Effect of social media agility on performance of small and medium enterprises: moderating roles of firm size and environmental dynamism

Worachet Onngam and Peerayuth Charoensukmongkol
International College, National Institute of Development Administration, Bangkok, Thailand

Abstract

Purpose – Despite the increasing numbers of research studies about social media business, the concept of social media agility is still an emerging topic that has been understudied. Therefore, the purpose of this study was to investigate the effect of social media agility on business performance by using a sample of small- and medium-sized enterprises (SMEs) in Thailand. Moreover, this study explored whether the effect of social media agility on business performance could be moderated by the characteristic of firm in terms of size, as well as the characteristic of market environment in terms of environmental dynamism.

Design/methodology/approach – The sample of 337 firms was obtained from the business directory using the simple random sampling method, and the model assessment was performed by using partial least squares structural equation modeling.

Findings – The data analysis indicated that social media agility positively affected the business performance of SMEs. Moreover, the moderating effect analysis showed that smaller firms tended to gain higher business performance from social media agility than larger firms. In addition, social media agility positively affected business performance to a greater extent when firms operated under low environmental dynamism than when they operated under high environmental dynamism.

Practical implications – Because SMEs are the key driving of economic development and economic growth, the recommendations from this study could be helpful for the government sector responsible for the competency development of SMEs to offer a development program that might enable entrepreneurial firms to develop social media marketing competencies and enhance their potential to be successful in the digital transformation.

Originality/value – The authors found new evidence showing that the degree to which social media agility affected business performance depended significantly on the firm characteristics in terms of firm size, as well as the environmental factor in terms of environmental dynamism. These findings provide valuable contributions to the existing literature that still lacks evidence about the moderating conditions that could increase or reduce the benefits that firms obtain from social media agility.

Keywords Social media marketing, Firm performance, Environmental dynamism, Small and medium enterprises, Entrepreneurship, Economic development, Economic growth, Business performance, Developing countries, Small- and medium-sized enterprises

Paper type Research paper

1. Introduction

Small- and medium-sized enterprises (SMEs) belong to the major business sector accelerating economic development and economic growth in emerging economies. However,

This research received funding from the National Institute of Development Administration.
the rapid change in the business environment has dramatically increased market volatility, which affects the business vitality of SMEs. In this uncertain business environment, SMEs generally face more challenges than larger firms due to their limited financial resources (Ratanavanich and Charoensukmongkol, 2023). Therefore, SMEs must develop capabilities that enable them to respond effectively to unexpected challenges and to meet the fast-changing needs of customers in a timely manner (Deng et al., 2021). Specifically, SMEs must be agile in their business operations to respond quickly both to new opportunities and various uncertainties (Saputra et al., 2022). Agility is seen as a primary business necessity in contemporary business environments, as it reflects the capacities enabling firms to quickly detect and react to market opportunities and challenges (Ghasemaghaei et al., 2017). Agility not only helps firms rapidly adapt their operations in response to unpredictable market circumstances, but it also enables them to identify and exploit new market opportunities more effectively than their competitors (Clauss et al., 2021; Xing et al., 2020).

One aspect of business agility that has become significantly vital in the current environment is agility in terms of how firms use social media in their business practices. Since the beginning of the COVID-19 pandemic, the utilization of social media has become imperative for firms in almost every sector, as more and more consumers have shifted their purchasing habits away from traditional storefronts to online channels, including social media platforms (Salam et al., 2021; Charoensukmongkol and Pandey, 2023). The pandemic pushed both customers and enterprises to increase their involvement in social media, resulting in an exceptionally rapid development in the usage of social media for a variety of purposes (Amoah et al., 2021). Due to this new trend, many SMEs have become more reliant on social media platforms as marketing tools to help them attract consumers whose social media habits have been rapidly revolutionized (Liao et al., 2022). SMEs not only use social media platforms as marketing tools to tap new target customers, but they also help SMEs with customer relationship management with existing customers at a low cost (Zhou and Charoensukmongkol, 2022). However, the sharp growth in social media usage has made competition more intense among firms that rely on social media for their business (Hoekstra and Leeflang, 2020). This intense competition has driven SMEs to revamp their social media marketing strategies to ensure their survival in the face of rapid transformations brought on by environmental dynamism (Vrontis et al., 2022; Al-Okaily, 2021; Lin et al., 2020).

To maintain satisfactory performance in social media business in an environment of intense competition, SMEs must develop agility in how they use social media to help them outperform their rivals (AlSharji et al., 2018; Singhal and Kapur, 2022). By definition, social media agility refers to the ability of companies to use social media to swiftly recognize and respond to changing market circumstances and consumer expectations, as well as to adapt to new social networking sites (Chuang, 2020; Gligor and Bozkurt, 2021). As a result, social media agility could be the critical capability serving as a source of competitive advantage for firms to achieve better performance than competitors that lack this agility.

Despite the increasing number of research studies about social media business, the concept of social media agility is still an emerging topic that has been understudied in the existing literature. Currently, there are a very limited number of studies that provide empirical evidence to support the effect of social media agility on business performance. To date, only the studies of Chuang (2020), Onamusi (2021) and Gligor and Bozkurt (2021) have provided empirical evidence for the benefits of social media agility. This deficiency of research is a major gap that needs more empirical studies to confirm the effect of social media agility by using samples of firms in different contexts. More importantly, existing studies on the benefits of social media agility have not considered moderating factors that might influence the degree to which firms benefit from social media agility. Despite the
benefits, there should be some boundary conditions that allow some firms to obtain greater or fewer benefits of social media agility. This is another important research gap that should be addressed.

