

## SOCIAL MEDIA AS A STRATEGIC CAPABILITY FOR STARTUPS AND THE MEDIATING ROLE OF SOCIAL CAPITAL

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**Abstract.** Social media have been widely adopted in various organizations. The use of social media for achieving business sustainability and financial outcomes has been addressed in the literature. In the entrepreneurship context, social media have received great attention as the platforms can be one of the cost-effective marketing activities and knowledge accumulation. Despite existing evidence regarding the impacts of social media, the study of social media in the startup's context is limited. Based on the dynamic capabilities perspective, this study relied on data from 128 startups in the emerging economy's context to investigate the importance of social media for startups. Particularly, the results from PLS-SEM support the significant influence of social media as firm's strategic capability toward performance. In addition, social capital consisting of three dimensions – cognitive, structural, and relational – has been found to mediate the direct association of social media strategic capability toward the startup performance. This study advances the social media research on entrepreneurship as well as the dynamic capabilities perspective to enhance the startup's sustainability through enhanced performance. Especially, it encourages the application of social media with the indirect effect of social capital for startups.

**Keywords:** startup, performance, social media strategic capability, social media, social capital, entrepreneurship.

**JEL Classification:** L1, L25, L26.

### Introduction

Entrepreneurship literature has emphasized a startup as technology-based business venture derived from innovative idea (Benson & Ziedonis, 2009; Slávik et al., 2022; Szarek & Piecuch, 2018). The startups encounter various challenges in escalating their potential for competitiveness and sustainability through the implementation of information technology. Recent studies reveal that the crucial obstacles of startups are lack of resources and limited experience (Salamzadeh & Tajpour, 2021; Zahra, 2021) in order to become sustainable. Prior literature especially in the entrepreneurship context, provides insights regarding the influential factors affecting the performance of the newly established innovative organization or startups such as the experience (Cassar, 2014), peer networks (Hasan & Koning, 2019), and venture capitalist (Ewens & Marx, 2018). In addition, various studies also highlight the importance of social media for startups as strategic tools for increasing stakeholder engagement (Chen et al., 2017) and brand awareness (Parida & Prasanna, 2021). However, the study that explores how startups could effectively utilize social media is still limited. Despite the emerging trends

of social media research and digital entrepreneurship in various business practices, a social media-related study in entrepreneurship still needs more attention (Baig et al., 2022; Olanrewaju et al., 2020; Schjoedt et al., 2020). More specifically, there is a limited study that provides insights regarding how and through what factor social media can influence various startup's outcomes.

Therefore, this study argues that social media could improve startup organizations' performance by serving as a platform for social capital-based effective communication. Even if the prior literature discovers the positive association between social media and the social capital (Ali-Hassan et al., 2015; Bharati et al., 2015; Chen & Li, 2017), the impact of social media and social capital on startup performance has not been explored. As consequence, this study aims at determining the research questions of how social media could influence startup performance and through what factor can social media increase the performance of startups. Drawing from a dynamic capability perspective, we propose and investigate that social media strategic capability (SMSC) could influence startup performance through social capital. The ability of a firm to obtain, assimilate, and apply information from social

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media to benefit organizations by optimizing flexibility is referred to as social media strategic capability (SMSC) (Nguyen et al., 2015), which is argued to affect the performance of startups. In addition, we believe that the level of strategic capability regarding social media could influence performance through the development of the startup's social capital which reflects the relationships between startups and other organizations (Bharati et al., 2015).

Based on the sample of 128 startups in the emerging economy context, this study employs the partial least squared structural equation model (PLS-SEM) to test the proposed relationship. The sample comprises high-tech startups registered as members of the Thai Startup Trade Association ([Thaistartup.org](http://Thaistartup.org)). Thai startups were chosen as the study's sample for two primary reasons. First, Thailand is moving toward a digital economy where small businesses rely significantly on the social media (Ngam-moh et al., 2021a). Therefore, the study of startups in the Thai context provides great insights into the associative environment that emphasize the importance of social media. Second, the level of internet penetration in Thailand is relatively high and therefore influence online transactions in social media platforms (Kemp, 2020). Thai startups may utilize the increasing trends regarding social media for their crucial activities, and therefore, showing that this is an appropriate setting for our study.

As expected, we found that social media strategic capability can influence startup performance. Furthermore, social capital as a higher-order construct comprised of cognitive capital, structural capital, and relational capital was found to mediate the positive effect between SMSC and startup performance. The presented research suggests that startups can be beneficial by developing their capability regarding social media. This study extends the dynamic capability literature supporting the application of social media as the tools for strategic adaptation for startup organizations. Also, the result from this research contributes to the emerging social media research in the entrepreneurship (Fischer & Reuber, 2011; Mei & Genet, 2022; Mumi et al., 2019), especially for startups in the context of an emerging economy to promote the sustainability through entrepreneurship. For managerial contribution, this study provides evidence for entrepreneurs or founders of startups to realize the importance of social media that can enhance social capital for better performance of their organizations.

In the section that follows, we discuss the background of this study and how the hypotheses were developed before focusing on the methodology and the results. Finally, the paper's final section discusses the paper's theoretical and managerial contributions, limitations, future research, and conclusions.

