

# Social Media in Micro-Enterprises: Exploring Adoption in the Indonesian Retail Sector

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## ABSTRACT

Social media is increasingly gaining traction as a valuable tool for small business. This is particularly the case in micro enterprises in the Indonesian retail industry, where adoption is anecdotally increasing, but with little understanding of the factors enabling such adoption. Consequently, this study proposes a research model derived from the Unified Theory of Acceptance and the Use of Technology and extended by integrating the task-technology-fit framework, along with price value propositions. Online surveys were sent to micro enterprises operating in the Indonesian retail industry with 153 valid responses received. Data analysis used structural equation modelling with SmartPLS 3. The results show that price value and task-technology-fit are perceived as significant factors for influencing positive attitudes towards the adoption of social media among micro enterprises. In addition, attitude and facilitating conditions were found to have a significant influence on intention to adopt social media. These findings hold import implications to theory and practice in this nascent field of research.

## KEYWORDS

Indonesia, Micro Enterprises, Mobile Commerce, Price Value, Social Media Adoption, Task-Technology-Fit, UTAUT

## INTRODUCTION

Social media is widely acknowledged as having enabled many recent social, economic, and political transformations. Over the past decade, the economic impact of social media on business organizations has attracted much interest among researchers, policy makers and the general public. These media, which include Wikipedia, YouTube, Facebook, Second Life, and Twitter, have become established as essential for achieving broad organizational advantage (Kaplan and Haenlein, 2010). Such advantages include better connections with stakeholders (Kaplan and Haenlein, 2010), improved brand affinity, increased sales opportunities, enhanced customer support, favorable customer sentiment, effective recruitment (Wood & Khan, 2016), better communication between customers and sellers, heightened relationship building and trust, and easier identification of potential business partners (Kelleher & Sweetser, 2012; Michaelidou, Siamagka, & Christodoulides, 2011). Moreover, social media provide innovative ways for firms to identify product bestsellers and attract and retain customers (Wamba & Carter, 2014).

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Concurrent with the rise of social media, has come a growing appreciation of the role of micro enterprises (MEs), which are viewed as pivotal to the economies of many countries. MEs represent the largest proportion of companies in the majority of economies and play an important role because of their flexibility, substantial employment, capacity to generate income, and their ability to innovate. Consequently, their survival and growth has been a major concern in an increasingly competitive globalized business environment often dominated by multinational corporations. However, many more optimistic researchers have heralded social media as a potential equalizer for MEs that has the potential to empower small organizations to effectively compete with their larger counterparts. It is well established that small-to-medium enterprises (SMEs) can benefit from the use of social media (Ainin, Parveen, Moghavvemi, Jaafar, & Mohd Shuib, 2015; Dahnil, Marzuki, Langgat, & Fabeil, 2014; Ghezzi, Gastaldi, Lettieri, Martini, & Corso, 2016; McCann & Barlow, 2015; Wamba & Carter, 2014). Given their widespread use and low cost of adoption (McCann & Barlow, 2015), social media can be a potential solution to overcome the drawbacks many MEs encounter in conducting business, especially their limited human resources, scarce financial resources, and basic IT infrastructure.

Although research on social media in SMEs has deservedly attracted attention, research pertaining to social media adoption among MEs, which typically have five or fewer employees, is still in its infancy, especially in developing countries. This is the primary motivator for this research. This study is empirically contextualized in Indonesia's retail industry because of the anecdotal evidence of the growing diffusion of social media in this industry, the lack of relevant research in such a context, and practical reasons pertaining to access to data. We have especially undertaken to answer this research question: What factors influence the adoption of social media among MEs in the Indonesian retail sector?

This paper commences by providing a theoretical background, research model, research methods, then continues to empirical results followed by a discussion of findings and their implications for theory and for practice. We conclude with a review of our key findings and suggestions for future research directions.

## **LITERATURE REVIEW**

### **Characteristics of Micro Enterprises**

Firms are predominantly classified based on their number of employees and, to a lesser extent, by their financial turnover. Governmental policies and definitions often determine these classifications. Some governmental policies and researchers consider an SME as having up to 500 employees, small firms to be those with fewer than 100 employees, and MEs as those with no more than five employees (Liberman-Yaconi, Hooper, & Hutchings, 2010).

Each country has varying cutoff points in their definitions of MEs, and these may even vary by industry. For example, in South Africa, an ME is defined as a business that has a turnover below the stipulated South African value-added tax (VAT) registration limit. These MEs do not formally register as an enterprise and employ no more than five people (Marnewick, 2014). Meanwhile, Indonesia's context delineates MEs based on financial turnover without regard to number of employees. The Republic of Indonesia Law No. 20 of 2008 on micro, small, and medium enterprises (MSMEs) defines an ME as a productive enterprise owned by an individual and/or individual business entities that has total net assets of IDR50 million or less, excluding land and buildings, or has annual sales of IDR300 million or less. Therefore, this Indonesian Law differentiates the criteria for MSMEs based on assets (net worth) and annual sales regardless of the number of employees.

MEs are often established and run by an entrepreneur who is often the owner, manager, and/or employee (Bravo, Maldonado, & Weber, 2013). Karjaluoto and Huhtamäki (2010) found that one of the most prominent determinants of the fate of MEs lies in the crucial role of the owner/manager. Thus, the owner/manager's personal characteristics such as attitude, aspirations, and values shape

those of the ME. The owner's or manager's motivation is also considered one of the most important factors determining e-business development in MEs because control is mainly in their hands. Prior studies highlight the notable characteristics of MEs. For example, MEs seldom involve informal contractual agreements with banks, suppliers, customers, or other stakeholders (Lieberman-Yaconi et al., 2010; Roy & Wheeler, 2006). They usually do not formally register (Marnewick, 2014) and have a small market share (Lieberman-Yaconi et al., 2010). Furthermore, Roy and Wheeler (2006) indicated that, in terms of business activity selection, MEs are usually directed by intuition based on a combination of the owner/manager's personal interest, ease of work, past training and experience (both formal and informal), current financial capacity, and a somewhat simple business assessment. Therefore, the decision in MEs to adopt IT such as social media is highly dependent on the owner/manager's interest, experience, intuition, and predisposition.

MEs have also been acknowledged as playing an important economic role as a major source of national income and employment (Lieberman-Yaconi et al., 2010; Marnewick, 2014). They are a significant part of the economy in both developing and developed countries. However, MEs have several limitations because of scarcities, including those of human, financial, and skill-based resources, especially in information technology (IT). Limited technological skills may hinder MEs from adopting traditional technologies and effectively integrating them into the business. Therefore, finding suitable and easily adaptable tools, such as social media, may assist MEs in overcoming these problems.

