H22	ATUT -> BI -> ATU	0.227	4.109	0.000	Support

Source: Data Processed by SmartPLS 3.2.9

The overall results in this study are shown in **Figure 2**, where the influence between variables is seen as the final model output obtained.





**Figure 2.** Reaserch Model

## DISCUSSION

This research takes the object of research on Omni Channel applications that MSME players have used in Sukabumi in the form of the WhatsApp's Business platform. This platform is more widely used compared to similar platforms that are more complete, because it is not paid and in accordance with the needs of the business scale and the ability of MSME respondents to operate it. WhatsApp Business is a free application designed to help businesses. The WhatsApp Business platform (known as WhatsApp APIs) is a collection of APIs and solutions that empower businesses of all sizes to have more efficient and scalable conversations with customers who use WhatsApp to deepen relationships, build trust, and increase sales. The platform offers more automation features, such as Integration with other business systems. It is capable of Analytics as well as Monitoring and other capabilities that are the foundation of an omnichannel Strategy.

Role of external factors (Job Relevance and Computer Self Efficacy) was studied to find out how they affect the Actual Technology Use of Sukabumi MSME players in using this WhatsApp Business. The idea of the Technology Acceptance Model (TAM) serves as a foundational reference for the research framework.

From the analysis of the respondent's profile, the results show that of the 200 MSME players in Sukabumi who have used WhatsApp Business within 3 months and have received training on omnichannel, the majority are engaged in the culinary business 77 per cent and 21 per cent are engaged the in the creative industry, with an average turnover below 100 million per year (88 per cent). They use sales channels with offline stores (31 per cent) and use social media (36 per cent). As for payment channels, many still use cash (35 per cent) followed by transfers (29 per cent). Most delivery channels used still use direct COD. The use of WhatsApp Business for promotion (31 per cent) and product sales (29 per cent).



Through numerous tested hypotheses, this research uncovered various intriguing insights regarding Job Relevance and Computer Self Efficacy Variables. The Job Relevance Variable positively and significantly impacts the Perceived Ease of Use (0.285) and the Perceived Usefulness Variables (0.495). It can be understood that respondents recognize the significance of their work with WhatsApp Business, leading to a strong positive impact on enhancing the perceived ease of use and advantages of the application in their perspectives. This aligns with studies (Dhiman et al., 2023; Sudhashini Nair et al., 2024; Venkatesh et al., 2022; Wang et al., 2023). The presence of Job Relevance is what causes a favorable impact on Perceived Ease of Use and Perceived Usefulness. This is evident from the Job Relevance indicator, which shows that the use of WhatsApp Business is connected and significantly related to their work.

Conversely, the contrary outcomes arise in the Computer Self Efficacy variable, which diverges from the earlier findings (Chahal, 2022; Usman et al., 2020). This study revealed that Computer Self Efficacy influences only the Perceived Ease of Use (0.254) of WhatsApp Business, rather than its perceived benefits or Perceived Usefulness. It can be concluded from this phenomenon that the digital literacy and Omni Channel training provided to respondents has positively impacted their perceptions regarding the application's ease of use. Nonetheless, this does not influence their view of the utility of WhatsApp Business. This was supported by the outcomes of the indicators regarding the variable of usefulness perception, which appears weak in the context of enhancing performance or boosting efficiency.

When examined from the direct and indirect influence between variables in this study. In general, it is concluded that the WhatsApp Business Omni Channel application is accepted and utilized well by respondents. This is indicated by several hypotheses that are accepted and show the direct or indirect influence of several dependent and mediating variables on the Actual Technology Use Variable which is shown in line by several studies such as (Arimbawa et al., 2020; Putri Ayu Yulisa & Dudi Permana, 2020; Scherer et al., 2019; Y. Wang et al., 2024).

Notable results emerged regarding the extent of the direct impact of the Attitude Towards Using Technology variable on Behavioural Intention Towards Use (0.582), which was significantly more influential than other variables. This can be understood as the use of WhatsApp's Business has created positive usage behavior, leading to a favorable habit that aids in the acceptance of this platform by respondents. The presence of the Attitude Towards Using Technology variable serves as a notable mediation for the Perceived Ease of Use variable concerning Behavioural Intention to Use (0.310). This favorable attitude towards using WhatsApp's Business serves as the foundation for the acceptance of Actual Technology Use observed in this study.

## CONCLUSION

The findings of this research indicate that MSME players in Sukabumi have embraced the presence of Omni Channel applications like WhatsApp Business. This is apparent from both the direct and indirect connections of research variables to Actual Technology Use. Job Relevance and Computer Self Efficacy factors also positively affect respondents' Perceived Ease of Use and Perceived Usefulness. This acceptance has additionally influenced behavior, routines, and the actual utilization of the application. A deeper analysis through interviews indicates that respondents are not fully utilizing the



WhatsApp Business application to increase their turnover, as they are not completely aware of or applying all its features. This leads to the lack of a positive and direct effect of the Computer Self Efficacy variable on the Perceived Usefulness of this application. Although participants are confident in utilizing the WhatsApp Business app, they do not fully grasp all the advantages this application offers. To ensure that WhatsApp's Business is used to its fullest potential.

The acceptance of WhatsApp Business as an Omni Channel strategy for MSMEs in Sukabumi is fairly positive. The lack of a direct and positive impact of Computer Self Efficacy on Perceived Usefulness results from MSME participants in Sukabumi not fully grasping the complete features of WhatsApp's Business application. Enhancing literacy initiatives and providing detailed training on Omni Channel applications can lead to improvements in this area. Digital marketing or omnichannel training focuses on practical and applicable content regarding its use rather than just cognitive, general knowledge. This initiative will motivate MSMEs to fully utilize WhatsApp's Business platform and comprehend the additional advantages of this technology.

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