The main objective of this study is to provide evidence to fill the two research gaps mentioned previously. First, this study investigates the effects of social media agility on business performance by using a sample of SMEs in Thailand, which is a context that has not been studied previously. The sample of Thai SMEs is ideal for research on social media agility due to the high rate of social media penetration among Thai citizens and the pervasiveness of social media business in the country. Moreover, SMEs are major players in Thailand that extensively use social media in marketing strategies (Tarsakoo and Charoensukmongkol, 2019). In particular, the intense competition in social media marketing among SMEs in Thailand makes this sample a suitable context to verify whether increased social media agility could enable firms to perform better than their rivals. Apart from the direct effect of social media agility, our second objective to explore is whether its effect on business performance could be moderated by the characteristic of firm in terms of size, as well as the characteristic of market environment in terms of environmental dynamism. In general, the size of the firms reflects the degree of flexibility and adaptability that they exhibit, which determines how quickly they can adjust and execute strategies (Sen et al., 2022; Reed, 2021). Although small firms have key disadvantages in terms of resource constraint when compared to large firms, research has shown that they tend to possess competitive advantages derived from higher speed and flexibility, which could help them to be more agile than larger firms (Sen et al., 2022). For this reason, it can be assumed that smaller firms may be more adaptable in exploiting social media agility to improve performance compared to large firms. On the other hand, environmental dynamism reflects the uncertainty and unpredictability of the market environment, which significantly constrains the ability of firms to get a clear picture of fast-changing market trends and emergent challenges (Rodriguez-Peña, 2021). For this reason, the benefit that firms obtain from social media agility could be greater for firms operating under high environmental dynamism than those operating under low environmental dynamism. To date, the existing research still lacks sufficient evidence on the moderating effects of these two factors in the context of social media agility. Therefore, our study will offer a knowledge contribution by theoretically clarifying how firm size and environmental dynamism should be taken into consideration when examining the benefits of social media agility on business performance.

The contents of this paper are organized as follows. Section 2 reviews the key concepts and proposes the hypotheses, and then the research methods (including sample selection, the data collection procedure and data analysis) are described. After the results from the data analysis are reported, we discuss the findings and provide research implications in the final chapter.

2. Literature review

2.1 Social media agility

Social media agility is defined as the capability of businesses to use social media to adapt to changing market conditions and customer expectations (Chuang, 2020). Gligor and Bozkurt (2021) described social media agility as a capability that enables firms to rapidly identify and react to changes in consumer demands, as well as to use and apply new features in social networking platforms for marketing practices. With the growing importance of social media in business, social media agility is becoming more essential in the areas of customer interactions and company sustainability (Onamusi, 2021; Chuang, 2020; Zhou and Charoensukmongko, 2021). In particular, social media agility enables firms to quickly obtain customer input,
allowing them to respond effectively in the face of constantly changing environments (Onamusi, 2021). Considering the consumer needs and expectations that change rapidly in the current business environment, firms that are agile in their use of social media to detect and react to these changes are more effective in using social media to enhance their business outcomes (Muninger et al., 2019). Social media agility allows firms to rapidly gather consumer feedback, enabling them to better deal with shifting market conditions (Onamusi, 2021). Firms that have achieved social media agility are equipped with the capability to adapt swiftly and dynamically to establish closer ties with both current and prospective consumers (Zhou et al., 2019). They are also better at anticipating and responding to market possibilities, which increases their ability to effectively create and adjust their marketing practices in order to match the unforeseen consumer needs and expectations (Chuang, 2020).

2.2 Effect of social media agility on business performance
Social media agility can enhance the business performance of firms. Theoretically, the logic supporting this benefit of social media agility can be explained by the resource-based view (RBV) of the firm (Barney, 1991). The RBV takes into consideration the role of critical resources and capabilities that enable firms to outperform their competitors and enjoy superior performance (Helfat and Peteraf, 2003). The theory also considers the ability of firms to address rapidly changing environments as a crucial capability that enables them to maintain competitive performance under changing business conditions (Teece et al., 1997). In fact, the RBV literature indicates that agility in terms of how firms use information technology can enhance their flexibility when responding to change (Xing et al., 2020). Through the lens of the RBV, the agility of firms can be regarded as the critical capability that enables them to adapt and redeploy their resources to deal effectively with change (Baškarada and Koronios, 2018). Moreover, many studies on RBV emphasize the crucial nature of agility as a key component required for achieving superior firm performance (Panda and Rath, 2016). In this regard, agility enables firms to quickly adapt their business operations and strategies to react appropriately to changing market trends, which is crucial for firms looking to identify new market opportunities and gain better performance than their competitors that lack agility (Clauss et al., 2021).

The concept of social media agility also fits within the realm of dynamic capability that enables firms to rapidly identify and react to changing market conditions (Onamusi, 2021). Firms that are agile in their social media utilization can effectively adapt to the changing market, as well as react more dynamically to unforeseen market opportunities. Social media agility not only enables firms to be responsive to current market trends, but also helps them to be proactive towards new ones that may arise in the future (Gligor and Bozkurt, 2021). Generally, firms with social media agility can constantly identify changes in client behaviors through customer feedback that they obtain from social media channels and then use such information to guide their strategic actions (Chuang, 2020). In particular, these firms can quickly and effectively use information from social media to determine which marketing trends to follow and which marketing approaches to deploy to generate sales and profit in various situations (Shen et al., 2019; Liu et al., 2022). For this reason, firms that can leverage social media agility are able to identify market trends and make prompt adaptations to changing market conditions (Sanger et al., 2021; Bocconcelli et al., 2017). All of these benefits of social media agility enable firms to generate more customer satisfaction and stay ahead in competition, which enables them to achieve better business performance than their competitors that do not possess social media agility (Li et al., 2021; Dwivedi et al., 2021). Apart from these rational arguments, empirical research also provides evidence that supports the effect of social media agility on business outcomes. For example, Onamusi
collected data from firms in Nigeria, Canada, Australia, the USA and the UK and found that social media agility had a positive impact on firm survival. The study of Chuang (2020) also found that social media agility positively affected firm performance in terms of customer–firm relationships. Finally, Ghigor and Bozkurt (2021) conducted customer attitudes survey among US consumers and found that the perception that consumers had towards social media agility of the brands had positive influence on customer engagement and customer-based brand equity.