### **MSMEs, Social Media, and Mobile Technologies**

Few researchers have focused on IT adoption in MEs. The research that has been done focused around grants for the adoption of hardware and software (Wolcott, Kamal, & Qureshi, 2008); the adoption of suitable advance manufacturing technologies (AMT) in India (Singh, Singh, & Yadav, 2014); and the adoption of corporate Websites to strengthen brand visibility in Nigeria (Osakwe & Chovancova, 2016). This latter study suggested that Nigeria's policy makers and related stakeholders should support the adoption and diffusion of corporate Websites among MEs. Overall, these studies emphasized that the big problems related to IT adoption in MEs are born out of a lack of IT skills, a lack of interest among owners, a lack of infrastructure, a lack of government support, and financial problems.

Although social media could indeed play a role in mitigating these factors, specific research into social media adoption among MEs is still rare. Notably, a broad study by Syuhada and Gambetta (2013) described the problems encountered by MSMEs in the adoption of e-commerce in Indonesia and highlighted the need for the development of online marketplaces for MSMEs. Another study conducted by Mandal and McQueen (2012) emphasized the use of UTAUT to explain social media adoption by MEs.

Prior research also categorized the dimensions of social media in different ways. Kaplan and Haenlein (2010) classified social media based on social presence/media richness and self-presentation/self-disclosure. Wood and Khan (2016) specified social media based on tools and objectives (such as blogs, Twitter, LinkedIn, and Facebook), internally developed social networks (such as the Cisco Learning Network), special purpose social software for enterprises (such as Chatter, Jive or Yammer), and data derived from social media and technologies (such as crowdsourcing or marketing intelligence). Conversely, Kietzmann, Hermkens, McCarthy, and Silvestre (2011) used the seven major functionalities afforded by social media as the means for classification; these seven are identity, conversation, sharing, presence, relationships, reputation, and groups. However, a study by McCann and Barlow (2015) showed overlaps in the functionality of social media applications, the type of human social interactions, and the level of information content for the classification approaches adopted by different authors. Moreover, several studies proposed the inclusion of the influence of culture in analyses of social media adoption (Ghezzi et al., 2016; Wamba & Carter, 2014).

With the ubiquitous diffusion of mobile devices, social media, along with many consumer-oriented e-commerce activities, have become mobile. The use of mobile devices such as smartphones, tablets, and laptops permit easy access to social media and to online business transactions. Moreover, the

unique features of mobile technologies such as portability, user verification, instant connectivity, and convenience (Picoto, Bélanger, & Palma-dos-Reis, 2014) can have an important impact on business operations. Consequently, the fusion of mobile and social technologies facilitates rapid interactions between businesses and their customers. They allow for localization and personalization of services. Localization refers to real-time identification of a user's physical location, hence providing them with personalized instantaneous mobile advertisements, coupons, or services based on their interests (Turban, King, Lee, Liang, & Turban, 2015).

### **Micro Enterprises and Technology Adoption in Indonesia**

A decade ago, the World Bank reported that two Southeast Asian countries, Brunei Darussalam and Indonesia, as having the highest density of formal MSMEs in the world. Others in the top five, in order, were Paraguay, the Czech Republic, and Ecuador (Kushnir, Mirmulstein, & Ramalho, 2010). Brunei Darussalam had 122 formal MSMEs and Indonesia 100 MSMEs per 1,000 people. High-income countries generally have lower MSMEs ratios. The ratio is highly correlated with economic development and job creation in the region. Indonesia was at the time also one of the fast-growing markets for social media (Kushnir et al., 2010). More recently, surveys have indicated that Indonesians spend almost three hours a day on social media (Kemp, 2015). The top 10 most active social media platforms used in Indonesia are Facebook (14%), followed by WhatsApp (12%), Twitter (11%), Facebook Messenger (9%), Google+ (9%), LinkedIn (7%), Instagram (7%), Skype (6%), Pinterest (6%), and Line (6%) (Kemp, 2015).

Given this growth of social media use in Indonesia, it appears essential for business leaders to consider adopting suitable social media that can engage customers in order to increase the value of their organizations and achieve their business objectives. Current findings also indicate that high numbers of small businesses, including MEs in Asian countries (the top three being Indonesia, Vietnam, and China), are using social media for business purposes (92.6%) at rates higher than those in New Zealand (56.5%) and Australia (50.2%) (CPAAustralia, 2015). Asian small businesses are considered to be more innovative and creative compared with Australian and New Zealand's small businesses, according to a report by the Chartered Professional Accountants (CPA) of Australia (2015). This indicates that the use of social media may have enabled Asian small businesses to become more innovative.

## **RESEARCH MODEL AND HYPOTHESES**

### **Unified Theory of Acceptance and Use of Technology (UTAUT)**

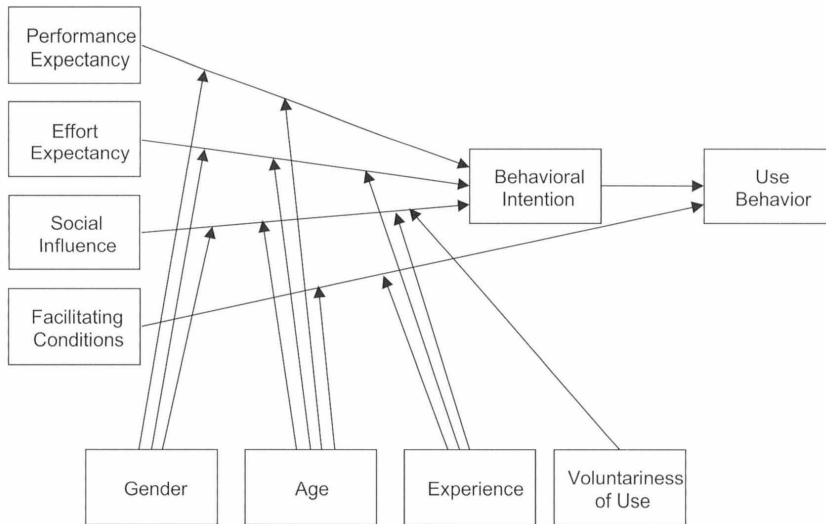
The unified theory of acceptance and use of technology (UTAUT) provides a holistic amalgamation of eight theories and models, all aimed at explaining intention and behavior as they relate to the use of technology. This study uses the UTAUT as the underpinning theory to explain the adoption of social media among MEs. It modifies and extends the theory to accommodate the research objective.