## 1. Theoretical background and hypotheses

### 1.1. The startup and the use of social media

Social media platforms, for example, Facebook, Twitter, LinkedIn, Instagram, YouTube, etc. have been perceived as

the crucial tools for stimulating the exchange of communication (Hanna et al., 2011). Particularly, organizations have utilized social media for gathering feedback from stakeholders through various engagements (Carlson et al., 2018). From the relative marketing perspective, social media became one of the crucial and affordable tools for organizations to connect with potential customers (Kumar & Mirchandani, 2012), enhance the brand evaluation (Naylor et al., 2012), as well as expand their geographical reach through different markets (Gao et al., 2018). Not only from the organizational perspective, recently customers have been increasingly influenced and empowered by social media where they become the crucial elements of the effective marketing communication process such as becoming the creators, influencers, and key-opinion leaders (Hamilton et al., 2016). Therefore, social media application has been developed and implemented within the new way of strategic marketing communication in enhancing the competitive advantage (Lamberton & Stephen, 2016; Li et al., 2021).

For a smaller organization, such as a startup, where technology is highly implemented, social media have also become an imperative strategic tool for various business practices. For example, the study by Jin et al. (2017) found that startup social media activities influence the invested capital from investors. The results are consistent with a study that found that the active use of social media can attract investment during the IPO process when startups transformed from private to public entity (Mumi et al., 2019). Besides, a prior study also provides evidence showing that, in the context of a startup, the application of social media is associated with increasing information sharing, long-term relationships, awareness, new business ideas, and reputation (Chen et al., 2017). It is evident that startup organizations can be beneficial from using social media in achieving various strategic goals. However, the study of social media for entrepreneurship especially in the context of startups is a rather new and fragmented (Olanrewaju et al., 2020). Therefore, this study aims at investigating social media as a strategic capability in impacting the performance of startups.

### 1.2. Social media: a strategic capability

The prior literature also views social media as strategic tools for dynamic organizations in coping with fast-growing competitive environments. Social media enables organizations to acquire a variety of external information and make effective and responsive strategic decisions (Zhang & Zhu, 2021). Drawing from the literature regarding the dynamic capability (Bocken & Geradts, 2020; Eisenhardt & Martin, 2000; Teece et al., 1997), the competitive advantage for firms can be established when demonstrating timely responsive strategic decisions and flexible innovation in coordinating with firm's competencies (Teece & Pisano, 2003). The use of social media as the tools for internal and external knowledge integration can be regarded as the organization's strategic capability for

responsive decision-making since social media stimulate a new way of interaction within and outside organizations (Kaplan & Haenlein, 2010). According to Teece (2007), the strategic capability refers to the ability in accumulating and integrating resources as well as skills embedded within organizations for achieving strategic goals. Social media has been argued as one of the crucial strategies and capabilities and proposed the concept of so-called social media strategic capability (SMSC). Therefore, SMSC focuses particularly on the organization's ability in applying social media for acquiring, integrating, communicating, sharing, and applying both current and new knowledge for strategic goals (Nguyen et al., 2015).

Although the concept of social media has been emphasized with various dimensional purposes, the study that investigates specifically social media strategic capability is rather limited. Prior research has mostly examined the impact of social media strategic capability on the innovation (Ngammoh et al., 2021b; Zhang & Zhu, 2021). In the current study, we believe that the performance of startups will also be influenced by social media strategic capability. Social media allows the flow of information within the organization through extensive communication between employees who may also act as the creators of information and ideas (Madsen & Johansen, 2019). Startups with higher social media capability may have a high potential to gather new knowledge through the exchange of expertise and therefore influence the performance (Zwass, 2010). Startups can also circulate information regarding their new products to reach a larger audience (Michaelidou et al., 2011). Therefore, to provide empirical evidence supporting the importance of social media strategic capability for a startup organization. We proposed the first hypothesis as follows:

Hypothesis 1: social media strategic capability is positively related to startup performance.

### 1.3. The mediating role of social capital

As aforementioned, social media provides great benefits for organizations in acting as the strategic capability in acquiring, integrating, sharing, and applying knowledge (Ngammoh et al., 2021b; Nguyen et al., 2015). Both current and new knowledge can be acquired through a deeper understanding of external stakeholders' actions or feedback on social media. According to the literature, social media enhance the greater communications between different parties – both individuals and firms – therefore, may lead to better relationships with external organizations. Relatively, this study argues that social media could benefit startup organizations through the social relationships between organizations or the social capital (Adler & Kwon, 2002; Payne et al., 2011). More specifically, social capital can be defined as both existing and anticipated resources that are accessible through networks and developed as a result of individual or group pursuits (Nahapiet & Ghoshal, 1998). In particular, social capital can

be broken down into structural, relational, and cognitive components (Nahapiet & Ghoshal, 1998). The structural dimension of social capital reflects the configuration of relationships between organizations. The relational dimension of social capital explains the value of relationships (such as a trust), while the cognitive dimension of social capital refers to the common understanding between organizations that results from interactions. Within the domain of entrepreneurship, it has been argued and investigated that social capital influences entrepreneurial activities and outcomes, including as growth and performance (Maurer & Ebers, 2006) and financing of new venture (Gopalakrishnan et al., 2008), and entrepreneurial ecosystem (Theodoraki et al., 2018).