In light of the logical reasoning and empirical evidence provided previously, the following hypothesis is proposed:

**H1.** Social media agility is positively associated with business performance.

### 2.3 The moderating effect of firm size

Apart from the direct effect of social media agility and business performance proposed earlier, this study argues that the benefits that firms achieve from social media agility depend on firm size. We propose that smaller firms are more likely to gain greater benefits from social media agility than larger firms. Although firm size can be justified in terms of employees, assets and revenue, research that uses questionnaire data collection usually determines the size of a firm by the total number of full-time employees (Foli et al., 2022; Bahri et al., 2021). Firm size can have a potential impact on how well firms perform, but evidence from prior studies has shown that the effect of firm size on business performance tended to be inconclusive. Traditionally, larger firms have more resources, which enables them to undertake higher risks and invest more in fixed assets than smaller firms. Nevertheless, although smaller firms do not have as many available resources, they still possess substantial competitive advantages from higher speed and flexibility, as well as the ability to fulfill niches and establish close connections to the market (Sen et al., 2022). Moreover, given that smaller firms are generally less bureaucratic than larger firms (Huang et al., 2012), their structural flexibility and adaptability enables them to make decisions faster and react more quickly to change than larger firms (Reed, 2021). From the RBV perspective, although small firms may not have many financial resources, their flexibility could easily help them develop the capability that facilitates adjusting more quickly to change (Hernández-Linares et al., 2021). Due to these stated advantages of smaller firms, they are likely to perform better than larger firms, especially during fast-changing market conditions that require businesses to be flexible and make adapt quickly to their environment. Thus, we initially propose the follow hypothesis:

**H2.** Firm size is negatively associated with business performance.

Due to the advantages that smaller firms have in terms of flexibility and adaptability, they tend to be better than larger firms at exploiting social media agility to increase business performance. Basically, the simpler and less bureaucratic structure of small firms gives them much more freedom to quickly make decisions and execute their strategies (Sen et al., 2022). For this reason, they tend to have greater potential to reap more benefits from possessing social media agility. With their agility in utilizing social media to gain insightful information that can guide their decision-making, along with their structural flexibility to make quick adaptations, smaller firms are able to use the combination of their capabilities to adjust their operations and customize their products to meet the fluctuating market demand more quickly than larger firms (Reed, 2021). For this reason, the integration of social media agility and the capability of smaller firms to make quick adaptations could significantly
increase their potential to improve their business performance at a higher rate than larger firms. On the other hand, the more bureaucratic and formalized structure of larger firms may impose some obstacles that make them unable to make quick decisions and adaptations in response to the market (Huang et al., 2012; Puyod and Charoensukmongkol, 2021). Although larger firms also possess social media agility, they may not be able to make quick adjustments to gain benefits from social media agility at the same level as smaller firms. For this reason, the effect of social media agility on business performance could be stronger for smaller firms than for larger firms. Therefore, the below hypothesis is proposed:

\[H3. \text{ The effect of social media agility on business performance is stronger for smaller firms than for larger firms.}\]

2.4 The moderating effect of environmental dynamism

This study proposes that the degree to which social media agility can help firms gain higher performance will depend on the level of environmental dynamism that firms encounter in their particular industry. Fundamentally, environmental dynamism is described as the degree to which changes in an industry’s or firm’s environment are uncertain and unpredictable (Wamba et al., 2020). Specifically, environmental dynamism reflects the uncertainty and unpredictability of external factors such as variations in client expectations, developments in technology, changes in product trends and the availability of resources (Reed, 2021; Charoensukmongkol and Pandey, 2022). Environmental dynamism reflects an unforeseen change in consumers’ preferences and needs, which determine how fast the products become obsolete and how quickly the technologies exploited by a business should be modernized (Rodriguez-Peña, 2021). Moreover, the strategic moves of competitors cannot be easily foreseen in a highly dynamic environment (Charoensukmongkol, 2022).

Basically, environmental dynamism seems to be the unfavorable factor that negatively affects firm performance. In prior research, empirical evidence has been reported about the negative impacts of environmental dynamism on business operations and the performance of firms in various sectors. For example, Dogru et al. (2019) analyzed the role of environmental dynamism on the performance of firms in the hotel industry in ten major US cities, and their findings revealed that a surge of dynamism negatively affected the business performance of these firms. Similarly, Wang (2018) explored the effect of environmental dynamism on the operational performance of firms in the logistics industry, and his findings confirmed the negative effect of dynamism on the operational performance of these firms. Moreover, Feng et al. (2021) found that environmental dynamism during an economic downturn was among the key factors that led to corporate bankruptcy. Considering these detrimental impacts of high environmental dynamism, the following hypothesis is proposed:

\[H4. \text{ Environmental dynamism is negatively associated with business performance.}\]

Environmental dynamism not only affects firm performance directly, but the uncertainty and unpredictability it causes also limits the ability of firms to effectively implement strategies to gain better performance. Theoretically, this moderating effect of environmental dynamism can be explained through the market-based view (MBV) perspective. The MBV, which is based on the industrial organization framework (Bain, 1954), considers the roles of industry factors and external market conditions as the key determinants of firm performance (Peteraf and Bergen, 2003). While the RBV theory primarily considers the role of resources and capabilities possessed by firms as sources of competitive advantage, the MBV perspective takes into consideration the influence of external factors and market
environment that can limit the effectiveness of resources and capabilities that firms deploy to gain superior performance (Purbasari et al., 2021). In particular, unfavorable environments such as intense competition and market turbulence could create difficulty for firms to reap the full benefits from resources and capabilities that they possess (Reed, 2021; Wamba et al., 2020; Charoensukmongkol, 2019). For this reason, scholars have suggested that the MBV perspective should be integrated with the RBV perspective to gain full understanding of how firm resources and capabilities could be more or less relevant to determine firm performance under different market conditions (Makhija, 2003; Peteraf and Bergen, 2003; Vaitoonkiat and Charoensukmongkol, 2020b). Moreover, this key tenet of the MBV perspective has been confirmed by empirical studies showing that an unfavorable market environment could significantly weaken the positive impacts of firm resources and capabilities on firm performance (Charoensukmongkol and Lamsam, 2022; Taghizadeh et al., 2021; Reed, 2021).

