

CHAPTER 2

LITERATURE REVIEW

2.1 Micro, Small, and Medium Enterprises (MSMEs)

Micro, Small, and Medium Enterprises (MSMEs) are a category of business units that play a crucial role in the Indonesian economy, regulated by Law Number 20 of 2008. MSMEs are defined as productive enterprises owned by individuals or entities that are not classified as subsidiaries, with criteria that include the amount of assets and revenue.

No.	Type of	Criteria	
	Business	Assets	Revenue
1	Micro Business	Max. 50 Million	Max. 300 Million
2	Small Business	>50 - 500 Million	>300 Million - 2.5 Billion
3	Medium Business	>500 Million - 10 Billion	>2.5 Billion

Source: Researcher's Work, 2025.

Based on the above explanation, it can be inferred that MSMEs refer to businesses owned by individuals or independent entities that are not affiliated with other companies and have limited capital in accordance with specific criteria. Research

by Davis et al. (1985) indicates that MSMEs typically employ fewer strategies compared to larger enterprises.

Despite operating under similar market conditions, MSMEs often select different strategic priorities. Knight (2000) pointed out that globalization has a considerable impact and creates significant pressure on the MSME sector. Regarding MSME analysis, Cordero (2023) mentioned that there has been a long-standing demand for research and understanding of the specific challenges faced by MSMEs in the context of rapid technological advancements.

To effectively compete and deliver product innovations that align with customer needs, MSME operators need to adopt technologies that are suitable for their business types.

2.2 Point of Sales (POS)

A Point of Sale (POS) system is defined as the time and place where a transaction concludes (Okeke et al., 2017). It serves as the final stage in the sales process, enabling customers to complete payments for goods or services. Unlike standalone cash registers, POS systems integrate with software and other hardware components (Handoko & Mauritsius, 2021), and are commonly found in retail settings (Adeniran, Burodo & Suleiman, 2022).

These systems assist cashiers in managing sales transactions by calculating totals, accepting payments, and issuing receipts (Handoko & Mauritsius, 2021). Since

their introduction in 2015, POS applications have become popular, with over 2,000 outlets in Indonesia employing them (Purwaningsih & Budyastuti, 2019). Leading POS applications in 2023 include Pawoon POS, Kasir Pintar, and Moka POS (Safitri, 2023).

Integrating POS with the internet provides significant advantages, including enhanced features, improved efficiency, reduced human error, and better transaction tracking (Handoko & Mauritsius, 2021). These systems are capable of processing multiple transactions and collecting extensive data (Ramos & Castro, 2017). Customer satisfaction plays a crucial role in business success (Adeniran et al., 2022), prompting many companies to adopt POS systems for faster service and improved operational control (Ramos & Castro, 2017).

2.3 Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM) is a crucial theoretical framework for understanding how users come to accept and utilize new technologies, particularly in the context of small businesses like cafés. Developed by Fred Davis (1980), TAM identifies two primary factors that influence technology adoption: perceived usefulness and perceived ease of use. In the café setting, the perceived usefulness of a Point of Sale (POS) system is significant; if café owners and staff believe that the system will enhance transaction efficiency, improve inventory management, and elevate customer service, they are more likely to embrace it.

Davis et al. (1989) state that the Technology Acceptance Model (TAM) includes several constructs in computer acceptance behavior, namely perceived ease of use (PEU), perceived usefulness (PU), attitude toward using (ATU), behavioral intention to use (BI), and actual system use (AU). The BI variable is influenced by ATU and PU, while the ATU variable is influenced by PU and PEU. Furthermore, the PU variable is influenced by PEU and external variables, and the PEU variable is determined by external variables (Davis et al., 1989). The framework of the Technology Acceptance Model (TAM) can be seen in Figure 2.1.