This study provides evidence that social capital can mediate the connection between social media and its consequence. Enhancing user interactions is one of social media's most significant benefits (Hanna et al., 2011). Startups can also benefit from social media as building up their relationship with external parties – business partners, suppliers, customers, etc. (Bughin et al., 2011). Social media can stimulate interactions that authenticate the level of social capital as well as communications across organizations. Prior studies also argued that communication through online platforms can stimulate benevolence-based trust (Watts & Zhang, 2008) as well as emotional support from others (Rheingold, 2000). Social media enhance the opportunities for employees with different backgrounds working in different business units to collaborate with each other as well as develop a common understanding through negotiation of shared code or paradigm (Bharati et al., 2015; Wenger, 1999) reflecting the cognitive dimension of social capital. As consequence, the higher level of social media capability for startups could enhance the level of social capital before influencing performance as proposed in the following hypothesis.

Hypothesis 2: Social capital mediates the relationship between social media strategic capability and the startup performance.

## 2. Methodology

### 2.1. Sample and data collection

This study analyzed information from 128 startup organizations in Thailand's information and communication technology (ICT) sector. Although the definitions of a startup are diverse, we follow the definitions of the startup as an early-stage organization that emphasizes the innovation and technology for new products or markets (Masters & Thiel, 2014; Skala, 2019). Therefore, we believe that the startup organizations in the ICT sectors serve as the appropriate sample for this study. The startups in ICT sectors empathized in this study deal with information technology, computer services, hardware, software, computer facilities, etc. The ICT-related startups were chosen since the ICT sectors frequently encounter unexpected

technology instability (Bodlaj & Čater, 2019) reflecting in high dynamic capabilities. Also, startups in ICT sectors tend to rely on knowledge transfer for better performance (Kenny & Fahy, 2011), manifesting the utilization of social capital within startups for knowledge sharing among networks. Therefore, social media and social capital may be the crucial factors that can enhance knowledge sharing, especially when obtaining feedback from stakeholders through online interaction (Huang et al., 2014). By examining the significance of social media and social capital, this study intends to provide a deeper understanding of the influencing elements for the performance of ICT-related companies.

Within this study, the data collection was done through questionnaires that were distributed to founders of targeted startups. Following Podsakoff et al. (2003), we performed the data collection by considering the common method bias issue that may be derived from a single respondent. For instance, it was made very clear to our participants that the information they provided would be kept completely confidential and anonymous. To examine the reliability of responses, we also used the confirmatory factor analysis (CFA) method. By evaluating correlations between the relevant variables, CFA enables the early detection of the common method bias. By establishing that the information from respondents was the same as that from non-respondents, this study carried out the procedure for evaluating non-response bias (Rogelberg & Stanton, 2007). Therefore, we compared the responses from early and late respondents to verify the potential non-response bias issue as suggested by a prior study in account of late respondents as similar to non-respondents (Lindner et al., 2001). Two groups of respondents were compared using a t-test. Since there was no significant difference between early and late responses for any of the targeted variables, the t-test results did not indicate any potential non-response bias.

## 2.2. Measurements

This study relied on the existing scale for operationalizing the constructs proposed in the hypotheses. More specifically, we measured social media strategic capability followed the scale items proposed by Nguyen et al. (2015) asking participants to respond to four questions using a six-point Likert scale. The items have been frequently utilized in studies on smaller firms to capture the social media strategic capacity constructs (Ngammoh et al., 2021a; Ngammoh et al., 2021b; Zhang & Zhu, 2021). Additionally, the second-order construct of social capital was operationalized from three dimensions: structural, cognitive, and relational (Liu, 2018). The structural social capital reflects network ties and configurations. While relational social capital stresses trust, norms, and expectations, cognitive social capital refers to shared values and beliefs (Claridge, 2018). We measured startup performance adapted from Asikhia (2010) and Wang et al. (2003) comparing startup

performance to that of other businesses in the same industry in terms of their earnings, sales growth, market share, return on investment, and overall success using a five-item scale. Additionally, the study placed a focus on a number of control variables to help divert the effects that could affect the dependent variable – startup performance in the analyses – including the founder's age, education, and industry specialization as well as startup size, as determined by the number of employees.

## 2.3. Structural Equation Modeling: Partial Least Squares (PLS-SEM)

The main analysis in this paper used structural equation modeling with the partial least squares approach (PLS-SEM) to incorporate the suggested framework. Numerous study fields, such as the strategic management (Hair et al., 2012a), organizational management (Sosik et al., 2009), and entrepreneurship (Arabeche et al., 2022; Manley et al., 2021), have made extensive use of PLS-SEM. Additionally, Regardless of advanced distributional assumptions, PLS-SEM enables researchers to estimate complex models with a comparatively larger number of constructs, indicators, and structural paths (Hair et al., 2019) and establishes an SEM method that varies from covariance-based SEM by using a causal-predictive approach. Besides, when there are several constructs and items in small sample size, PLS-SEM is the preferred method (Hair et al., 2017a; Willaby et al., 2015). We, therefore, believe that using PLS-SEM to investigate the structural links and emphasize the predictive relationships of social media strategic capability toward startup performance would be appropriate given the study's relatively small sample size.