Considering the key tenet of the MBV perspective, even though social media agility can be beneficial for the performance of firms, this study further argues that the benefits that firms obtain from social media agility could be lower for firms operating under high environmental dynamism than firms operating under low environmental dynamism. In a highly dynamic environment, change is highly unpredictable and occurs at a rapid pace of progress, corresponding to the rate of transformation in market demands and the pace of technological innovation (Miller and Friesen, 1983; Charoensukmongkol and Suthatorn, 2022). In addition, in a highly dynamic market, the behavior of customers can fluctuate enormously as well (Slagmulder and Devoldere, 2018). Even though firms are equipped with social media agility, they may not be able to get a clear and complete picture of fast-changing market trends and emergent challenges that their industries are about to face. The highly unpredictable nature of environmental dynamism makes planning and executing strategies tremendously difficult and highly ambiguous, even for firms with social media agility. But despite possessing social media agility, firms may still be unable to make accurate adjustments to gain superior performance when faced with market situations that are tremendously more unpredictable than usual.

On the other hand, under the benign level of environmental dynamism in which changes in market conditions and the level of competition can somehow be foreseeable, firms with social media agility are able to respond more quickly to the market than those without social media agility. Furthermore, the need to exploit social media agility to swiftly identify changes in customer behavior is easier to achieve when customer behaviors and market demands do not fluctuate much. When firms exploit social media agility under low environmental dynamism, it is more clear for them how to assess business situations and develop social media plans that can respond to market opportunities more accurately than they do when environmental dynamism is high (Goyal and Mishra, 2019). As a result, low environment dynamism could be more beneficial for firms to achieve high performance from exploiting social media agility than in conditions of high environment dynamism.

Prior studies have provided empirical evidence about the moderating role of an unpredictable environment that diminishes the effect of firm competencies on business performance. For example, Omri (2015) collected data from Tunisian SMEs in various sectors and found that environmental dynamism weakened the positive effect of innovative action on the business performance of these firms. Moreover, the study of Taghizadeh et al. (2021), which investigated the effect of technological capability on the business performance of SMEs in Malaysia, found that environmental dynamism significantly reduced the effect of open innovation on operational performance. Particularly in the area of organizational agility, this rationale is also supported by the study by Reed (2021) demonstrating that a
high level of environmental turbulence could significantly reduce the positive effect of strategic agility on firm performance:

\[ H5. \text{ The effect of social media agility on business performance is weaker under high environmental dynamism than low environmental dynamism.} \]

Figure 1 presents the conceptual model that summarizes all hypotheses proposed in this research study.

3. Methods
3.1 Research context, sample selection and data collection
The research context of this study is SMEs in Thailand. This study used the business directory created by the Department of Business Development of Thailand as the sampling frame for sample selection. This directory contained the list of firms countrywide that were registered with the Ministry of Commerce of Thailand. To minimize the random sampling error, we used the probability sampling method to select 1,000 firms from the directory. This number of randomly chosen firms was arbitrarily set by the researchers. And to make the sample classified as SMEs, only firms that had less than 200 full-time employees were selected. Moreover, because the benefits of social media marketing tend to be more relevant for firms in the business-to-consumer sector than those in the business-to-business sector (Iankova et al., 2019), we ensured that only business-to-consumer firms were selected for the data collection. The data collection was done using self-administered questionnaire survey. The invitation to participate in the data collection was sent to the contact emails of firms provided in the directory. We requested a business owner or a top executive of each firm to answer the survey because they are the key stakeholders with extensive knowledge about the strategic practices and performance of their firm. The cover letter that was shown at the beginning of the survey contained information about the background and purposes of the study, as well as the clarification of the ethical policy in survey research that was approved by the Institutional Review Board of our institution (COA No. 2022/0084). The period of data collection was August 2022 until September 2022, which took two months to complete.
A total of 392 questionnaires were returned (39.2% response rate). After data cleaning, we had received 374 questionnaires that were usable for data analysis. Table 1 summarizes the characteristics of the sample. According to the data from the Office of Small and Medium Enterprises Promotion (2021), 16.98% of SMEs in Thailand were in the manufacturing sector, 41.10% were in the trading sector, 40.10% were in the service sector and 1.85% were in the agricultural sector. For our sample, the percentages of firms that belonged to these four industries (as reported at the end of Table 1) were proportionate to those of the SME population.

3.2 Measures
The measurement of social media agility was derived from Chuang (2020). The scale measures social media agility on two dimensions: internal social media agility (four items) and external social media agility (four items). The five-point Likert scale was used, with 1 representing “strongly disagree” and 5 representing “strongly agree.” Because this scale operationalized social media agility based on two dimensions, we first created the first-order latent variables of internal social media agility and external social media agility. As shown in Table 2, the first-order latent variables of internal social media agility and external social media agility had satisfactory validity and reliability. The factor scores of these two dimensions were then used to create the second-order latent variable of social media agility.

The first moderator, firm size, was measured by the number of full-time employees that the firms employed. This was measured by the number of full-time employees.

The second moderator, environmental dynamism, was measured by the scale obtained from Chen et al. (2015) that evaluates the rate of change in environmental factors based on four items that represent environmental dynamism. The items were evaluated on a five-point Likert scale, with 1 representing “very stable” and 5 representing “very volatile.”