The UTAUT was originally proposed by Venkatesh, Morris, Davis, and Davis (2003) to provide a useful instrument to assess user acceptance and usage behavior in IT. The theory helps managers assess the prospect of success of new technology adoption and assists them in understanding the drivers of acceptance to proactively design interventions such as training and marketing. The eight theories and models integrated by UTAUT are: the theory of reasoned action (TRA), the technology acceptance model (TAM), the motivational model (MM), the theory of planned behavior (TPB), a model combining the technology acceptance model and the theory of planned behavior (Combined TAM-TPB), the model of PC utilization (MPCU), the innovation diffusion theory (IDT), and the social cognitive theory (SCT).

The original UTAUT theory proposed three direct determinants of behavioral intention — performance expectancy, effort expectancy, and social influence — and two direct determinants of

usage behavior, intention and facilitating conditions. These are demonstrated in Figure 1. The theory also assumes gender, age, experience, and voluntariness of use moderate the effect of the four core constructs. This original version of the UTAUT was able to account for 70% of the variance (adjusted  $R^2$ ) in usage intention, a result superior to any of the eight models applied independently (Venkatesh et

Figure 1. Original UTAUT model adapted from Venkatesh et al. (2003)



al., 2003). Therefore, the UTAUT could be applied to gain an understanding of a variety of problems related to Information Systems (IS) or IT adoption and diffusion (Williams, Rana, & Dwivedi, 2012).

The UTAUT has been widely used in various technology adoption studies of online behavior. Some examples are online banking behavior (Al-Qeisi, Dennis, Hegazy, & Abbad, 2015; Oh & Yoon, 2014), mobile device acceptance (Carlsson, Carlsson, Hyvönen, Puhakainen, & Walden, 2006); mobile commerce (Qingfei, Shaobo, & Gang, 2008); micro blogging adoption in enterprises (Günther, Krasnova, Riehle, & Schöndienst, 2009); social media among student entrepreneurs (Shokery, Nawi, Nasir, & Al Mamun, 2016); and e-commerce adoption (Chiemeké & Ewwiekpaefe, 2011).

In terms of social media adoption, specifically, the UTAUT has been used in several studies. For example, Gruzdz, Staves, and Wilk (2012) examined the use of social media by scholars; Günther et al. (2009) studied microblogging in enterprises; Mandal and McQueen (2012) investigated social media adoption by MEs; Salim (2012) studied social media in Egypt; Talukder, Quazi, and Djatikusumo (2013) investigated the impact of social influence on individuals' adoption of social networks in SMEs; Wong, Tan, Loke, and Ooi (2015) explored factors that influence users' behavioral intentions to adopt mobile social networking in learning; and Yueh, Huang, and Chang (2015) investigated factors affecting students' continued Wiki use for individual and collaborative learning. Therefore, the UTAUT is well-established in technology adoption research in general and in social media adoption research in particular.

The UTAUT aligns well with our objective of investigating the adoption of social media among MEs in the Indonesian retail sector. Nevertheless, it does have limitations in relation to concepts of price value and technology fit. MEs usually do not have formal processes and delegation and have limited access to resources, all concepts not well captured in the original UTAUT model. To address these limitations while still building upon the original UTAUT, we have extended the UTAUT with two additional concepts. These are price value (adapted from UTAUT2) and task technology fit (Goodhue

& Thompson, 1995). This extended model allows a deeper examination of price value propositions in resource poor MEs along with an examination of the fit between tasks and technology. We expected a good fit between tasks and technology could promote users' adoption of social media. In contrast, a poor fit could decrease users' intent to adopt. These concepts are discussed in detail below.

## Price Value

We adapted the price value construct from the UTAUT2 model proposed by Venkatesh, Thong, and Xu (2012). An important difference between a consumer use setting (UTAUT2) and an organizational use setting — the context in which the original UTAUT was developed — is that consumers usually bear the monetary cost of such use whereas employees do not. The cost and pricing structure may have a significant impact on consumers' technology use. Similarly, because of their limited finances, MEs must consider the cost and value proposition of using certain technologies for their business activities.

In marketing research, the monetary cost/price construct is usually conceptualized together with the quality of products or services to determine the perceived value of such products or services (Zeithaml, 1988). Our study followed this principle and defined price value as consumers' cognitive tradeoff between the perceived benefits of applications and the monetary cost for using them (Dodds, Monroe, & Grewal, 1991). The price value is positive when the benefits of using a technology are perceived to be greater than the monetary cost. Then, such price value would be considered to have a positive impact on intention to use a technology, which would necessitate the addition to the model of this variable as a predictor of behavioral intention to use technology (Venkatesh et al., 2012).

## Task-Technology Fit

The task-technology-fit (TTF) model attempts to explain how technology affects performance. Proposed by Goodhue and Thompson (1995), the TTF model suggests that technology adoption depends on how well the new technology fits or supports the requirements of particular task(s). Specifically, the TTF model is used to investigate the correspondence between task requirements, individual abilities, and the functionality of the technology.

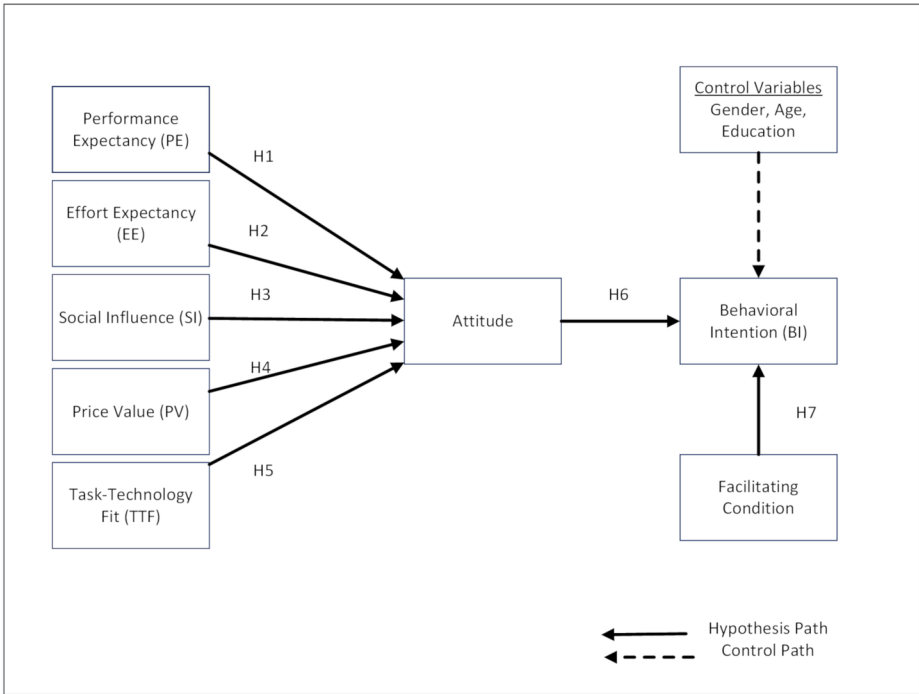
The TTF model has been successfully implemented to predict acceptance of group decision support systems (Zigurs, Buckland, Connolly, & Wilson, 1999), adoption of systems for accounting decision making (Benford & Hunton, 2000), and to evaluate online shopping (Klopping & McKinney, 2004). Dishaw and Strong (1999) used an integrated TTF model with TAM to explain the relationship between software use and users' performance; and Lee, Choi, Kim, and Hong (2007) used a modified TTF model to explore the factors affecting the adoption of mCommerce (Mobile Commerce) in the insurance industry. Moreover, Oliveira, Faria, Thomas, and Popovic (2014) used an integrated model of UTAUT, TTF, and the Initial Trust Model (ITM) to study mobile banking adoption.

Figure 2 illustrates the proposed research model in which we extended the UTAUT by incorporating price value and TTF. Taking previous findings into consideration, in our study the three UTAUT variables, together with additional variables relating to price value and TTF, are the determinants of attitude. This builds upon Davis, Bagozzi, and Warshaw (1989). They asserted that individual behavioral intention to use a technology is determined by an individual's attitude toward such technology. This was further reinforced by findings in Finland in the context of mobile devices and services (Carlsson et al., 2006). Meanwhile, facilitating conditions have a direct effect on the behavioral intention of using social media. Each of the variables in the proposed model will be explained in the following discussion.

## Performance Expectancy

Performance expectancy is the degree to which an individual believes that using a system will provide a benefit or enhance job performance (Venkatesh et al., 2003). Performance expectancy corresponds with perceived usefulness in TAM. Perceived usefulness and perceived ease of use in TAM are determinants of attitude (Davis, 1989; Davis, Bagozzi, & Warshaw, 1989; Venkatesh et al.,

Figure 2. Research model



2003). ME operatives may have certain expectations that the use of social media can improve their business performance. Consequently, they will use social media to facilitate their business processes. Therefore, we propose the first hypothesis:

**H1:** Performance expectancy has a positive influence on attitudes toward social media adoption among MEs in the Indonesian retail industry.

### *Effort Expectancy*

Effort expectancy is the degree of ease an individual associate with the use of a system (Venkatesh et al., 2003). It is derived from perceived ease of use in the TAM, and it is one of the determinants of attitude (Davis, 1989; Davis et al., 1989). Dealing with limited technological skills, operatives in MEs may have a certain expectation that social media is easy to use in helping them conduct their businesses, leading them to use social media. Therefore, we propose our second hypothesis:

**H2:** Effort expectancy has a positive influence on attitudes toward social media adoption among MEs in the Indonesian retail industry.

### *Social Influence*

Social influence describes a situation in which an individual perceives that others believe he or she should use a new technology (Venkatesh et al., 2003). Social influence is derived from a subjective norm in which there is a perception of social pressure to perform or avoid a behavior (Ajzen, 1991; Venkatesh, Morris, & Ackerman, 2000). The attitudes of MEs toward use social media can come through the influence of a person or a group. For example, the influence may come from family,

friends, competitors, suppliers, retail customers, etc., whose influence is considered important. Therefore, we propose our third hypothesis:

**H3:** Social influence has a positive influence on attitudes toward social media adoption among MEs in the Indonesian retail industry.

#### *Price Value*

Price is the sum of all the costs (such as money, time, and energy) that buyers exchange for the benefits of having or using a service (Strauss & Frost, 2013). The cost and pricing structure may have a significant impact on consumers' decisions to use technology (Venkatesh, Thong, & Xu, 2012). Monetary cost or price is usually conjectured together with the quality of products or services to establish a perceived value. For instance, there is evidence that the popularity of short messaging services (SMS) in China is owed to its low pricing compared with other types of mobile Internet applications (Chan, Gong, Xu, & Thong, 2008). Users consider price value or cost in deciding whether to use certain technology. Low-cost technology with many benefits will likely attract users. Social media can attract MEs because it can potentially provide significant benefits for relatively little cost. Therefore, we propose the following hypothesis:

**H4:** Price value has a positive influence on attitudes toward social media adoption among MEs in the Indonesian retail industry.

#### *Task-Technology-Fit*

The TTF model suggests that user adoption depends on how well the technology fits the requirement of a particular task (Goodhue & Thompson, 1995). The TTF model connects the task requirements, individual abilities, and functionality of a technology. Several studies have implemented the TTF model in research; for example, in e-commerce, the use may be related to how well the consumer feels Web technology fits a task (Klopping & McKinney, 2004). Another implementation of the TTF model relates to the attraction of traditional banks to mobile banking (Zhou, Lu, & Wang, 2010) and the adoption of mobile banking in Portugal (Oliveira et al., 2014). Those studies confirmed that the TTF model is a significant predictor of users' adoption of certain technologies. Operatives of MEs will use social media if they feel such technologies fit with the task or business activities conducted by the enterprise. Therefore, we propose the following hypothesis:

**H5:** Task-Technology-Fit has a positive influence on attitudes toward social media adoption among MEs in the Indonesian retail industry.

#### *Impact of Attitudes*

The connection between attitude and behavior has been well documented in the previous literature. The TRA and TAM suggest that attitudes are significant predictors of behavioral intentions that in turn are predictive of behavior (Davis et al., 1989; Krishnan & Hunt, 2015). Attitudes differ from behaviors. Attitudes are internal evaluations about people, products, and other objects. They can be either positive or negative, but the evaluation process occurs implicitly inside a person's mind. Behaviors refer to what a person does physically, such as talking, registering at a Website, posting a comment on a blog, liking a Facebook fan page, or visiting a Website to purchase a product (Strauss & Frost, 2013). An attitude toward using technology is defined as an individual's overall affective reaction to using a system (Venkatesh et al., 2003). It is the individual's positive or negative feelings about performing a behavior (Klopping & McKinney, 2004; Krishnan & Hunt, 2015). Empirical testing indicates that the attitude construct in some cases (e.g., TRA, TPB/DTPB, and MM) is significant



across time periods (e.g., post-training, one month after implementation, and three months after implementation) and is the strongest predictor of behavioral intention. Therefore, we hypothesize that:

**H6:** Attitudes have a positive influence on behavioral intention to adopt social media among MEs in the Indonesian retail industry.

### *Facilitating Conditions*

Facilitating conditions are defined as the degree of belief in the existence of technical and organizational infrastructure to support the usage of a new technology (Venkatesh et al., 2003). They relate to the availability of technological or organizational resources such as knowledge, infrastructure, and the ability to eliminate obstacles to using a system (Venkatesh, Brown, & Maruping, 2008). Facilitating conditions have a direct influence on the usage of a technology. Our goal was to assess such conditions by testing whether operatives of MEs intend to use social media when resources and support are available. Therefore, we propose the following hypothesis:

**H7:** Facilitating conditions have a positive influence on behavioral intention to adopt social media among MEs in the Indonesian retail industry.

## **RESEARCH METHODS**

We adopted a positivist research approach by using a quantitative methodology and methods to collect and analyze empirical data. Indonesian owners/operatives of MEs in the retail industry are the unit of data collection in this study. The research was approved by the university and conducted according to its stipulations of human ethics directives. A survey instrument was derived from the research model, and we used Qualtrics to construct an online questionnaire. All the items were measured using a 7-point Likert-type scale ranging from “strongly disagree” (1) to “strongly agree” (7). Table 1 contains a description of each construct and measurement item.

We obtained a list of potential participants from the Central Bank of the Republic of Indonesia’s database (<https://www.bi.go.id/id/umkm/klaster/Contents/Default.aspx>) and from retailer groups on popular social media Websites such as Facebook, WhatsApp, and Line. We selected 600 Indonesian MEs in the retail industry based on the criteria stipulated in Indonesia’s Law No. 20 of 2008 on micro, small, and medium enterprises. The survey was then sent out directly to the owners of the MEs. Most Indonesian MEs are operated by one individual. We requested that one person, the owner/manager, answer the survey. Empirical data were collected from 5 July to 19 August 2016. In total, invitation emails with a link to the questionnaire were sent out to 600 MEs in the retailing sector. We received 153 valid anonymous responses during the period for a response rate of 25.50% based on the 600 questionnaires distributed. Demographic data of the MEs were examined using IBM SPSS version 22. Meanwhile, we used SmartPLS 3 with a PLS-SEM approach to evaluate the structural and measurement models and test our hypotheses.

The demographic profile indicates that most of the respondents were from the clothing and footwear and food and beverages sectors. These two sectors seem to be favored by consumers in the Indonesian online retail industry. Female respondents accounted for 59.5% in this study and male respondents 39.9%. Meanwhile, the age of most respondents was in the range of 20 to 29 years and 30 to 39 years. In educational achievement, bachelor’s degrees were the most numerous, with high school graduates second, and master’s degrees third. Most respondents accessed social media through mobile devices, mostly from smartphones (62.8%), laptops (21.2%) and tablets (16%). Importantly, most of the respondents spent more than two hours a day on social media for business purposes (62.7%).

**Table 1. Description of the construct**

|    | Construct                    | Description  | Adapted From   |
|----|------------------------------|--|--|
| IV | Performance Expectancy (PE)  | The degree to which an individual believes that using the system will provide a benefit or enhance job performance.<br>PE2: Using social media helps me to accomplish tasks more quickly<br>PE3: Using social media increases the effective use of my time in handling my tasks<br>PE4: If I use social media, I will increase my chances of getting a raise | (Oh & Yoon, 2014; Venkatesh et al., 2003; Venkatesh et al., 2012)                              |
|    | Effort Expectancy (EE)       | The degree of ease an individual associate with the use of a system.<br>EE1: Learning how to use social media is easy for me.<br>EE2: My interaction with social media is clear and understandable.<br>EE3: I find social media easy to use.<br>EE4: It is easy for me to become skillful at using social media.   | (Oh & Yoon, 2014; Venkatesh et al., 2003; Venkatesh et al., 2012)                              |
|    | Social Influence (SI)        | The situation in which an individual perceives that significant others believe that he or she should use the new technology.<br>SI1: My family influences me to use social media for my business.<br>SI2: My friend and colleagues influence me to use social media for my business.<br>SI3: Most of my competitors use social media for business.           | (Oh & Yoon, 2014; Venkatesh et al., 2003; Venkatesh et al., 2012)                              |
|    | Price Value (PV)             | Users' cognitive tradeoff between the perceived benefits of the application and the monetary cost for using it.<br>PV1: Cost to set up mobile Internet connection is reasonable<br>PV2: At the current price, I can experience social media facilities reasonably<br>PV3: Using social media can save my operational expenses                                | (Venkatesh et al., 2012)   |
|    | Facilitating Conditions (FC) | The degree of belief in the existence of the technical and organizational infrastructure to support the usage of a new technology.<br>FC1: I have the resources necessary to use social media.<br>FC2: Social media is compatible with other technologies I use.<br>FC3: The quality of Internet connection is good enough to operate the business           | (Oh & Yoon, 2014; Venkatesh et al., 2008; Venkatesh et al., 2003; Venkatesh et al., 2012)      |
|    | Task-Technology Fit (TTF)    | User adoption depends on how well the technology fits the requirement of a particular task.<br>TTF1: Social media are compatible with all aspects of my work<br>TTF2: Social media fits well with the way I like to work.<br>TTF3: Social media fits into my work style  | (Goodhue & Thompson, 1995; Kloppe & McKinney, 2004; I. Lee et al., 2007; Vatanasakdakul, 2008) |
| DV | Attitude (ATT)               | An individual's overall affective reaction to using a system.<br>ATT1: Using social media is a good idea<br>ATT 2: Social media makes work more interesting<br>ATT 3: Working with social media is fun<br>ATT4: The effect of using social media makes me feel satisfied   | (Venkatesh et al., 2003)   |
|    | Behavioral Intention (BI)    | A measure of the strength of one's intention to perform a specified behavior.<br>BI1: I intend to continue using social media in the future<br>BI2: I will always try to use social media in my daily life<br>BI3: I plan to use social media frequently   | (Oh & Yoon, 2014; Venkatesh et al., 2003; Venkatesh et al., 2008)                              |

Notes: IV = Independent Variable; DV = Dependent Variable

## RESULTS

### Evaluation of Measurement Model

We conducted reliability and validity tests to ensure the accuracy of the structural model analysis. Table 2 presents the results of reliability testing via bootstrapping. The analysis includes PLS loadings, T-statistics, significance levels, composite reliability, average variance extracted (AVE) and Cronbach's alpha. Overall, reflective scales confirmed acceptable performance above the minimum value of

composite reliability, which is greater than 0.7. The results indicate that all the scales performed acceptably in this study, and the T-statistics indicate that all items were at a significance level of 99%.

The statistical results in Table 2 indicate all the Cronbach's alpha scales exceeded the acceptable limit of 0.7. Hair, Hult, Ringle, and Sarstedt (2014) have suggested that the AVE scales should exceed 0.5, indicating that the construct clarifies 50% or more of the variance of its indicators. All the scales performed acceptably on this standard. The correlation matrix in Table 3 shows that the square roots of AVE are greater than the corresponding off-diagonal elements. This result indicates that no measure tapped into different concepts. Thus, discriminant validity is confirmed. The cross-loadings procedure was also calculated to confirm discriminant validity. This procedure shows whether the indicators were to be declined or kept. All the results indicate that the validity criteria in this study have been met.

## Structural Model Results

We used PLS-SEM to evaluate the structural model. The evaluation included the assessments of coefficients of determination ( $R^2$ ),  $f^2$  effect sizes, predictive relevance ( $Q^2$ ), and the significance of path coefficients. Figure 3 presents the full partial least square graphic output for this research. The coefficient of determination is commonly used to assess the structural model. The  $R^2$  value suggests the extent to which the independent constructs could predict or explain the dependent constructs. The bigger  $R^2$  is, the more predictive power the model implies. Figure 3 shows that the  $R^2$  of Attitude is 0.726. This indicates that the PE, EE, SI, PV and TTF accounted for 72.6% of the variance of the construct. The  $R^2$  of 0.607 of behavioral intention indicates that attitude and facilitating conditions accounted for 60.7% of the variance of the construct.

The strength of the effect of a particular independent construct on the dependent construct in the model can be investigated by looking at the effect size or  $f$  square ( $f^2$ ). Hair et al. (2014) recommended the criteria for determining the degree of the effect size as  $f^2 = 0.02$ , which is classified as a small effect;  $f^2 = 0.15$  is classified as a medium effect, and  $f^2 = 0.35$  is a large effect. The results indicate that attitude has a large influence on behavioral intention, with a size effect of 0.488. Meanwhile, the TTF affects attitude moderately.

Furthermore, the Stone-Geisser's  $Q^2$  value should be examined as an additional evaluation of the magnitude of  $R^2$  values.  $Q^2$  values larger than zero for certain reflective endogenous latent variables indicate the path model's predictive relevance for this particular construct (Hair et al., 2014). A blindfolding procedure was used to obtain cross-validated redundancy measures for each endogenous construct. The  $Q^2$  predictive values of attitude (0.576) and behavioral intention (0.466) exceed 0, indicating that the model has predictive relevance for these constructs.

We further validated testing of the hypotheses by conducting significance tests of path coefficients. Bootstrapping analysis was performed to estimate the precision of the PLS estimates. The results of path coefficients in Table 4 show that PE, EE, and SI had no significant influence on attitudes toward using social media. Meanwhile, the results of the analysis support the hypotheses that PV and the TTF model had significant impact on attitudes toward using social media. Task-technology fit is significant at 0.01, and PV significant at 0.05. Furthermore, facilitating conditions have a direct significant influence on behavioral intention to use social media among Indonesian MEs in the retail sector. The findings also suggest that attitude positively predicts the behavioral intention to use social media.

## ANALYSIS AND DISCUSSION

The results in this study reveal that the extended research model based on the UTAUT is applicable in explaining factors that influence adoption of social media among MEs in the Indonesian retail sector. Several theoretical models have emphasized that behavioral intention is the best predictor of human behavior. The findings of Lee and Rao (2009) and Zuiderwijk et al. (2015) are examples. Interestingly, in the case of Indonesian MEs, the findings indicate that the three main variables from the original UTAUT model — PE, EE, and SI — are not major determinants of attitudes toward

**Table 2. Summary statistics of measurement model**

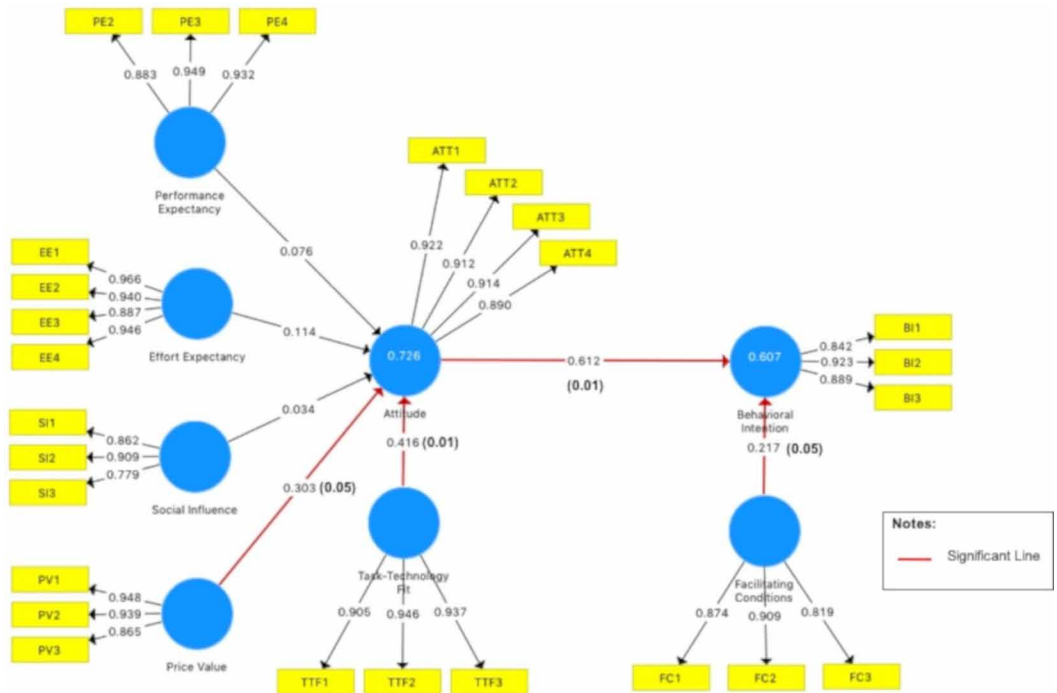
| Construct and Items     | PLS Loadings | T Statistics | Significance Level | Composite Reliability | AVE   | Cronbach's Alpha |
|-------------------------|--------------|--------------|--------------------|-----------------------|-------|------------------|
| Attitude                |              |              |                    | 0.950                 | 0.827 | 0.930            |
| ATT1                    | 0.922        | 46.134       | 0.01               |                       |       |                  |
| ATT2                    | 0.912        | 38.144       | 0.01               |                       |       |                  |
| ATT3                    | 0.914        | 42.901       | 0.01               |                       |       |                  |
| ATT4                    | 0.890        | 26.517       | 0.01               |                       |       |                  |
| Behavioral Intention    |              |              |                    | 0.916                 | 0.784 | 0.861            |
| BI1                     | 0.842        | 26.858       | 0.01               |                       |       |                  |
| BI2                     | 0.923        | 41.265       | 0.01               |                       |       |                  |
| BI3                     | 0.889        | 32.346       | 0.01               |                       |       |                  |
| Task-Technology-Fit     |              |              |                    | 0.950                 | 0.864 | 0.921            |
| TTF1                    | 0.905        | 35.759       | 0.01               |                       |       |                  |
| TTF2                    | 0.946        | 73.247       | 0.01               |                       |       |                  |
| TTF3                    | 0.937        | 60.011       | 0.01               |                       |       |                  |
| Effort Expectancy       |              |              |                    | 0.965                 | 0.874 | 0.952            |
| EE1                     | 0.966        | 85.284       | 0.01               |                       |       |                  |
| EE2                     | 0.940        | 38.456       | 0.01               |                       |       |                  |
| EE3                     | 0.887        | 21.939       | 0.01               |                       |       |                  |
| EE4                     | 0.946        | 51.312       | 0.01               |                       |       |                  |
| Facilitating Conditions |              |              |                    | 0.902                 | 0.754 | 0.836            |
| FC1                     | 0.874        | 27.021       | 0.01               |                       |       |                  |
| FC2                     | 0.909        | 50.832       | 0.01               |                       |       |                  |
| FC3                     | 0.819        | 19.846       | 0.01               |                       |       |                  |
| Performance Expectancy  |              |              | 0.944              | 0.849                 | 0.911 |                  |
| PE2                     | 0.883        | 31.840       | 0.01               |                       |       |                  |
| PE3                     | 0.949        | 79.406       | 0.01               |                       |       |                  |
| PE4                     | 0.932        | 58.433       | 0.01               |                       |       |                  |
| Price Value             |              |              |                    | 0.941                 | 0.843 | 0.906            |
| PV1                     | 0.948        | 79.283       | 0.01               |                       |       |                  |
| PV2                     | 0.939        | 69.462       | 0.01               |                       |       |                  |
| PV3                     | 0.865        | 22.164       | 0.01               |                       |       |                  |
| Social Influence        |              |              |                    | 0.887                 | 0.725 | 0.809            |
| SI1                     | 0.862        | 37.889       | 0.01               |                       |       |                  |
| SI2                     | 0.909        | 50.222       | 0.01               |                       |       |                  |
| SI3                     | 0.779        | 12.381       | 0.01               |                       |       |                  |

Table 3. Correlation of variables compared with square root AVEs

| Measures                | Attitude      | Behavioral Intention | Effort Expectancy | Facilitating Conditions | Performance Expectancy | Price Value  | Social Influence | Task-Technology Fit |
|-------------------------|---------------|----------------------|-------------------|-------------------------|------------------------|--------------|------------------|---------------------|
| Attitude                | <b>0.910*</b> |                      |                   |                         |                        |              |                  |                     |
| Behavioral Intention    | 0.764         | <b>0.885</b>         |                   |                         |                        |              |                  |                     |
| Effort Expectancy       | 0.711         | 0.573                | <b>0.935</b>      |                         |                        |              |                  |                     |
| Facilitating Conditions | 0.699         | 0.645                | 0.598             | <b>0.868</b>            |                        |              |                  |                     |
| Performance Expectancy  | 0.705         | 0.690                | 0.681             | 0.609                   | <b>0.922</b>           |              |                  |                     |
| Price Value             | 0.773         | 0.596                | 0.758             | 0.782                   | 0.684                  | <b>0.918</b> |                  |                     |
| Social Influence        | 0.710         | 0.702                | 0.657             | 0.678                   | 0.793                  | 0.740        | <b>0.851</b>     |                     |
| Task-Technology Fit     | 0.803         | 0.738                | 0.706             | 0.669                   | 0.764                  | 0.739        | 0.764            | <b>0.929</b>        |

\*Diagonal elements are square roots of average variance extracted (AVE)

Figure 3. Structural model result



adoption of social media. However, the variables added to the extended research model — PV and TTF — have significant influence on such attitudes. This validates the extended research model conceptually and empirically.

Moreover, prior research showed that PE and its related constructs are the strongest predictors of behavioral intention (Duyck et al., 2008; van Dijk, Peters, & Ebberts, 2008). For instance, Davis (1989) argued that the extent to which people believe a certain application is going to help them perform their job better would influence whether they will use it. Venkatesh and Speier (1999) also acknowledged that the achievement of valued outcomes, such as increased payment and improved job performance, are important motivators for using certain technologies. However, the insignificant

Table 4. Path coefficient test

|   | Actual Effect | Path Coefficient | T Statistics | P Values | Significance Level |
|---|---------------|------------------|--------------|----------|--------------------|
| Performance Expectancy -> Attitude              | +             | 0.076            | 0.875        | 0.382    | Not Significant    |
| Effort Expectancy -> Attitude                   | +             | 0.114            | 0.992        | 0.321    | Not Significant    |
| Social Influence -> Attitude                    | +             | 0.034            | 0.344        | 0.731    | Not Significant    |
| Price Value -> Attitude                         | +             | 0.303            | 2.136        | 0.033    | 0.05               |
| Task-Technology Fit -> Attitude                 | +             | 0.416            | 4.726        | 0.000    | 0.01               |
| Attitude -> Behavioral Intention                | +             | 0.612            | 7.350        | 0.000    | 0.01               |
| Facilitating Conditions -> Behavioral Intention | +             | 0.217            | 1.987        | 0.047    | 0.05               |

result of the PE variable in the case of MEs could mean they have not yet fully deciphered how to optimize the use of social media in their contexts and how it could be best customized to improve performance. Anecdotally, it may be that social media is still viewed as a tool for casual interaction and not yet full reconceptualized as an effective transformative tool to improve business performance. The provision of expert advice and training could assist MEs in developing and operationalizing strategies and performance matrices that could alleviate any confusion about expected performance measures.

Furthermore, skills for deploying social media platforms for business objectives may vary among MEs. The respondents have varying capacities to access and use social media, and these capacities, to a certain extent, shape the impacts, outcomes, and distribution of social media benefits to MEs. This barrier may increase a person's or organization's EE for social media use and acceptance. The use of social media often combines the formal with the informal. Sorting out legitimate business communication from other social chatter could be time-consuming and complicated. Ironically, the more successful an ME is in its social media operations, the more effort it requires to timely sort, analyze, and respond to issues. MEs may also lack the resources and absorptive capacity to deal with such issues. Moreover, any negative feedback or rumors could be hard to deal with, leading to perceived concerns in relation to the effort required.

Surprisingly, the SI variable was not a main determining factor for the intention to use social media. Although previous research indicated that SI may also come from friends, family and other people who are important to a person (Oh & Yoon, 2014; Venkatesh et al., 2003; Venkatesh et al., 2012; Zuiderwijk et al., 2015), Indonesian ME operatives apparently are not subject to such pressures, although we expected that such pressures would be significant in Indonesia's collectivist culture. We also expected that because of the small size of MEs, this influence would be higher. Conversely, it could be that the opposite is true, because entrepreneurs who tend to lead MEs are generally more independent and not subject to the peer pressures typical of large business and organizational environments.

The characteristics of MEs aligned with the PV and TTF variables. We found these independent variables have a significant influence on attitudes. Integrating social media into operations of MEs in the retail sector could come with a minimal investment (i.e., buying computing equipment, Internet connectivity, planning, responding to, and monitoring social media interactions), but align well with business tasks and processes, thus resulting in valuable rewards such as generating sales, brand recognition, viral marketing, and customer loyalty and satisfaction.

To the best of our knowledge, our research is the first to address the issue of TTF in the adoption of social media among Indonesian MEs. Our findings reinforce prior studies on TTF in other contexts by Goodhue and Thompson (1995) and Klopping and McKinney (2004). It seems that Indonesian

MEs recognize the alignment between the retail tasks that they need to accomplish and the salient functionalities of the various social media. In turn, this recognition prompts MEs to develop a favorable attitude toward incorporating social media into their operations.

Overall, attitude has a positive significant influence on behavioral intention to adopt social media, which reinforces studies by Davis et al. (1989) and Krishnan and Hunt (2015). Facilitating conditions also have a significant influence on behavioral intention to adopt social media. The results differ from the original UTAUT model that assumed attitude is not a direct determinant of behavioral intention and facilitating conditions do not have a significant influence on such intention (Venkatesh et al., 2003). However, the original UTAUT acknowledged that attitude and facilitating conditions likely have a direct influence on behavioral intention, but only under certain circumstances because different environments might generate different results. The results of our study provide an interesting contrast with the original model when it comes to these two variables, especially in light of the fact the empirical data was collected from a relatively distinct context (compared with the original empirical model).

## **CONTRIBUTION**

### **Theoretical Contributions**

This study contributes to the IT adoption literature in several ways. First, it contributes to understanding the factors influencing social media adoption among MEs. This research expands the UTAUT model developed by Venkatesh et al. (2003), by including TTF, which is tailored to the characteristics of MEs and influences their adoption of social media. When considered independently, the original UTAUT is not as effective in the empirical context studied in explaining factors influencing adoption intention among MEs. The proposed extended model provides for a richer and more comprehensive consideration. Consequently, in this research, PE, EE, and SI, along with PV and TTF, aligned to explain attitude. Specifically, PV and the TTF model were found to be significant variables influencing attitude.

The second contribution lies in using attitude to explain behavioral intention. The research asserts that attitude has a large and significant effect among MEs in explaining behavioral intention to use social media. As suggested in the TRA, attitude is a significant predictor of behavioral intention, which in turn is predictive of behavior in adopting/using technology (Davis et al., 1989; Krishnan & Hunt, 2015). This finding is different from the original UTAUT by Venkatesh et al. (2003). This study provides for an interesting contrast.

### **Practical Contributions**

The findings from this research can inform policy makers in promoting IT-enabled national strategies in Asia and especially in Indonesia (Karjaluoto & Huhtamäki, 2010; Liberman-Yaconi et al., 2010; Marnewick, 2014). In Indonesia, our findings could contribute to the government's drive toward digital economy development by informing policy makers about factors that enable MEs to adopt social media. The findings of this research could highlight factors important for adoption of social media to overcome the challenges MEs could be facing in achieving a digital transition. Importantly, given the significance of facilitating conditions noted in the findings, governments are advised to provide not only the technical infrastructure, but also the support and expertise needed to advance the use of social media for business purposes. This could come in the form of a call center to contact if an ME encounters problems in adopting technology (e.g. a list of case studies, expected benefits, online training, start guides, mentorship, etc.) or in the use of social media (e.g. hacking, defamation, etc.).

The findings of this study could also amplify among owners and operatives of MEs the potential of conducting commerce digitally through social media. MEs generally have limited human resources, scarce financial resources, and inadequate access to basic IT infrastructure. Accessibility to social

media platforms for mobile commerce, especially via smartphones, enables MEs to engage directly anytime and from anywhere with customers as well as promote their products and make quick operational business decisions. In addition, given that the TTF model is another contributing factor to the success of MEs with social media, owners and operatives can inform themselves, through the findings of this study, of the most appropriate social media platforms that could be tailored to fit their business activities and their customers' purchasing behaviors.

## **CONCLUSION AND FUTURE RESEARCH**

We conceptualized and operationalized an extended research model that integrated PV and the TTF model with the UTAUT to study the adoption of social media among Indonesian MEs operating in the retail industry. Our findings suggest that PV and the TTF model are significant factors influencing attitude. Our research also confirms that attitudes and facilitating conditions are strong predictors of behavioral intention toward social media adoption among Indonesian MEs in the retail industry.

Despite its contributions and implications, this study has several limitations. A small sample size limits the generalizability of the results and lessens its statistical power. Therefore, future research can be expanded by increasing the sample size and modifying the model to develop a deeper understanding of these and other constructs. The study also targeted MEs that have already demonstrated a degree of social media adoption. Future researchers could also consider MEs that lack a social media presence and therefore, study the hindrances and limitations they face as well as contrasting their findings with those in this study. Furthermore, the scope of such future analyses could be expanded to other industries and national contexts to understand more broadly the factors that influence social media adoption in MEs.

Finally, future research could thoroughly consider how social media fits/clashes with Indonesian culture. Cultural differences between developed and developing countries may influence how owners and operatives of MEs perceive social media and their compatibility with their business operations. Comparative studies with other national contexts regarding the adoption of social media in MEs will also yield insights into this important business sector that has not yet attracted the attention it deserves.



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