## 3. Results

### 3.1. Reliability and validity

We ran Pearson's correlation table as shown in Table 1 to reveal the associations among variables included in this study. Although the correlation coefficients lack predictability as well as causality, the figures manifest the initial analyses describing the characteristics of the data. A correlation table can also signal the tendency that led to the support of hypotheses. More specifically, Table 1 shows the significant results between the main variables. As expected, social media strategic capability is significantly correlated with performance ( $r = 0.450$ ,  $p\text{-value} < 0.01$ ). The social capital, as well as its dimensions, are also positively correlated with the dependent variable ( $p\text{-value} < 0.01$ ) with the value of  $r = 0.306$  for the social capital as well as  $r = 0.452$  for cognitive social capital,  $r = 0.432$  for structural social capital, and  $r = 0.276$  for relational social capital. Each dimension of social capital also significantly correlates with its higher construct manifesting the value between 0.407–0.460 with a  $p\text{-value} < 0.01$ . Regarding the correlation results of the control variables, we found that only size ( $r = 0.256$ ,  $p\text{-value} < 0.05$ ) and education of the

Table 1. Pearson's correlation matrix

	SMSC	Performance	Social_cap	Cognitive	Structural	Relational	Male	Age	Size	Service	Edu
SMSC	1										
Performance	0.450***	1									
Social Capital	0.498***	0.306***	1								
Cognitive	0.401***	0.452***	0.460***	1							
Structural	0.321***	0.432***	0.428***	0.703***	1						
Relational	0.276**	0.398***	0.407***	0.654***	0.801***	1					
Male	0.0610	0.143	-0.0266	0.00601	0.0808	0.104	1				
Age	-0.199*	0.0409	0.00731	-0.102	-0.159	-0.130	0.101	1			
Size (emp)	-0.112	0.256**	-0.0644	-0.0385	-0.185*	-0.132	-0.0103	0.525***	1		
Service	0.138	0.0140	0.0941	0.0666	0.149	0.153	-0.0733	-0.111	-0.215*	1	
Founder education	-0.159	-0.215*	-0.00969	-0.0948	-0.117	-0.114	0.146	0.180*	0.0852	0.0654	1

Note: \*p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001; SMSC = social media strategic capability.

founder (r = -0.215, p-value < 0.10) are significantly correlated with performance with larger startups can translate into better performance and higher education of founder may lead to lower performance.

Table 2 reveals the confirmatory factor analysis (CFA) for the construct reliability. CFA has been widely used in investigating the reliability of each indicator or item that could potentially represent the focused constructs of the study. According to Table 2, each item that represents the construct has passed the cutoff 0.5 factor loading threshold (Hair et al., 2009), indicating satisfactory reliability. Furthermore, the table manifests the composite reliability (C.R.) of each construct that is in an acceptable standard (Hair et al., 2021a). The composite reliability reflects the internal consistency of the items, used in lieu of or similar to the Cronbach's Alpha (Netemeyer et al., 2003) that account for the amount of true score and the total scale score variance (Brunner & Süß, 2005). Furthermore, the average variance extracted (AVE) value is also displayed in Table 2. The AVE is the indicator for convergent validity in which the value should exceed 0.50 (Hair et al., 2009). The convergent validity is the degree of confidence regarding how constructs are well measured by their indicators (Carlson & Herdman, 2012). Based on the analyses, the value of AVE for the main constructs focused on this study has a value higher than 0.50 which can be regarded as an acceptable level of convergent validity. In addition, the comparative fit indices (CFI) were also reported in the table. CFI is among the commonly used indicators for model-data fit when analyzing using SEM. According to Hu and Bentler (1999), the satisfactory threshold for CFI is higher than 0.90. While most of the constructs in this study have passed the threshold, the social capital higher construct is slight under the threshold (CFI = 0.867). Therefore, it should be noticed when interpreting the results regarding the fit index of the social capital higher construct.

Table 2. Confirmatory factor analysis with factor loadings, composite reliability, variance extracted, and comparative fit index

Constructs	Items	Factor Loadings	C.R.	AVE	CFI
SMSC	SMSC1	0.854	0.83	0.57	0.978
	SMSC2	0.932			
	SMSC3	0.627			
	SMSC4	0.552			
Performance	Perf1	0.904	0.95	0.78	0.957
	Perf2	0.932			
	Perf3	0.893			
	Perf4	0.828			
	Perf5	0.878			
Social Capital	Cognitive	0.866	0.95	0.66	0.867
	Structural	0.987			
	Relational	0.868			
Cognitive	Cog1	0.711	0.86	0.67	0.980
	Cog2	0.918			
	Cog3	0.820			
Structural	Struc1	0.763	0.88	0.65	0.934
	Struc2	0.754			
	Struc3	0.865			
	Struc4	0.807			
Relational	Relation1	0.637	0.89	0.70	0.985
	Relation2	0.869			
	Relation3	0.923			
	Relation4	0.902			

This study also assesses the discriminant validity using Fornell-Larcker’s criterion (1981). The discriminant validity represents how different constructs are unrelated. The analysis of discriminant validity has been regarded as very crucial for variance-based SEM such as partial least square SEM (Henseler et al., 2015) especially in the field of management information system (Ringle et al., 2012), marketing (Hair et al., 2012b), and strategic management (Hair et al., 2012a). Among various methodologies in testing discriminant validity, the Fornell-Larcker’s criterion has been commonly used for PLS (Hair et al., 2017b). According to Fornell-Larcker Criterion, the discriminant validity can be established when the square root of average variance extracted (AVE) is higher than its correlation with other constructs. The analyses of the Fornell-Larcker criterion for the discriminant validity of this study can be seen in Table 3 regarding three main constructs – social media strategic capability, social capital higher construct, and performance, the findings demonstrate that the AVE’s square roots in the diagonal are greater than its correlation coefficient in the lower triangle. Therefore, the constructs in this study can be considered to pass the acceptable discriminant validity.