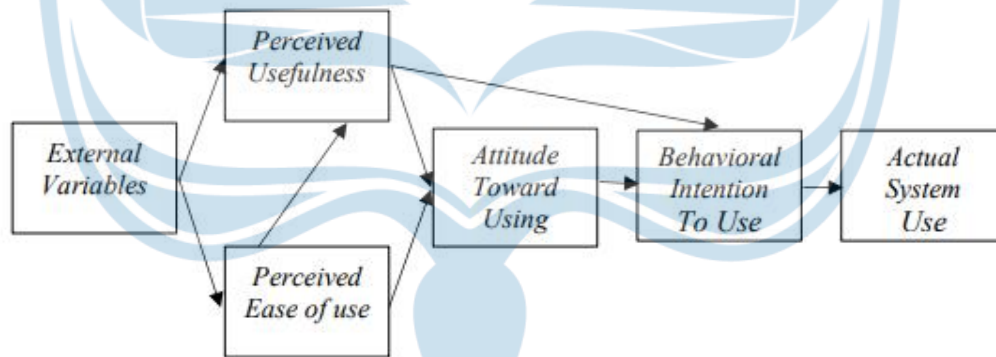


Figure 2. 1 Framework of Technology Acceptance Model (TAM)

Source: Davis et al. (1989)

The Technology Acceptance Model (TAM) has been extensively applied across various fields, including business and healthcare, to examine the factors influencing technology acceptance. In the context of cafés, leveraging TAM can assist in

identifying potential barriers to the adoption of Point of Sale (POS) systems, such as concerns regarding complexity and uncertainties about their impact on productivity. Furthermore, TAM can be expanded to include additional factors like social influence and facilitating conditions, which also play a role in acceptance. By comprehending these dynamics, café owners can implement POS systems that enhance operational efficiency, improve record-keeping security, and ultimately contribute to the overall productivity and success of their businesses.

According to Marikyan and Papagiannidis (2023), TAM seeks to explain the fundamental processes underlying technology acceptance, predict related behaviors, and provide a theoretical framework for successful technology adoption. It has been applied in various contexts and disciplines to forecast user behavior. For instance, TAM has been utilized to assess the adoption of POS applications in small and medium enterprises (Sipayung et al., 2020) and to analyze the adoption of e-learning systems among students (Oktavia et al., 2022).

Perceived Ease of Use (PEU) is a key variable that determines system usage (Davis et al., 1989). The easier a system is to use, the greater the likelihood that users will adopt the technology (Permana & Rosiana, 2022). The Technology Acceptance Model (TAM) distinguishes two fundamental mechanisms through which PEU influences user attitudes and behavior (Davis et al., 1989).

On the other hand, Perceived Usefulness (PU) refers to an individual's belief that using a specific system will enhance their performance (Davis et al., 1989). Systems deemed highly useful by users instill confidence in the positive relationship between system usage and performance improvement (Davis, 1989). According to Davis et al. (1989), PU is linked to Behavioral Intention (BI), which represents a person's interest in engaging in a certain behavior. BI is related to PU, as users develop a desire for actions they believe will improve their effectiveness in completing tasks (Davis et al., 1989).

Attitude Toward Use (ATU) reflects a person's positive or negative feelings (evaluative influence) regarding a specific action (Davis et al., 1989). Within the TAM framework, the relationship between perceived usefulness (PU) and attitude toward use (ATU) shapes the intention to engage in behavior that has a positive effect (Davis et al., 1989).

Lastly, Actual Use (AU) pertains to the real-world usage of the system (Davis et al., 1989). Individuals are more likely to utilize a system if they believe it is easy to use and can boost their productivity (Permana & Rosiana, 2022). AU is measured by the time spent interacting with the system and how frequently it is used (Permana & Rosiana, 2022).

2.4 Perceived Ease of Use (PEU)

Perceived Ease of Use (PEU) refers to the extent to which an individual believes that using a particular system will require minimal effort (Davis, 1989). According to the Technology Acceptance Model (TAM), PEU is a fundamental determinant of system usage (Davis, 1989). Adam (1992) notes that PEU leads to a user's ongoing intention to adopt disposable technology, as the interaction process with such technology demands little effort.

In the context of using Point of Sale (POS) applications, the process should be straightforward (Ramos & Castro, 2017). Cordero (2023) suggests that if a new technology requires less effort to understand, the intention to use it will increase. Research by Christopher et al. (2022) indicates that PEU significantly influences an individual's intention to use the BCA Mobile application. It can be concluded that users are more likely to adopt a POS application if it offers ease of use.

2.5 Perceived Usefulness (PU)

Perceived Usefulness (PU) refers to the extent to which an individual believes that using a specific system will enhance their job performance (Davis, 1989). According to the Technology Acceptance Model (TAM), PU is a fundamental determinant of system usage (Davis, 1989). In the context of Point of Sale (POS) applications, PU indicates that individuals are unlikely to use the system unless they are convinced that it will be beneficial for their work (Ramos & Castro, 2017).

PU is influenced by various factors and can significantly affect the acceptance of a system during its adoption (Ramos & Castro, 2017). Research by Handoko and Mauritsius (2021) and Rohman, Mukhsin, and Gabika (2023) demonstrates that PU has a significant positive impact on user acceptance (AU) in both POS applications and e-commerce. It can be concluded that POS applications perceived as highly useful are more likely to be adopted by users.

2.6 Attitude Toward Using (ATU)

Attitude Toward Use (ATU) is defined as an affective response (related to emotions/attitudes) that mediates the relationship between perceived usefulness and perceived ease of use, as well as the intention to use a system (Davis, 1989). ATU is one of the measurement variables in the Technology Acceptance Model (TAM) (Ramos & Castro, 2017). Wang et al. (2023) state that all human choices are influenced by both rational and emotional feelings. In the context of Point of Sale (POS) applications, ATU reflects a favorable or unfavorable attitude toward using the POS application (Ramos & Castro, 2017).

ATU represents users' assessment of their interest in utilizing technology (Novelia, Effendi & Syahputri, 2021). The overall attitude of potential users toward using the system serves as a trigger for their intention to use the application (Novelia et al., 2021). Marikyan and Papagiannidis (2023) indicate that a higher affective response correlates with a greater likelihood of behavioral intention. Research by

Adhiputra (2015) shows that ATU has a positive and significant relationship with the acceptance of internet banking services. In conclusion, ATU reflects users' attitudes toward using POS applications.

2.7 Behavioral Intention to Use (BI)

Behavioral Intention (BI) is defined as an individual's interest or desire to engage in a specific behavior (Davis et al., 1989). According to Adeniran et al. (2022), behavioral intention determines user acceptance of a technology. Furthermore, Minan (2021) suggests that the level of computer technology adoption by individuals can be predicted based on their attitudes and concerns regarding the technology. Humida, Mamun, and Keikhosrokiani (2022) state in their research that BI reflects the extent to which an individual has formed a deliberate strategy to either perform or refrain from a particular behavior. In the context of Point of Sale (POS) applications, BI refers to the intention to continue using the application.

The Technology Acceptance Model (TAM) posits that computer usage is determined by BI (Davis et al., 1989). Within TAM, BI influences Actual Use (AU) and is affected by Attitude Toward Use (ATU) and Perceived Usefulness (PU) (Pratama, Wulandari & Indyastuti, 2022). Research by Arts, Frambach, and Bijmolt (2011), Novelia et al. (2021), and Wang et al. (2023) indicates that BI has a positive and significant impact on AU in relation to technology. In conclusion, an individual is

likely to use a POS application if they possess the desire or intention to continue using it.

2.8 Actual System Use (AU)

Actual Use (AU) is described as a measurable external psychomotor response of an individual when using technology in real-world situations (Davis, 1989). AU is assessed through the amount of time spent interacting with the system and the frequency of its use (Firdaus et al., 2022). In the context of Point of Sale (POS) applications, AU reflects an individual's actual engagement with the POS system.

2.9 Previous Literature

No	Name of Researcher (Year)	Research Variables	Research Results
1.	Omotayo (2015)	Dependent Variable Adoption of POS Independent Variables 1. PEU (Perceived Ease of Use) 2. PU (Perceived Usefulness) 3. Organizational Characteristics 4. Subjective Norms 5. Image	The variables PEU, PU, organizational characteristics, subjective norms, and image have an impact on the adoption of POS.

No	Name of Researcher (Year)	Research Variables	Research Results
2.	Tira et al (2016)	Dependent Variables 1. AU (Adoption Usage) 2. ATU (Adoption Time Usage) Independent Variables 1. PEU (Perceived Ease of Use) 2. PU (Perceived Usefulness)	1. The variables PEU and PU have a positive and significant impact on ATU (Adoption Time Usage). 2. The variables PEU and PU have a positive and significant impact on AU (Adoption Usage). 3. The variable ATU has a positive and significant impact on AU. 4. The variables PEU, PU, ATU, and AU influence the usage of E-Newspaper.

No	Name of Researcher (Year)	Research Variables	Research Results
3.	Okeke et al (2017)	Dependent Variable Adoption of POS (Point of Sale) Independent Variables 1. PEU (Perceived Ease of Use) 2. PU (Perceived Usefulness) 3. CA (Compatibility) 4. Security	1. The variables PEU (Perceived Ease of Use) and PU (Perceived Usefulness) have a positive and significant impact on the adoption of POS (Point of Sale). 2. The variable CA (Compatibility) has a positive and significant effect on PU and has no significant effect on PEU. 3. The variable Security has a positive and significant effect on PEU and has no significant effect on PU.

No	Name of Researcher (Year)	Research Variables	Research Results
4.	Ramos dan Castro (2017)	Dependent Variable Acceptance of POS Usage Independent Variables 1. ATU 2. PU 3. PEU	The variables ATU , PU and PEU have a positive impact on the acceptance of POS (Point of Sale) usage.

No	Name of Researcher (Year)	Research Variables	Research Results
5.	Mayjeksen and Pibriana (2020)	Dependent Variables 1. Acceptance of Online Shopping Applications 2. Usage of Online Shopping Applications Independent Variables 1. Perceived Ease of Use 2. Perceived Usefulness 3. Adoption Time of Use 4. Behavioral Intention	1. The variables PEU (Perceived Ease of Use), PU (Perceived Usefulness), ATUT (Adoption Time of Use), BI (Behavioral Intention), and ATU (Adoption Time Usage) positively and significantly influence the acceptance of online shopping applications. 2. The acceptance of online shopping applications positively affects the usage of online shopping applications.

No	Name of Researcher (Year)	Research Variables	Research Results
		5. Adoption Time Usage	

No	Name of Researcher (Year)	Research Variables	Research Results
6.	Mardhiyah et al (2020)	Dependent Variable Usage of Gojek Application Independent Variables 1. PEU (Perceived Ease of Use) 2. PU (Perceived Usefulness) 3. BI (Behavioral Intention) 4. ATU (Attitude Towards Use)	The variables PEU (Perceived Ease of Use), PU (Perceived Usefulness), BI (Behavioral Intention), and ATU (Attitude Towards Use) positively influence the usage of the Gojek application.

No	Name of Researcher (Year)	Research Variables	Research Results
7.	Handoko dan Mauritsius (2021)	Dependent Variable Usage of POS Systems Independent Variables 1. PEU (Perceived Ease of Use) 2. PU (Perceived Usefulness) 3. ITU (Intention to Use) 4. SN (Social Norms) 5. ATB (Attitude Towards Behavior) 6. TA (Technology Acceptance)	The variables PEU (Perceived Ease of Use), PU (Perceived Usefulness), ATB (Attitude Towards Behavior), TA (Technology Acceptance), ITU (Intention to Use), and SN (Social Norms) influence the usage of POS systems.

No	Name of Researcher (Year)	Research Variables	Research Results
8.	Minan (2021)	Dependent Variable Usage of E-commerce Applications Independent Variables 1. PEU (Perceived Ease of Use) 2. PU (Perceived Usefulness) 3. ATU (Attitude Towards Use) 4. BI (Behavioral Intention) 5. AU (Actual System Use)	The variables PEU (Perceived Ease of Use), PU (Perceived Usefulness), ATU (Attitude Towards Use), BI (Behavioral Intention), and AU (Actual System Use) influence the usage of e-commerce applications.

No	Name of Researcher (Year)	Research Variables	Research Results
9.	Novelia et al (2021)	Dependent Variable Usage of Linkaja Application Independent Variables 1. PEU (Perceived Ease of Use) 2. PU (Perceived Usefulness) 3. ITU (Intention to Use) 4. AU (Actual System Use)	1. PEU (Perceived Ease of Use) significantly influences PU (Perceived Usefulness). 2. PEU significantly influences ITU (Intention to Use). 3. PU significantly influences ITU. 4. ITU significantly influences Actual System Use. 5. PEU, PU, ITU, and Actual System Use positively affect the usage of the Linkaja application.

No	Name of Researcher (Year)	Research Variables	Research Results
10.	Puspitasari et al (2023)	Dependent Variable 1. AU (Actual System Use) Independent Variables 1. PEU (Perceived Ease of Use) 2. PU (Perceived Usefulness) Intervening Variable 1. BI (Behavioral Intention)	PEU (Perceived Ease of Use) and PU (Perceived Usefulness) influence AU (Actual Use) through BI (Behavioral Intention) in the usage of the Netflix application.

Source: Processed by the researcher based on previous researches.

2.10 Conceptual Framework

A conceptual framework is a conceptual representation of the relationships between theories and the factors identified as a problem. The conceptual framework also serves to explain the relationship between theory and the factors that influence the research phenomenon (Sugiyono, 2014).

In this research, the conceptual framework is based on the Technology Acceptance Model (TAM), which aims to model how users accept a system (Davis et al., 1989). TAM is used to construct a conceptual framework influenced by five factors: Perceived Ease of Use (PEU), Perceived Usefulness (PU), Attitude Toward Using (ATU), Behavioral Intention (BI), and Actual Use (AU). In this research, there are no distinct independent and dependent variables, as each variable is interdependent based on the Technology Acceptance Model (TAM). All variables—Perceived Ease of Use (PEU), Perceived Usefulness (PU), Attitude Toward Use (ATU), Behavioral Intention (BI), and Actual System Use (Y)—are interconnected, influencing one another within the model. This perspective highlights the mutual dependence of the variables, emphasizing that they collectively shape user behavior rather than fitting into a strict independent-dependent framework. The conceptual framework for this research is illustrated in Figure 2.2 below.

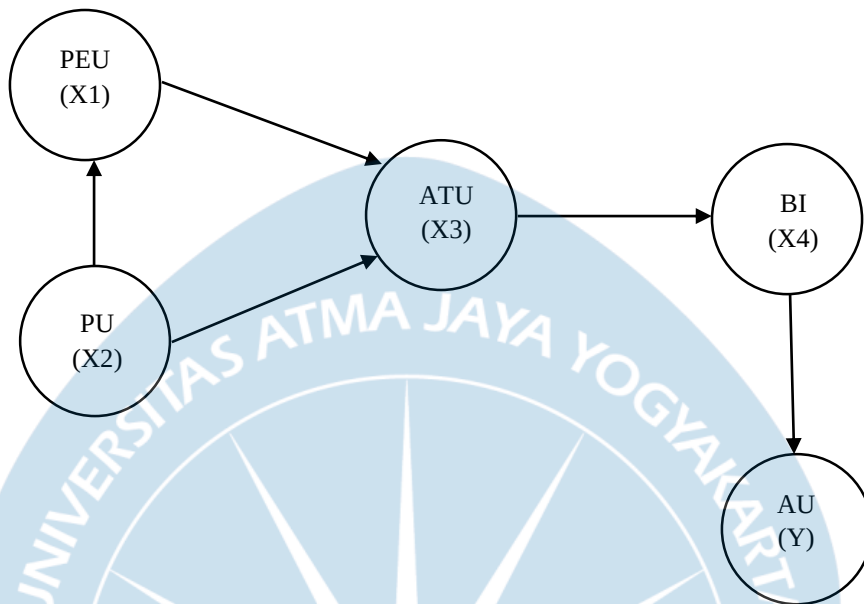


Figure 2. 2 Conceptual Framework

2.11 Research Hypothesis

A hypothesis serves as a provisional answer to the research problem being investigated. As noted by Sugiyono (2014), formulating a research problem involves creating statements or questions that describe the relationships between the variables under study. This research presents several hypotheses to tackle the identified challenges, including:

2.11.1 The Influence of Perceived Usefulness (PU) on Perceived Ease of Use (PEU)

Perceived Usefulness (PU) impacts Perceived Ease of Use (PEU) and is rooted in the Technology Acceptance Model (TAM). PU denotes the extent to which users

believe that utilizing a specific technology will enhance their performance. Research by Davis (1989) indicates that when users view a technology as useful, it positively influences their perception of its ease of use. Recent studies, including those by Minan (2021) and Rohman et al. (2023), further support this significant relationship; as users perceive a technology to be more useful, their perception of its ease of use improves. This relationship suggests that when users believe a technology will provide benefits, they are more likely to feel at ease using it.

H1: Perceived Usefulness (PU) influences Perceived Ease of Use (PEU)

2.11.2 The Influence of Perceived Ease of Use on Attitude Toward Using

The Technology Acceptance Model (TAM) defines Perceived Ease of Use (PEU) as an individual's belief about how effortless it is to use a technology. The easier users perceive a system to be, the more likely they are to adopt it (Igbaria & Chakrabarti, 1990). This concept is supported by studies from Christopher et al. (2022), Handoko and Mauritsius (2021), and Rohman et al. (2023), which show a significant correlation between PEU and Attitude Toward Using (ATU). When an application is seen as user-friendly, it positively influences users' attitudes toward its use. Thus, the hypothesis presented in this research is:

H2: Perceived Ease of Use (PEU) influences Attitude Toward Using (ATU).

2.11.3 The Impact of Perceived Usefulness on Attitude Toward Using

The Technology Acceptance Model (TAM) defines Perceived Usefulness (PU) as an individual's belief that using a specific system will yield benefits. Users are more likely to engage with a system if they believe it will enhance their job performance (Tira et al., 2016). This assertion is supported by research from Handoko and Mauritsius (2021) and Rohman et al. (2023), which indicate a significant relationship between PU and Attitude Toward Using (ATU). When users perceive a high level of benefit from an application, it positively influences their attitudes towards using that application. Therefore, the hypothesis articulated in this research is:

H3: Perceived Usefulness (PU) influences Attitude Toward Using (ATU).

2.11.4 The Influence of Attitude Toward Using on Behavioral Intention

The Technology Acceptance Model (TAM) defines Attitude Toward Using (ATU) as a user's positive (accepting) or negative (rejecting) disposition towards using a system. Users are more likely to adopt a system if they display a positive attitude towards it (Davis, 1993). This claim is supported by research from Minan (2021) and Rohman et al. (2023), which demonstrate a significant effect of ATU on Behavioral Intention (BI). When users have a favorable attitude toward an application, their intention to use it tends to increase. Therefore, the hypothesis outlined in this research is:

H4: Attitude Toward Using (ATU) influences Behavioral Intention (BI).

2.11.5 The Influence of Behavioral Intention on Actual System Use

The Technology Acceptance Model (TAM) defines Behavioral Intention (BI) as an individual's interest or desire to engage in a specific behavior. According to Minan (2021), user interest tends to evolve over time, increasing the likelihood of changes in intent as time progresses. This assertion is supported by research from Minan (2021) and Rohman et al. (2023), which indicate a significant relationship between BI and Actual Use (AU). When users are motivated to continue using an application, the actual level of its usage is likely to increase. Therefore, the hypothesis presented in this research is:

H5: Behavioral Intention (BI) influences Actual Use (AU).