Business performance is an indicator of commercial effectiveness, which justifies how well a company can achieve its anticipated outcomes (Morgan, 2012). Business performance is broadly classified into financial performance and nonfinancial performance (Venkatraman and Ramanujam, 1986). Financial performance is normally represented by short-term success indicators such as profit, revenue, and return on investment (Morgan, 2012). On the other hand, nonfinancial performance determines the long-term strategic success of an organization, which is usually represented by indicators such as market share and customer satisfaction (Morgan, 2012). In this research, we obtained the measure of business performance from the scale developed by Yau et al. (2007). This scale is a subjective measure

<table>
<thead>
<tr>
<th>Firm characteristics</th>
<th>Descriptive statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firm age</td>
<td>Mean: 38.68</td>
</tr>
<tr>
<td>(Number of years that firms have been established)</td>
<td>SD: 6.22</td>
</tr>
<tr>
<td>Firm size</td>
<td>Mean: 30.83</td>
</tr>
<tr>
<td>(Number of full-time employees)</td>
<td>SD: 14.87</td>
</tr>
<tr>
<td>Business experience</td>
<td>Mean: 1.13</td>
</tr>
<tr>
<td>(Number of years that owners/top management have worked in the business)</td>
<td>SD: 6.88</td>
</tr>
<tr>
<td>Industry</td>
<td>Manufacturing: 51 (14.2%)</td>
</tr>
<tr>
<td></td>
<td>Trading: 175 (48.6%)</td>
</tr>
<tr>
<td></td>
<td>Service: 127 (35.3%)</td>
</tr>
<tr>
<td></td>
<td>Agriculture: 7 (1.9%)</td>
</tr>
</tbody>
</table>

Table 1. Descriptive statistics of the sample
Table 2. Factor loadings and reliability indicators and average variance extracted of internal social media agility and external social media agility (first-order latent variables).

<table>
<thead>
<tr>
<th>Items</th>
<th>Internal social media agility</th>
<th>External social media agility</th>
<th>Cronbach’s alpha coefficients</th>
<th>Composite reliability coefficients</th>
<th>Average variance extracted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Since our company started using social media, the reliability of our company’s offer of products and services has increased</td>
<td>0.896</td>
<td>-0.125</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Since our company started using social media, its day-to-day operations have been flexible for customized demand</td>
<td>0.827</td>
<td>0.215</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Since our company started using social media, its offerings (i.e. products and services) have been more cost efficient than those of our competitors</td>
<td>0.825</td>
<td>-0.198</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Since our company started using social media, our company has delivered our offerings (i.e. products and services) more quickly</td>
<td>0.847</td>
<td>0.116</td>
<td>0.871</td>
<td>0.916</td>
<td>0.731</td>
</tr>
<tr>
<td>Since our company started using social media, it has responded very reliably to market changes</td>
<td>-0.223</td>
<td>0.814</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Since our company started using social media, it has had greater flexibility in our offerings to adapt to market changes</td>
<td>0.030</td>
<td>0.821</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Since our company started using social media, it has efficiently redesigned our offerings to adapt to market changes</td>
<td>-0.019</td>
<td>0.860</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Since our company started using social media, it has been very quick to adapt to market opportunities</td>
<td>0.208</td>
<td>0.846</td>
<td>0.855</td>
<td>0.923</td>
<td>0.699</td>
</tr>
</tbody>
</table>

Source: Authors’ own work
containing five items which capture business performance from financial and marketing aspects. The respondents were asked to assess their performance in comparison to the competitors of their firms within the same industry. The assessment was made on a five-point Likert scale with 1 representing “significantly worse than other competitors” and 5 representing “significantly better than other competitors.” According to prior studies that collected data from SMEs, the use of subjective performance is justified for SME research for several reasons. First, the performance data of SMEs are not publicly available, unlike those of the publicly traded companies. Moreover, financial data are considered to be sensitive information that business owners are generally unwilling to share with outsiders. In addition, the Data Protection Act also prohibits researchers from requesting such data from business owners. Due to these difficulties obtaining objective performance data, particularly in emerging countries, the subjective measure of business performance has been widely accepted in SME research (Vaitoonkij and Charoensukmongkol, 2020a; Snoj et al., 2010).

### 3.3 Control variables

We controlled for some fundamental characteristics of firms that could affect business performance. Generally, prior research used firm age, firm size and the business experience of an entrepreneur as the main control variables for business performance (Bahri et al., 2021; Foli et al., 2022). Therefore, we also control for these factors to be consistent with prior studies. Apart from the role of firm size that was already proposed in the hypothesis, we additionally control for firm age and business experience. Firm age was measured by asking business owners/executives how many years their firm had been established, and business experience was measured by asking how many years they had worked in the business.

### 3.4 Data analysis

The model assessment was performed by partial least squares structural equation modeling (PLS-SEM), which is the variance-based SEM. PLS-SEM is recommended as the suitable method to be used under some conditions, such as when the sample size is small, when the data are not normally distributed and when the model contains several moderators (Hair et al., 2019). In particular, the characteristics of our data fit well with these conditions. First, the sample size of 334 firms that our study obtained was relatively small. Moreover, we already conducted the Jarque–Bera test of normality to assess the normal distribution of our variables, but the test indicated that most of them were not normally distributed. Finally, our model contained two moderators that were analyzed simultaneously. Overall, these conditions made PLS-SEM a practical choice for our model assessment. The model analysis was performed by the software WarpPLS version 7.

### 4. Results

#### 4.1 Measurement model assessment

The tests of construct validity and reliability were conducted as follows. First, we considered the values of factor loadings of the construct to assess their convergent validity. The analysis shown in Table 3 indicates that all factor loadings were higher than 0.7, which were the ideal numbers to confirm that the constructs had satisfactory convergent validity (Hair et al., 2009). Next, the assessment of discriminant validity was justified by the average variance extracted (AVE). In particular, Fornell and Larcker (1981) recommended that the quality of discriminant validity of latent constructs can be supported when the square root of AVE of each latent variable is higher than the correlations that it has with other variables in the correlation matrix. In the correlation matrix presented in Table 4, this justification for discriminant validity assessment was satisfactory for all latent variables. In addition, we
Table 3. Factor loadings, reliability indicators and average variance extracted of social media agility, business performance and environmental dynamism

<table>
<thead>
<tr>
<th>Items</th>
<th>Social media agility</th>
<th>Business performance</th>
<th>Environmental dynamism</th>
<th>Cronbach's alpha coefficients</th>
<th>Composite reliability coefficients</th>
<th>Average variance extracted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal social media agility</td>
<td>0.973</td>
<td>0.043</td>
<td>0.007</td>
<td>0.943</td>
<td>0.972</td>
<td>0.946</td>
</tr>
<tr>
<td>External social media agility</td>
<td>0.970</td>
<td>-0.043</td>
<td>-0.007</td>
<td>0.956</td>
<td>0.946</td>
<td>0.815</td>
</tr>
<tr>
<td>Overall profit level achieved</td>
<td>0.026</td>
<td>0.924</td>
<td>0.007</td>
<td>0.943</td>
<td>0.956</td>
<td>0.815</td>
</tr>
<tr>
<td>Profit margin achieved</td>
<td>0.088</td>
<td>0.909</td>
<td>-0.040</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Return on investment</td>
<td>-0.038</td>
<td>0.825</td>
<td>-0.006</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sales volume achieved</td>
<td>0.103</td>
<td>0.937</td>
<td>-0.031</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Market share achieved</td>
<td>-0.184</td>
<td>0.914</td>
<td>0.069</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The rate at which your customer's product/service needs change</td>
<td>-0.166</td>
<td>0.231</td>
<td>0.815</td>
<td>0.798</td>
<td>0.869</td>
<td>0.624</td>
</tr>
<tr>
<td>The rate at which your supplier's skills/capabilities change</td>
<td>0.043</td>
<td>-0.106</td>
<td>0.760</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The rate at which your competitors' products/services change</td>
<td>0.062</td>
<td>-0.061</td>
<td>0.759</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The rate at which your firm's products/services change</td>
<td>0.068</td>
<td>-0.074</td>
<td>0.823</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Authors' own work
also used the heterotrait–monotrait ratio of correlations (HTMT) in order to assess discriminant validity. Based on criterion set by Henseler et al. (2015), the HTMT values below 0.9 are used to confirm that the level of discriminant validity is satisfactory. As reported in Table 5, the HTMT criterion results that we received were below 0.9 satisfactory. Thus, we confirmed that the quality of discriminant validity of all latent constructs met the criterion.

Apart from construct validity, we also evaluate construct reliability through the use of the Cronbach’s alpha coefficient. Based on Nunnally (1978), the value of Cronbach’s alpha coefficient of 0.7 or higher is expected for good reliability. In Table 3, the results show that all latent variables had values of Cronbach’s alpha coefficients appropriately above the requirement.

### 4.2 Multicollinearity and common method variance assessment

We also ensured that multicollinearity did not affect our data analysis. This assessment was justified by variance inflation factor (VIF) statistics. The maximum value of full VIF must not be higher than 3.3 (Petter et al., 2007). The results presented in Table 3 indicate that all full VIFs did not violate this requirement, confirming that multicollinearity should not be a major concern. Finally, because this study used cross-sectional data collection and the questionnaire was obtained from a single source, the assessment of common method variance (CMV) was indispensable. The Harman’s one-factor test (Podsakoff et al., 2003) and the marker variable method (Simmering et al., 2015) were used to detect CMV in our study. First, the Harman’s one-factor test was assessed using an exploratory factor analysis. When all latent variables’ items were loaded into one-factor, we obtained the total variance

### Table 4.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>SD</th>
<th>SMA</th>
<th>BPM</th>
<th>EDY</th>
<th>SIZE</th>
<th>AGE</th>
<th>EXP</th>
</tr>
</thead>
<tbody>
<tr>
<td>SMA</td>
<td>3.23</td>
<td>0.93</td>
<td>(0.973)</td>
<td>0.752**</td>
<td>0.615**</td>
<td>0.113*</td>
<td>−0.112*</td>
<td>0.056</td>
</tr>
<tr>
<td>BPM</td>
<td>3.22</td>
<td>0.91</td>
<td>(0.903)</td>
<td>−0.62**</td>
<td>−0.355**</td>
<td>0.125*</td>
<td>0.22**</td>
<td></td>
</tr>
<tr>
<td>EDY</td>
<td>3.23</td>
<td>0.79</td>
<td>(0.79)</td>
<td>0.104*</td>
<td>−0.014</td>
<td>0.045</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SIZE</td>
<td>38.68</td>
<td>6.62</td>
<td>(1)</td>
<td></td>
<td>0.571**</td>
<td>0.515**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AGE</td>
<td>30.83</td>
<td>14.87</td>
<td>(1)</td>
<td></td>
<td></td>
<td>0.453**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EXP</td>
<td>1.13</td>
<td>6.99</td>
<td>(1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jarque–Bera normality test</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full variance inflation factor</td>
<td>2.775</td>
<td>3.182</td>
<td>1.864</td>
<td>2.008</td>
<td>1.678</td>
<td>1.445</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Notes:** SMA = social media agility; BPM = business performance; EDY = environmental dynamism; SIZE = firm size; AGE = firm age; EXP = business experience. For the Jarque–Bera test of normality, NO indicates that the data normality is not supported. Values in parentheses are square roots of the AVE.

*p < 0.01; **p < 0.05

**Source:** Authors’ own work

### Table 5.

<table>
<thead>
<tr>
<th>Latent variables</th>
<th>Social media agility</th>
<th>Business performance</th>
<th>Environmental dynamism</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social media agility</td>
<td>0.797</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Business performance</td>
<td></td>
<td>0.71</td>
<td>0.714</td>
</tr>
<tr>
<td>Environmental dynamism</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Source:** Authors’ own work
explained by a single factor that was equal to 43.25%. Podsakoff et al. (2003) suggested that a value below 50% could be used as the indicator to rule out the severity of CMV in the analysis. In addition, we used the marker variable method to test CMV. This method required researchers to have any variable (called a marker variable) that has no theoretical association with the variables in the model. And because the marker variable has no theoretical association with other key variables, it must not have strong correlation with them as well (Simmering et al., 2015). In our study, we used “pro-environmental attitude” as the marker variable. This was measured by responses to the statement “I would be willing to accept cuts in my standards of living, if it helped to protect the environment,” with the responses rated on a five-point Likert scale ranging from 1 (Never) to 5 (Always). The correlation analysis showed that it was not significantly associated with social media agility ($r = -0.01; p = 0.79$), environmental dynamism ($r = 0.05; p = 0.38$) or business performance ($r = 0.01; p = 0.83$). Considering the evidence from these tests, we may conclude that the CMV problem was not a concern in our data.

4.3 Structural model assessment
The results from model estimation were summarized in a conceptual model, as shown in Figure 2.

For $H1$, in which we expected a positive association between social media agility and business performance, the beta coefficient that represented their association showed a positive sign with a sufficient level of significance ($\beta = 0.576; p < 0.001$). This result supported $H1$.

For $H2$, in which we expected a negative association between firm size and business performance, the beta coefficient that represented their association showed a positive sign with a sufficient level of significance ($\beta = -0.211; p < 0.001$). This result supported $H2$.

In $H3$, we expected the positive association between social media agility and business performance to be stronger for smaller firms than for larger firms. We tested this hypothesis

![Figure 2. Results from hypotheses testing](image)

**Notes:** *$p < 0.05$; ***$p < 0.001$. Standardized coefficients are reported. Dashed line represents the beta coefficient that is not significant*

**Source:** Authors’ own work
by considering the beta coefficient of the interaction between social media agility and firm size. The beta coefficient showed a negative sign with a sufficient level of significance ($\beta = -0.064; p = 0.038$). This result implied that the positive association between social media agility and business performance was stronger for smaller firms than for larger firms. This result supported $H3$.

For $H4$, in which we expected a negative association between environmental dynamism and business performance, the beta coefficient that represented their association showed a negative sign with a sufficient level of significance ($\beta = -0.230; p < 0.001$). This result supported $H4$.

In $H5$, we expected the positive association between social media agility and business performance to be weaker under high environmental dynamism than under low environmental dynamism. We tested this hypothesis by considering the beta coefficient of the interaction between social media agility and environmental dynamism. The beta coefficient showed a negative sign with a sufficient level of significance ($\beta = -0.054; p = 0.044$), and this result implied that environmental dynamism could reduce the positive association between social media agility and business performance. This result supported $H5$.

The simple slope analysis was performed to provide a clearer picture of how firm size and environmental dynamism moderated the association between social media agility and business performance. The WarpPLS software provided a tool with which to create simple slope graphs based on the standardized values of all variables. The medians of these moderating variables were used by the software to separate and classify the groups as high (above median) and low (below median). The simple slope graphs are presented in Figure 3.

The graph located at the top of Figure 3 shows the moderating effect of firm size. The slopes clearly show that the degree to which business performance increased with the level of social media agility was higher in smaller firms than in larger firms. Under a low level of social media agility, larger firms showed much higher business performance than smaller firms. However, with a high level of social media agility, smaller firms could achieve business performance to a level that was close to that of the larger firms. This may imply that social media agility could allow smaller firms to increase business to a higher extent than it did for the larger firms. This graph provides additional evidence to support $H3$. On the other hand, the graph located at the bottom of Figure 3 shows the moderating effect of environmental dynamism. Obviously, the slopes that represent the degree to which social media agility affected business performance were higher under low environmental dynamism than under high environmental dynamism. This may imply that social media agility could allow firms to increase business to a higher extent under low environmental dynamism than under high environmental dynamism. This graph provides additional evidence to support $H5$.

4.4 Results and discussion

Overall, the results we obtained from the PLS-SEM analysis supported all hypotheses that we proposed at the beginning. First, the data analysis provided statistical confirmation of the positive association between social media agility and the level of business performance that firms reported. This finding implies that firms with social media agility were able to achieve better business performance than those without social media agility. This result indicating this positive impact of social media agility seems to be in line with extant literature that emphasizes the essential roles of social media agility in helping firms use social media in ways that enable them to adjust effectively to changing consumer demands
and market conditions (Zhou et al., 2019; Mason et al., 2021; Baškarada and Koronios, 2018). In particular, this result is consistent with findings reported in the studies of Gligor and Bozkurt (2021), Chuang (2020) and Onamusi (2021), the pioneer works that offered empirical evidence about the effect of social media agility on business performance.

In addition, our moderating effect analysis found insightful evidence showing that firm size could play a crucial role in determining the level of benefit that firms obtain from social

**Figure 3.** Moderating effects of firm size and environmental dynamism

**Source:** Authors’ own work
media agility. In particular, we found that smaller firms tended to show higher improvement in business performance from social media agility than larger firms. This finding corresponds to the arguments from prior literature regarding the advantage of small firms in terms of flexibility, which facilitates making quick adjustments in response to environmental changes more effectively than larger firms (Hernández-Linares et al., 2021; Sen et al., 2022; Reed, 2021). This could explain why smaller firms tend to be more effective than larger firms when exploiting social media agility to improve their business performance.

Moreover, our moderating effect analysis found that the degree to which social media agility affects business performance depends on the degree of environmental dynamism that firms encounter. In particular, we found that social media agility positively correlated with business performance to a higher extent when firms operated under low environmental dynamism than when they operated under high environmental dynamism. This result supports prior literature that regards environmental dynamism as an unfavorable business environment that creates obstacles for successful strategic planning and execution (Dogru et al., 2019; Wang, 2018; Slagmulder and Devoldere, 2018). The finding is in accordance particularly with the results from the study by Reed (2021) demonstrating that a high level of environmental turbulence significantly reduced the positive effect of strategic agility on firm performance. In this regard, the high level of environmental dynamism that firms encounter could create uncertainty and ambiguity that eventually limits their ability to fully benefit from social media agility.

5. Conclusion
5.1 Theoretical implications
As for the theoretical contribution, our findings about the benefits of social media agility on firm performance provide additional support to the RBV perspective regarding the key competency of firms that could allow them to gain a competitive advantage in a market. In particular, we showed that social media agility could be a crucial capability of firms that enable them to make effective adaptations and improve business performance (Barney, 1991; Teece et al., 1997). Moreover, our result regarding the positive effect of social media agility that was highly significant for smaller firms also aligns with the RBV perspective that emphasizes the role of resource composition that might enhance the ability of firms to gain superior performance (Jancenelle, 2021). We showed that the advantage of smaller firms in terms of flexibility could be the key characteristic that facilitates them to exploit social media agility more effectively than larger firms. The combination of capabilities in terms of social media agility and the high flexibility that smaller firms possess could enable them to gain more benefits than larger firms when they exploit social media agility. On the other hand, the evidence regarding the moderating role of environmental dynamism that weakened the positive effect of social media agility on firm performance also aligns with the MBV perspective that considers the role of the market environment as the constraining force that could limit the potential of firms to fully benefit from the resources and capabilities that they possess (Peteraf and Bergen, 2003; Purbasari et al., 2021; Makhija, 2003). In accordance with the MBV perspective, we showed that an unfavorable market environment in terms of environmental dynamism could prevent firms from fully benefitting from social media agility. This finding also corresponds to existing studies which found that an unfavorable market environment tended to weaken the positive impacts of firm resources and capabilities on the level of performance that firms achieved (Charoensukmongkol and Lamsam, 2022; Taghizadeh et al., 2021; Reed, 2021).
Our research also provides knowledge contributions to the existing literature. Considering the limited amount of empirical research on the roles of social media agility on the performance of firms, the findings from our study that was derived from the context that was not previously investigated could fill this gap in the research. In particular, our evidence that supported the positive association between social media agility and the business performance of SMEs in Thailand provided additional evidence confirming the benefits that firms could achieve from possessing social media agility. Aside from this contribution, our research also provides more important evidence that broadens the knowledge from previous research on social media agility. Specifically, we found new evidence showing that the degree to which social media agility affected business performance depended significantly on the firm characteristics in terms of firm size, as well as the environmental factor in terms of environmental dynamism. These findings provide valuable contributions to the existing literature that still lacks evidence about the moderating conditions that could increase or reduce the benefits that firms obtain from social media agility. Based on these findings, our research suggests that it is essential for scholars to take into consideration the characteristics of firms and the contexts under which firms operate when justifying the benefits that firms obtain from social media agility.

5.2 Practical implications for entrepreneurship in emerging economies

The findings of this research study suggest some implications for entrepreneurship in emerging economies, especially for SMEs in Thailand. To achieve a sustainable strategic position in a competitive market, firms not only need to know how to respond to market demands and customer expectations in an appropriate manner, but they must also develop agility in their operations in order to make quick adaptations. In light of our findings, we suggest that social media agility is a crucial capability that firms must develop to help them gain satisfactory performance in a fast-changing business environment. In particular, firms should adopt a more agile approach when they use social media in their business to boost their performance. Social media agility provides businesses with the ability to leverage social platforms in a prompt manner, allowing them to notice and adapt to shifting market conditions and the evolving expectations of customers. We demonstrate that social media agility is an essential capability that is particularly important for smaller firms to develop. Although smaller firms may not perform as well as larger firms due to their size, their flexibility tends to be the key advantage that enables them to exploit social media agility more effectively than larger firms do. The social media agility of smaller firms could compensate for their size disadvantage, which allows them to compete more effectively with larger firms that lack the flexibility with which to fully benefit from social media agility. Nevertheless, it is important to note that the benefits that firms achieve from social media agility could depend on the nature of the market environment. Social media agility can offer the highest benefits for firms when the market environment under which they operate is not highly dynamic. Under high market dynamism, although firms may still use social media to discover and exploit opportunities, this may not be a sufficient way to respond effectively to extremely volatile market conditions.

Specifically, the recommendations from our study could also be helpful for the government sector in Thailand responsible for the competency development of Thai SMEs. As part of the national policy to promote the sustainable economic growth and economic development of the country by enhancing the competitiveness of SMEs, a government sector can design a development program in social media marketing strategy for Thai entrepreneurs to attend. This training should be designed to help the entrepreneurs gain an in-depth understanding of how to use the key features of social media platforms to identify
new market trends and to respond effectively and promptly to the fast-changing needs of consumers. In essence, the benefits obtained from such a training program could enable entrepreneurial firms in Thailand to develop social media marketing competencies and enhance their potential to be successful in the digital transformation. Overall, these expected outcomes are essential to strengthening the competitiveness of Thai SMEs and promoting the economic development of the nation as a result.

5.3 Limitations and recommendations for future research

Despite the contributions that our study provides, it is important to note that we still had some limitations that need to be reported. The main limitation is with regard to the methodology that was used for data collection, including the use of cross-sectional data collection, the use of a self-report questionnaire survey and the use of the subjective measure of business performance. Particularly when the cross-sectional data collection was conducted, we cannot infer causality from our results. In addition, the self-port measure of business performance may not be as accurate as the objective performance data. Moreover, although we used probability sampling to draw a sample of firms from the business directory to minimize the sampling bias, the small sample size that we actually obtained may not be adequate enough with which to generalize the findings to every firm in the population. Finally, the selection of firms on the basis of the number of employees alone may be problematic as it may exclude some vital businesses.

Given that current research on the benefits of social media agility is an emerging topic with limited existing research having been conducted, there are some areas for future studies to consider to help advance the knowledge on this topic. Due to the small number of empirical studies on the role of social media agility, more empirical studies that test its effects in different countries and contexts are required to provide additional confirmation. Moreover, future studies can explore some other moderating factors that could affect the benefits that firms gain from social media agility.

References


Corresponding author
Peerayuth Charoensukmongkol can be contacted at: peerayuth.c@nida.ac.th

For instructions on how to order reprints of this article, please visit our website: www.emeraldgrouppublishing.com/licensing/reprints.htm
Or contact us for further details: permissions@emeraldinsight.com