Table 3. Convergent and discriminant validity

	SMSC	Social Capital	Performance
SMSC	0.747		
Social Capital	0.380	0.906	
Performance	0.451	0.481	0.888

Note: \*\*Construct correlations on the lower triangle and square the AVE on the diagonal.

### 3.2. Results from PLS-SEM

Figure 1 shows the proposed framework regarding the inter-relationship between social media strategic capability

(SMSC), social capital, and startup performance. The items associated with each latent construct are also displayed in the figure. It can be noticed that social capital is treated as the second-order construct consisting of cognitive social capital, structural social capital, and relational social capital. As aforementioned, the factor loadings for all the items are displayed in Table 2. In addition, Figure 1 reveals the path coefficients in relation to the hypotheses. The direct relationship between SMSC and performance is positive and significant ( $\beta = 0.519$ ,  $p\text{-value} < 0.01$ ), supporting Hypothesis 1. The results also display the positive relationship between social capital and performance ( $\beta = 0.387$ ,  $p\text{-value} < 0.01$ ) as well as SMSC and social capital ( $\beta = 0.437$ ,  $p\text{-value} < 0.01$ ). These results support our argument that startups also utilize social media for their embedded strategies and in turn improve performance.

In delineating Figure 1 with extended results, Table 4 reveals the results from PLS-SEM for direct and indirect effects as well as the effects from control variables. In investigating Hypothesis 2 in arguing that social capital mediates the direct relationship between social media strategic capability and performance, we ran bootstrapping analysis (Streukens & Leroi-Werelds, 2016) to test the significance of the mediating effects. In bootstrapping analysis, the subsamples are created randomly from the original data to ensure the stability of the results. As suggested by Hair et al. (2021b), bootstrapping can be used to investigate the indirect effects such as the mediating effect within the structural models. We found a significant indirect relationship between social media strategic capability and performance through social capital based on the bootstrapping findings ( $\beta = 0.169$ ,  $p\text{-value} < 0.01$ ) as appeared in Table 4. The results support our second hypothesis revealing evidence of mediating relationship of social capital. Regarding the control variables used in this study, it was discovered that founder education and size were significantly associated with performance. Performance is

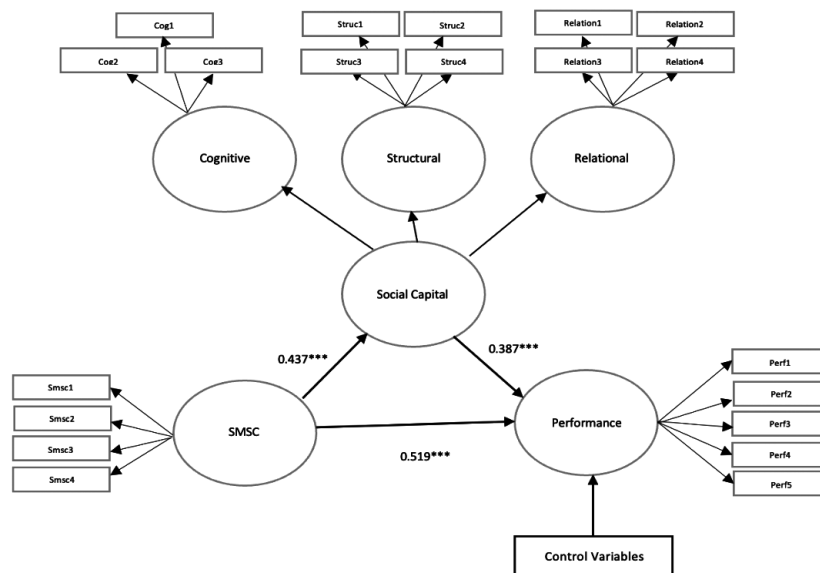


Figure 1. The proposed framework for social media strategic capability, social capital, and performance

positively impacted by size as determined by the number of employees ( $\beta = 0.373$ ,  $p$ -value  $< 0.01$ ). Conversely, we found that the founder's education negatively influences the performance ( $\beta = 0.162$ ,  $p$ -value  $< 0.10$ ) as the education is higher, the performance seems to be lower.

Table 4. The results of PLS-SEM analyses

	$\beta$	S.E.	t	P-value
Control Variables				
Age	0.007	0.093	0.074	0.941
Size	0.373	0.082	4.558	0.000
Service	0.011	0.071	0.154	0.877
Founder Gender (Male)	0.122	0.072	1.708	0.090
Founder Education	-0.162	0.086	-1.880	0.062
Direct Effects				
SMSC	0.519	0.083	6.235	0.000
Social Capital	0.387	0.099	3.902	0.000
Indirect Effect				
SMSC > Social Capital > Performance	0.169	0.050	3.327	0.001

#### 4. Discussion

This study intends to investigate the variables impacting the performance of startups while highlighting the influence of social capital and social media strategic capability (SMSC). SMSC reflects the ability to utilize social media in achieving strategic goals (Nguyen et al., 2015; Zhang & Zhu, 2021) which has been argued to drive better performance. Based on the dynamic capability perspective (Eisenhardt & Martin, 2000; Teece et al., 1997), startups who use social media strategically are seen as highly adaptable organizations with knowledge gathered from both internal and external sources (Ngammoh et al., 2021a). According to our results, this study found the support for the importance of social media for startup organizations. Particularly, we found that in the emerging economy context, SMSC significantly influences the performance of startups. The findings extend the limited generalizability of social media impact on startup organization (e.g., Gloor et al., 2020) and respond to the call for more social media research in entrepreneurship.

Furthermore, we also found the support for the mediating effect of social capital toward the direct relationship between SMSC and performance. It is evident that in better explaining the effects of social media on startups, social capital plays a significant role in this impact. This research offers concrete evidence that social media can be a significant source of social capital within a business, which can improve performance. The findings of this study are in line with earlier studies that claim social media is a crucial tool for promoting community and networking (Bucher, 2015; Mumi et al., 2018) as well as extending social media research into how startup businesses might use the social media to create higher social capital.

The results of this study contribute to the theoretical implications at least two folds. First, the study extends the concept of dynamic capability for startup organizations, especially in arguing and testing those startups that utilize social media for their competitive advantages. Although the study of dynamic capabilities has been established in the literature, few research has investigated the importance of social media in this domain. By extending the study of Ngammoh et al. (2021a), one of the strategic tools for businesses to stand out is social media, which can also be used to gather both internal and external knowledge. Second, this study adds to the body of knowledge on using social media for entrepreneurship and offers empirical support for its strategic application (Mumi et al., 2019). Despite the emerging attention toward this domain, the literature regarding social media for entrepreneurship is still nascent with more areas to be explored (Mumi, 2020; Schjoedt et al., 2020). This study is one of the limited evidence-based arguments for the advantages of social media and social capital in the context of startups.

Additionally, this study offers managerial contributions to startup firm founders and managers in understanding the significance of social media. A startup or emerging organization's strategic usage of social media is essential for growing the business. More particularly based on the findings of this study, the founders and managers can be aware that social media can be used for enhancing internal and external networking in addition to marketing. Social media can be one of the tools for affecting performance via the cognitive, structural, and relational dimensions of social capital.

The limitations of this study should also be taken into consideration along with the findings. First, the study's scope is applicable to the context of an emerging economy, with data for the analysis coming from startups in Thailand. As Thailand is considered one of the nations with larger numbers of innovative and entrepreneurial organizations (Ackaradejruangsri et al., 2022) that can be a suitable context for this study, the results regarding the startups might be different for various geographical landscapes and cultures. Future studies could also investigate the influences of social media through social capital toward startup performance in different contexts to see whether the results are generalizable. Also, with the limited sample size, the results should be carefully interpreted. Although the study employed the PLS-SEM for structural analyses with testing of the proposed relationships that is argued to be appropriate for a small sample size (Hair et al., 2017a; Wilaby et al., 2015), the future study could be more beneficial with a relatively larger sample size. Finally, the study of social media-related research in the entrepreneurship domain is still limited. This study shows how social media might affect performance while emphasizing the mediating role of social capital. There could be various mediating effects awaiting to be explored in future studies. For example, social media as the source of internal and external knowledge could improve performance through various organizational behaviors such as teamwork, adaptability,

employee loyalty, or entrepreneurial orientation. Also, the use of social media for startups may be different than larger companies. For example, startups may utilize social media for gathering investment (Mumi et al., 2019) or crowdsourcing different tasks.

## Conclusions

Startup businesses rely on innovative ideas to provide business solutions in order to grow rapidly and sustainably (Benson & Ziedonis, 2009; Szarek & Piecuch, 2018). Startups also encounter various risks associated with high uncertainty and limited resources (Salamzadeh & Tajpour, 2021; Zahra, 2021). As a result, attempts have been undertaken to investigate the factors that contribute to startups' success. This study is among the limited studies that provide greater insights of how social media could influence performance in the entrepreneurship domain (Olanrewaju et al., 2020; Schjoedt et al., 2020), especially in the startup context. Based on the dynamic capabilities perspective and the results from the data of 128 startups, we found that social media as a startup's strategic capability could improve performance through social capital that comprises three dimensions – cognitive, structural, and relational. Despite the study of the social media and social capital (Ali-Hassan et al., 2015; Bharati et al., 2015; Chen & Li, 2017), this research presents the initial investigation into how social media and social capital may affect startup performance both directly and indirectly. The results reveal the empirical evidence extending the dynamic capabilities perspective and social media research in entrepreneurship, particularly suggesting that startups can yield great advantages from developing the capability regarding social media for achieving organizational sustainability.

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## References

- Ackaradejruangsri, P., Mumi, A., Rattanapituk, S., & Pakhuanich, P. (2022). Exploring the determinants of young inclusive leadership in Thailand: Research taxonomy and theoretical framework. *Journal of the Knowledge Economy*, 1–28. <https://doi.org/10.1007/s13132-022-01017-7>
- Adler, P. S., & Kwon, S.-W. (2002). Social capital: Prospects for a new concept. *Academy of Management Review*, 27(1), 17–40. <https://doi.org/10.5465/amr.2002.5922314>
- Ali-Hassan, H., Nevo, D., & Wade, M. (2015). Linking dimensions of social media use to job performance: The role of social capital. *The Journal of Strategic Information Systems*, 24(2), 65–89. <https://doi.org/10.1016/j.jsis.2015.03.001>
- Arabeche, Z., Soudani, A., Brahmi, M., Aldieri, L., Vinci, C. P., & Abdelli, M. E. A. (2022). Entrepreneurial orientation, organizational culture and business performance in SMEs: Evidence from emerging economy. *Sustainability*, 14(9), 5160. <https://doi.org/10.3390/su14095160>
- Asikhia, O. (2010). Customer orientation and firm performance among Nigerian small and medium scale businesses. *International Journal of Marketing Studies*, 2(1), 197. <https://doi.org/10.5539/ijms.v2n1p197>
- Baig, U., Hussain, B. M., Meidute-Kavaliauskiene, I., & Davidavicius, S. (2022). Digital entrepreneurship: Future research directions and opportunities for new business model. *Sustainability*, 14(9), 5004. <https://doi.org/10.3390/su14095004>
- Benson, D., & Ziedonis, R. H. (2009). Corporate venture capital as a window on new technologies: Implications for the performance of corporate investors when acquiring startups. *Organization Science*, 20(2), 329–351. <https://doi.org/10.1287/orsc.1080.0386>
- Bharati, P., Zhang, W., & Chaudhury, A. (2015). Better knowledge with social media? Exploring the roles of social capital and organizational knowledge management. *Journal of Knowledge Management*, 19(3), 100–140. <https://doi.org/10.1108/JKM-11-2014-0467>
- Bocken, N. M., & Geradts, T. H. (2020). Barriers and drivers to sustainable business model innovation: Organization design and dynamic capabilities. *Long Range Planning*, 53(4), 101950. <https://doi.org/10.1016/j.lrp.2019.101950>
- Bodlaj, M., & Čater, B. (2019). The impact of environmental turbulence on the perceived importance of innovation and innovativeness in SMEs. *Journal of Small Business Management*, 57, 417–435. <https://doi.org/10.1111/jsbm.12482>
- Brunner, M., & Süß, H.-M. (2005). Analyzing the reliability of multidimensional measures: An example from intelligence research. *Educational and Psychological Measurement*, 65(2), 227–240. <https://doi.org/10.1177/0013164404268669>
- Bucher, T. (2015). Networking, or what the social means in social media. *Social Media + Society*, 1(1). <https://doi.org/10.1177/2056305115578138>
- Bughin, J., Byers, A. H., & Chui, M. (2011). How social technologies are extending the organization. *McKinsey Quarterly*, 20(11), 1–10.
- Carlson, J., Rahman, M., Voola, R., & De Vries, N. (2018). Customer engagement behaviours in social media: Capturing innovation opportunities. *Journal of Services Marketing*, 32(1). <https://doi.org/10.1108/JSM-02-2017-0059>
- Carlson, K. D., & Herdman, A. O. (2012). Understanding the impact of convergent validity on research results. *Organizational Research Methods*, 15(1), 17–32. <https://doi.org/10.1177/1094428110392383>
- Cassar, G. (2014). Industry and startup experience on entrepreneur forecast performance in new firms. *Journal of Business Venturing*, 29(1), 137–151. <https://doi.org/10.1016/j.jbusvent.2012.10.002>
- Chen, H.-T., & Li, X. (2017). The contribution of mobile social media to social capital and psychological well-being: Examining the role of communicative use, friending and self-disclosure. *Computers in Human Behavior*, 75, 958–965. <https://doi.org/10.1016/j.chb.2017.06.011>
- Chen, Z. F., Ji, Y. G., & Men, L. R. (2017). Strategic use of social media for stakeholder engagement in startup companies in China. *International Journal of Strategic Communication*, 11(3), 244–267. <https://doi.org/10.1080/1553118X.2017.1298114>
- Claridge, T. (2018). Dimensions of social capital-structural, cognitive, and relational. *Social Capital Research*, 1, 1–4.
- Eisenhardt, K. M., & Martin, J. A. (2000). Dynamic capabilities: What are they? *Strategic Management Journal*, 21(10–11), 1105–1121. [https://doi.org/10.1002/1097-0266\(200010/11\)21:10/11<1105::AID-SMJ133>3.0.CO;2-E](https://doi.org/10.1002/1097-0266(200010/11)21:10/11<1105::AID-SMJ133>3.0.CO;2-E)



- Ewens, M., & Marx, M. (2018). Founder replacement and startup performance. *The Review of Financial Studies*, 31(4), 1532–1565. <https://doi.org/10.1093/rfs/hhx130>
- Fischer, E., & Reuber, A. R. (2011). Social interaction via new social media: (How) can interactions on Twitter affect effectual thinking and behavior? *Journal of Business Venturing*, 26(1), 1–18. <https://doi.org/10.1016/j.jbusvent.2010.09.002>
- Fornell, C., & Larcker, D. F. (1981). Structural equation models with unobservable variables and measurement error: Algebra and statistics. *Journal of Marketing*, 18(3), 382–388. <https://doi.org/10.2307/3150980>
- Gao, H., Tate, M., Zhang, H., Chen, S., & Liang, B. (2018). Social media ties strategy in international branding: An application of resource-based theory. *Journal of International Marketing*, 26(3), 45–69. <https://doi.org/10.1509/jim.17.0014>
- Gloor, P. A., Colladon, A. F., Grippa, F., Hadley, B. M., & Woerner, S. (2020). The impact of social media presence and board member composition on new venture success: Evidences from VC-Backed U.S. startups. *Technological Forecasting and Social Change*, 157, 120098. <https://doi.org/10.1016/j.techfore.2020.120098>
- Gopalakrishnan, S., Scillitoe, J. L., & Santoro, M. D. (2008). Tapping deep pockets: The role of resources and social capital on financial capital acquisition by biotechnology firms in biotech–pharma alliances. *Journal of Management Studies*, 45(8), 1354–1376. <https://doi.org/10.1111/j.1467-6486.2008.00777.x>
- Hair, J., Black, W., Babin, B., Anderson, R., & Tatham, R. (2009). *Multivariate data analysis*. Pearson Education.
- Hair, J. F., Sarstedt, M., Pieper, T. M., & Ringle, C. M. (2012a). The use of partial least squares structural equation modeling in strategic management research: A review of past practices and recommendations for future applications. *Long Range Planning*, 45(5–6), 320–340. <https://doi.org/10.1016/j.lrp.2012.09.008>
- Hair, J. F., Sarstedt, M., Ringle, C. M., & Mena, J. A. (2012b). An assessment of the use of partial least squares structural equation modeling in marketing research. *Journal of the Academy of Marketing Science*, 40(3), 414–433. <https://doi.org/10.1007/s11747-011-0261-6>
- Hair, J. F., Hult, G. T. M., Ringle, C. M., Sarstedt, M., & Thiele, K. O. (2017a). Mirror, mirror on the wall: A comparative evaluation of composite-based structural equation modeling methods. *Journal of the Academy of Marketing Science*, 45(5), 616–632. <https://doi.org/10.1007/s11747-017-0517-x>
- Hair, J. F., Matthews, L. M., Matthews, R. L., & Sarstedt, M. (2017b). PLS-SEM or CB-SEM: Updated guidelines on which method to use. *International Journal of Multivariate Data Analysis*, 1(2), 107–123. <https://doi.org/10.1504/IJMDA.2017.10008574>
- Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, 31(1). <https://doi.org/10.1108/EBR-11-2018-0203>
- Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2021a). *A primer on partial least squares structural equation modeling (PLS-SEM)*. Sage Publications. <https://doi.org/10.1007/978-3-030-80519-7>
- Hair, J. F., Hult, G. T. M., Ringle, C. M., Sarstedt, M., Danks, N. P., & Ray, S. (2021b). Mediation analysis. In *Partial Least Squares Structural Equation Modeling (PLS-SEM) Using R: A workbook* (pp. 139–153). Springer. [https://doi.org/10.1007/978-3-030-80519-7\\_7](https://doi.org/10.1007/978-3-030-80519-7_7)
- Hamilton, M., Kaltcheva, V. D., & Rohm, A. J. (2016). Social media and value creation: The role of interaction satisfaction and interaction immersion. *Journal of Interactive Marketing*, 36, 121–133. <https://doi.org/10.1016/j.intmar.2016.07.001>
- Hanna, R., Rohm, A., & Crittenden, V. L. (2011). We're all connected: The power of the social media ecosystem. *Business Horizons*, 54(3), 265–273. <https://doi.org/10.1016/j.bushor.2011.01.007>
- Hasan, S., & Koning, R. (2019). Prior ties and the limits of peer effects on startup team performance. *Strategic Management Journal*, 40(9), 1394–1416. <https://doi.org/10.1002/smj.3032>
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 43(1), 115–135. <https://doi.org/10.1007/s11747-014-0403-8>
- Hu, L.-t., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 6(1), 1–55. <https://doi.org/10.1080/10705519909540118>
- Huang, J., Newell, S., Huang, J., & Pan, S.-L. (2014). Site-shifting as the source of ambidexterity: Empirical insights from the field of ticketing. *The Journal of Strategic Information Systems*, 23(1), 29–44. <https://doi.org/10.1016/j.jsis.2014.01.001>
- Jin, F., Wu, A., & Hitt, L. (2017). Social is the new financial: How startup social media activity influences funding outcomes. *Academy of Management Annual Proceedings*, 2017(1), 13329. <https://doi.org/10.5465/AMBPP.2017.13329abstract>
- Kaplan, A. M., & Haenlein, M. (2010). Users of the world, unite! The challenges and opportunities of social media. *Business Horizons*, 53(1), 59–68. <https://doi.org/10.1016/j.bushor.2009.09.003>
- Kemp, S. (2020). *Digital 2020: Thailand*. <https://datareportal.com/reports/digital-2020-thailand>
- Kenny, B., & Fahy, J. (2011). Network resources and international performance of High Tech SMEs. *Journal of Small Business and Enterprise Development*, 18(3). <https://doi.org/10.1108/14626001111155691>
- Kumar, V., & Mirchandani, R. (2012). Increasing the ROI of social media marketing. *MIT Sloan Management Review*, 54(1), 55.
- Lamberton, C., & Stephen, A. T. (2016). A thematic exploration of digital, social media, and mobile marketing: Research evolution from 2000 to 2015 and an agenda for future inquiry. *Journal of Marketing*, 80(6), 146–172. <https://doi.org/10.1509/jm.15.0415>
- Li, F., Larimo, J., & Leonidou, L. C. (2021). Social media marketing strategy: Definition, conceptualization, taxonomy, validation, and future agenda. *Journal of the Academy of Marketing Science*, 49(1), 51–70. <https://doi.org/10.1007/s11747-020-00733-3>
- Lindner, J. R., Murphy, T. H., & Briers, G. E. (2001). Handling nonresponse in social science research. *Journal of Agricultural Education*, 42(4), 43–53. <https://doi.org/10.5032/jae.2001.04043>
- