MODEL THEORY OF REASONED ACTION WITH DIGITAL LITERACY AS A SUPPORTING FACTOR IN DIGITAL-DRIVEN INDONESIAN MSMEs

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Abstract:
This research aims to determine the influence of attitude toward behavior, subjective norms, and digital technology literacy on the intention to adopt digital technology and its influence on the behavior of MSMEs that use technology in Indonesia. A total of 532 samples were used in this research by testing using SEM PLS analysis. The method goes through stages such as Inferential Statistical Analysis through Structural Equation Modeling (SEM) in business and management research. The process involves Measurement Model Testing, assessing Discriminant Validity, Convergent Validity, and Composite Reliability. Structural Model Testing evaluates predictive power in PLS-SEM, focusing on relationships between latent variables. Importance Performance Map Analysis combines mean and total effect values, aiding managerial prioritization. Hypothesis testing, based on SEM PLS analysis, validates research models through bootstrapping procedures and directional coefficient examination. The test results stated that the hypothesis raised was accepted. By having digital literacy, MSME owners or leaders can increase awareness of changes in the market competition to formulate clear digital transformation goals in their businesses. By having digital literacy, MSME owners or leaders can use digital technology not only for marketing but also to innovate and develop businesses.

Keywords: Digital Literacy, Digital Driven MSMEs, Theory of Reasoned Action

INTRODUCTION

The Government in Indonesia has made various efforts to overcome the problems encountered by MSMEs. The problems are often found in weak company health, decreased turnover, and impact on cash flow (Ratnasingham, 2020; Dai et al., 2020; Effendi et al., 2020). One of the efforts made is to encourage MSMEs to 'go digital' by making it a national MSME Digitalization program which aims to improve digital skills and business readiness of MSMEs in facing digital challenges, as well as promoting MSME products in the global market through e-commerce platforms (Secretariat Public Relations Cabinet of the Republic of Indonesia, 2020). The Digitalization of MSMEs by switching to online sales patterns through e-commerce is a problem solution for micro, small, and medium enterprises (MSMEs) to survive and help the Indonesian economy. By digitizing MSMEs, they can increase business efficiency, product visibility, and sales and reach a broader target market. MSME Go Digital can also help MSME players accelerate digital transformation and increase competitiveness in the digital era. Digitalization of MSMEs has become inevitable and is also one of the solutions for MSME players.
The actual manifestation that can be seen is the existence of MSMEs Go Digital or Go Online (Rachma et al., 2020). The implementation of Go Online by MSMEs shows that MSMEs that implement e-commerce gain considerable benefits compared to carrying out transactions traditionally, offering reduced transaction costs and providing convenience for all consumers (Joseph et al., 2020). This research aligns with the results of Raharjo and Japarianto (2017), which show the many benefits of implementing e-commerce. The McKinsey study (Dimson & Zdravko, 2020) also states that if Indonesia can encourage as many as 168,000 MSMEs to scale up from micro and small scale to medium scale with the adoption of digital technology, it will have the potential to obtain additional GDP growth of USD 140 billion and 26 million jobs in 2030 (Kominfo, 2020). Thus, transforming MSMEs to digital is essential in encouraging productivity, development, and future economic recovery.

However, in reality, in adapting to digital technology, MSMEs still face difficulties and obstacles (Kurniawati et al., 2021). According to Aida (2021), there are still several challenges in transforming MSMEs to go digital, such as low levels of digital literacy, limited information for MSMEs regarding the use of fintech services, and uneven access to internet infrastructure. According to Effendi et al. (2020), the acceptance of information technology by MSME leaders will influence the adoption of technology. According to Hamburg (2021), one of the problems with the Digitalization of MSMEs is the need for more knowledge or skills to plan, manage, and optimize digital transformation. The statement from digital marketing practitioner and writer Gord Hotchkiss, quoted by Charlesworth (2018), is, 'Technology does not cause our behavior to change, but technology allows our behavior to change.' Digitalization has various implications through rapid and transformative changes (Kraus et al., 2018). Digital platforms are digital spaces that provide business opportunities for interconnection between business people and customers (Hsieh & Wu, 2019). The occurrence of the Covid-19 pandemic has resulted in many losses for MSMEs.

In contrast, MSMEs have a vital role in the Indonesian economy, so the Government has launched MSMEs Go Digital as one of the efforts to recover MSMEs. However, its implementation is challenging, as proven in 2019, with only around 13% of MSMEs adopting digital technology. For this reason, researchers want to know and reveal several factors that influence digital technology MSMEs use.

**Literature, Theory of Reasoned Action, and Theory of Planned Behavior.** The Theory of Reasoned Action was initially introduced in social psychology and is usually used to explain individual behavior. The Reasoned Theory of Action (after this, abbreviated as TRA) was first developed in 1975 through research by Fishbein and Azjen, but as it developed, this theory also became the basis for investigating the individual usage behavior of information technology.

Icek Ajzen was influenced by the ideas of Don Dulany, who worked in the area of verbal learning known as the Dulany model (Dulany, 1962), which states that if a rewarding event follows a behavior, the behavior will be strengthened. In contrast, if a punishing event follows a behavior, the behavior will be weakened. This process is assumed to be automatic, not requiring awareness of possible behavior outcomes or other higher-order cognitive mediation. This hypothesis is then referred to in TRA as behavioral belief, which is defined as a person's subjective probability that carrying out a specific behavior will produce certain results, and the subjective value of the reinforcing factor is the person's evaluation of that result.

Social psychologists are interested in the fact that most behaviors can produce more than one outcome. Therefore, in TRA, people are assumed to have multiple behavioral beliefs that each link the performance of a behavior to a different outcome (Van Lange et al., 2012).

The second component in Dulany's model is the behavioral hypothesis. Behavioral hypotheses are normative beliefs in TRA and can be defined as a person's subjective probability that a particular
normative reference (the tester in Dulany's model) would want that person to perform a specific behavior. TRA assumes that people can hold normative beliefs concerning more than one individual or reference group (Van Lange et al., 2012). According to Fishbein and Ajzen (1975), one of the theories quite commonly used in determining behavioral intention is TRA, which was later updated with the Theory of Planned Behavior (Ajzen, 1991). According to Ajzen (1988), a person's behavior depends on the desire to behave (behavioral intention), which consists of three components, namely: attitude, subjective norms contained in TRA theory, and perceived behavioral control) which appears in the Theory of Planned Behavior (after this, abbreviated to TPB).

This theory is often used, especially in analyzing a person's attitude towards their behavior, as shown in Figure 2.2. Every human behavior can be predicted and explained through three cognitive components, namely behavior/attitude (a person's feelings of liking or disliking a behavior), social norms (environmental influences), and intentions (an individual's decision to do or not do a behavior).

Attitude Toward Behavior. Attitude is practical and can be defined as an individual's evaluation of an object. Attitudes are influenced by the results of actions taken in the past. In this case, attitude can be categorized into two characteristics, namely "belief" and "behavior." Belief is considered a link to an object, while "behavior" is considered a result or goal. Ajzen (2005) suggests that attitudes toward this behavior are determined by the beliefs obtained regarding a behavior's consequences, also called behavioral beliefs. Belief relates to a person's subjective assessments of the world around him and his understanding of himself and his environment.

Subjective Norm. Another factor that plays a role in TRA is a person's subjective norms in forming their perception of the community's direct attitude towards specific behavior. Subjective norms are influenced by beliefs about other people's opinions and motivation to obey other people's beliefs or opinions. Simply put, a person will take an action if it has positive value from existing experiences and the individual's environment supports it. For example, when using a credit card. This factor analyzes the perceived premise of the influence of a person's views on using a credit card. For certain people, having a credit card indicates a certain status (Lai, 2017).

Digital Literacy. Along with changes and developments over time, using digital technology has become an inevitable effort for MSMEs to survive and develop their businesses. Hence, leaders and employees of MSMEs need to be technologically literate to utilize existing technology. Technologically literate people can “use technology as a tool for organization, communication, research, and problem solving” (Eisenberg & Johnson, 2002). Therefore, technologically savvy people know what technology is capable of, can use technology proficiently, can make intelligent decisions about which technologies to use and when to use them, and can also utilize technology in creating entrepreneurship and business development. According to Alam and Noor (2009), five variables influence the adoption of information and communication technology: perceived benefits, perceived costs of adoption, knowledge of information and communication technology, employee skills such as digital literacy, external pressure, and government support.

Intention to Adopt. Wiyono and Kirana (2021) specifically researched the Digital Transformation of MSME Financial Behavior in the New Normal Era, which shows that the Covid-19 pandemic has an effect on MSMEs (old behavioral intention) in using fintech, and this strengthens the influence of new behavior in using fintech (new behavioral intention). According to Fishbein and Ajzen (1975), TRA is a commonly used theory in determining behavioral intention, which was later updated with the Theory of Planned Behavior (Ajzen, 1991).

Digital Technology Use Behavior. The relationship between attitudes and behavior is very determined, so subjective norms are also influenced by beliefs. The difference is that if the relationship between attitudes and behavior is a function of beliefs about the behavior that will be
carried out (behavioral beliefs), then subjective norms are a function of a person's beliefs obtained from other people's views. Others related to it (normative belief). The essence of the theory of planned behavior includes three things, namely, beliefs about possible outcomes and evaluation of the behavior (behavioral beliefs), beliefs about expected norms and motivation to fulfill those expectations (normative beliefs), and beliefs about factors that can support or hinder behavior and awareness of the strength of these factors (control beliefs).

From several literature reviews described, the researcher developed a framework of thinking, which can be seen in Figure 1.

**Attitude Toward Behavior of Small Enterprises regarding Digitalization with Digital Technology Use Behavior of Small Enterprises.** Following the Theory Acceptance Model, according to (Davis, 1989), the user's attitude influences technology use. Attitudes and behavior are reciprocal; attitudes can follow behavior (Shrigley, 1990). The theory of planned behavior also identifies a hierarchical relationship between beliefs and attitudes that influence behavior. The influence of attitudes towards the use of technology, especially by students in Korea who use technology to carry out their academic assignments, also shows a significant relationship. A good attitude toward using technology indicates increased use among students at school (Mae & Espinosa, 2020). The same thing was also stated by Al-Yaqoobi and Tan (2021): Technology adoption reflects that the actual use of new technology depends on the user's attitude. In research conducted by Shen (2015) on MSMEs in the Malaysian tourism sector, which is dependent on Internet technology, it was found that the attitude of the MSME owner or manager will influence their decision to adopt Internet technology. It was further said that if MSME owners or managers have an 'e-vision,' they will not hesitate to adopt and apply Internet technology. Based on several research results above, the following hypothesis can be proposed.

**H1:** Attitude toward the behavior of small enterprises regarding digitalization positively affects their digital technology use behavior.

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**Figure 1.** Research Framework
Subjective Norm of small enterprises with Digital Technology Use Behavior of small enterprises. Literature related to the theory of reasoned action (Fishbein & Ajzen, 1975; Sheppard et al., 1988; Werner, 2004) shows that subjective norms can be explained as cultural perceptions that are learned and then influence attitudes and behavior related to sustainability. Planned Behavior Theory argues that the relationship between subjective norms and behavior is entirely mediated by behavioral intentions (Ajzen, 1991; Ajzen & Fishbein, 1973). Research from Minton (2017), which aims to examine the role of personal and subjective norms in predicting sorting and pro-environmental behavior, is increasingly relevant. The results of this study demonstrate that personal and subjective norms influence waste sorting behavior (WSB) directly and significantly, bypassing behavioral intentions. According to Friedrich (2016), individual behavior results from rational activities to be aware of behavior externally and assess information internally, which is influenced by subjective norms. Based on several research results above, the following hypothesis can be proposed:

H2: Subjective norms of small enterprises positively affect their digital technology use behavior.

Digital Technology Literacy of small enterprises with Digital Technology Use Behavior of small enterprises. Nikou, Brännback, and Widén (2018) in their research provide the opinion that the more confident leaders of MSMEs, both digital natives and digital immigrants, are with their ICT skills, such as digital literacy, the more favorable it will influence the use of digital technology. Research conducted by (Setiaji 2019 Putri et al., 2020) shows that digital technology literacy also positively impacts the use of digital technology by MSME entrepreneurs because it can make it easier to access information, expand networks, and communicate. The research results of Rusdy (2021) also state that digital technology literacy positively impacts user behavior, enabling someone to analyze, evaluate, or assess information obtained digitally. Research conducted by Lestari et al. (2020) shows that digital technology literacy has a positive and significant impact, especially in the use of mobile applications. According to Neumeyer et al. (2021), the technological capabilities and digital literacy of entrepreneurs with low economic backgrounds, especially for the use of digital technology at the primary usage and application level, will influence these entrepreneurs in their decision to adopt digital technology so that they need to be given external support such as access, training, and practice of using digital technology. From the research above, the following hypothesis can be proposed:

H3: The digital technology literacy of small enterprises positively affects their digital technology use behavior.

Intention to adopt Digital Technology of small enterprises with Digital Technology Use Behavior of small enterprises. Research results from Mumtaz and Nalin (2017) and Ayudya and Wibowo (2018) state that the intention to use electronic money positively influences Use Behavior. Likewise, research results from Nurunnisha and Dalimunthe (2018) concluded that intention to use also positively influences or impacts use behavior in using E-Commerce in Bandung. Previous research by Jaya et al. (2017) stated that behavioral intention factors mediate performance expectations, business expectations, social influence, and facilitating conditions in E-Learning use behavior. Other research conducted by Fauzi et al. (2018) also shows that behavioral intention significantly influences user behavior when using the Go-Jek and Grab online transportation applications. Research conducted by Widyanto et al. (2020) also concluded that intention to use favorably influences use behavior in using mobile payments as a 'digital disruptor' in the future. Research on the use of mobile applications conducted by Ikhsan and Sunaryo (2020) also proves that intention to use favorably influences use behavior. Based on the findings from several studies above, the following hypothesis can be proposed:
H4: The intention of small enterprises to adopt digital technology positively affects their digital technology use behavior.

METHODS

Inferential Statistical Analysis Using SEM Analysis. Statistical analysis of sample data originating from questionnaire data is carried out using inferential statistics (also known as inductive statistics or KMO statistics), and the findings are then applied to the population (Sugiyono, 2013). Normalized data can be challenging in business and management research, especially in the human resources domain, where perception measurements are conducted. Therefore, it will be difficult for researchers to produce a BIRU (Best Linear Unbiased Estimate) regression equation if using a regression approach.

Measurement Model Testing (Outer Model). The measurement model testing stage includes testing Discriminant validity, Convergent Validity, and Composite Reliability. First, convergent validity was checked using AVE values and factor loadings. Discriminant validity is the next step, indicated by the cross-loading values. Next, the composite reliability value shows the second step, reliability testing.

Structural Model Testing (Inner Model). The purpose of evaluating the structural model in PLS-SEM is to determine its predictive power (Ghozali, 2021). Specifically, it seeks to determine whether the relationship between exogenous and endogenous constructs, two latent variables, can answer questions about the relationships between latent variables that have been the subject of previous hypotheses.

Importance Performance Map Analysis. Importance Performance Map Analysis (IPMA) is an analysis that combines descriptive analysis of the mean value with inferential analysis of the total effect value as an indication of importance. This analysis was carried out to provide managerial implications for management to pay attention to or prioritize managerial activities on aspects that are very important to the selected target but require performance improvement (Sarstedt et al., 2022; Hair et al., 2019).

Hypothesis test. Hypothesis testing can be carried out after a research model is believed to be fit. Hypothesis testing in this research is based on the results of SEM PLS analysis using a bootstrapping procedure with a one-tailed type, namely by looking at the coefficient values obtained (standardized coefficient), whether the direction of the coefficient is by the direction of the hypothesis (directional) that was previously written.

RESULT AND DISCUSSION

Direct influence is a term used to describe the direct impact of exogenous factors on endogenous variables without any additional (intervening) variables. The significance and direction of direct effects are demonstrated in SEM PLS analysis with path coefficients, t statistics, and p values for each route connecting endogenous and exogenous variables. Table 1 shows the direct effect of hypothesis testing in this research.

| Path       | Original Sample (O) | Sample Mean (M) | Standard Deviation (STDEV) | T Statistics (|O/STDEV|) | P Values |
|------------|---------------------|-----------------|---------------------------|------------------------|----------|
| ATB -> INT | 0,216               | 0,208           | 0,066                     | 3,258                  | 0,001    |
| SNE -> INT | 0,466               | 0,471           | 0,071                     | 6,537                  | 0,000    |
| DTL -> INT | 0,187               | 0,185           | 0,047                     | 3,974                  | 0,000    |
Table 1 shows that Attitude Toward Behavior has a positive and significant effect on the intention to adopt digital technology, as indicated by a p-value of 0.001 < 0.05, t statistic of 3.258 > 1.96, and a positive path coefficient of 0.216. Subjective Norm on Intention to Adopt Digital Technology, with a p-value of 0.000 < 0.05, t statistic of 6.537 > 1.96, and a positive path coefficient of 0.466, all show that Subjective Norm has a positive and substantial effect on Intention To Adopt Digital Technology. Digital Technology Literacy has a positive and significant effect on the intention to adopt digital technology as indicated by a p-value of 0.000 < 0.05, t statistic 3.974 > 1.96, and a positive path coefficient of 0.187 and Intention to adopt digital technology is positive and significantly influenced by Intention to Adopt Digital Technologies. Utilizing behavior is suggested by a positive path coefficient of 0.229, a t statistic of 4.047 > 1.96, and a p-value of 0.000 < 0.05.

Table 2. Indirect Effects

| Original Sample (O) | Sample Mean (M) | Standard Deviation (STDEV) | T Statistics (|O/STDEV|) | P Values |
|---------------------|-----------------|---------------------------|------------------------|----------|
| ATB -> INT -> DTUB  | 0.049           | 0.049                     | 0.021                  | 2.362    | 0.009 |
| DTL -> INT -> DTUB  | 0.043           | 0.043                     | 0.015                  | 2.774    | 0.003 |
| SNE -> INT -> DTUB  | 0.107           | 0.109                     | 0.031                  | 3.465    | 0.000 |

In the indirect path of the influence of attitude toward behavior towards digital technology Use behavior through intention to adopt digital technology, a p-value of 0.009 is obtained with a t statistic of 2.362 with a positive indirect path coefficient of 0.049 because the p-value obtained is <0.05 t statistic > 1.96 and the coefficient is positive, it is concluded that attitude toward behavior has an indirect effect on digital technology use behavior, mediated by intention to adopt digital technology. In the indirect path of the influence of digital technology literacy on digital technology use behavior through intention to adopt digital technology, the p-value obtained is 0.003 with a t statistic of 2.774 with a positive indirect path coefficient of 0.043 because the p-value obtained is <0.05 t statistic > 1.96 and the coefficient is positive, it is concluded that digital technology literacy has an indirect effect on digital technology use behavior, mediated by intention to adopt digital technology. In the indirect path of the influence of subjective norms on digital technology Use behavior through intention to adopt digital technology, a p-value of 0.000 was obtained with a t statistic of 3.465 with a positive indirect path coefficient of 0.107 because the p-value obtained was <0.05 t statistic > 1.96 and the coefficient is positive, it is concluded that subjective norms have an indirect effect on digital technology use behavior, mediated by intention to adopt digital technology.

The results of the descriptive analysis regarding attitude toward behavior show that overall motivation to work with digital technology is good. However, using digital technology to work more productively still needs improvement because this may occur according to research results from (Xin and Du, 2022), which state that there has been an increase in productivity due to using digital technology. Therefore, MSMEs need to make more efforts to use digital technology to increase productivity, and it is hoped that this will also impact the intention of MSME members to adopt digital technology (Putri et al., 2019).

Research regarding the influence of attitude toward behavior on the intention to adopt digital technology has been examined in previous studies. This research aligns with the results of Zhang et al. (2023), which shows a significant influence of attitude toward behavior on the intention to adopt technology by teenagers who sell culinary delights at Chinese food markets. This investigation's
findings align with previous research by Ramdani et al. (2022), which showed a significant influence of attitude toward behavior on intention to adopt digital technology in retail companies. Research results (Akroush & Al-Debei, 2005; Chou et al., 2010; Malufu et al., 2016; Mirzaeifar et al., 2020; Oentoro, 2020; Rastogi et al., 2020; Boo & Chua, 2022; Huang et al., 2022; Ramachandran & Stella, 2022; Tran & Serhal, 2023) also show results that attitude toward behavior is one of the factors that influences the intention to adopt digital technology.

Subjective norms refer to individuals' understanding of other people's views, which may influence their desire to engage in or not engage in certain activities. Previous studies have proven that subjective norms influence a person's interest in using a system. The findings of this study are in line with the research results. (Yuliana, 2004; Chou, Stu and Lin, 2010; Tjahjono and Palupi, 2014; Agung, Christian and Loisa, 2020; Hesniati et al., 2022) It also shows that the higher the subjective norm, the higher the intention to adopt digital technology.

In several previous studies, digital literacy has increased a person's intensity in using digital technology. The findings of this research are consistent with research findings (Jang et al., 2021; Rahmah & Gufron, 2023), which also show the results that digital literacy is one of the factors that influence a person's intention to use digital technology. Managers confident in their digital literacy abilities tend to be better prepared and more willing to use digital technology in carrying out complex work activities (Neumeyer et al., 2021). The research results of (Mulyati & Hati, 2021) also show the same results, as do the research results of (Ollerenshaw et al., 2021) (Masbiran et al., 2021) (Aldita & Alfansi, 2023; Cynthia et al., 2023; Ratnawati, 2021) shows the results that a person's digital literacy influences intention to use digital technology (Masbiran et al., 2021).

CONCLUSION

From the built hypothesis, it was stated that all hypotheses were accepted. Attitude toward behavior has a positive and significant effect on the intention to adopt digital technology; Subjective norm has a positive and significant effect on the intention to adopt digital technology. Digital Technology literacy has a positive and significant effect on the intention to adopt digital technology, and Intention to adopt digital technology has a positive and significant effect on digital technology use behavior. MSME owners/leaders need to realize that in business competition, digital technology has the potential to be disruptive, so MSMEs need to adopt digital transformation. Because one of the main obstacles in this case is a lack of digital skills, this research suggests that MSME owners/leaders can increase their digital knowledge and skills by increasing their digital literacy abilities.

By having digital literacy, MSME owners or leaders can increase awareness of changes in the market competition to formulate clear digital transformation goals in their businesses. By having digital literacy, MSME owners or leaders can use digital technology not only for marketing but also to innovate and develop businesses.

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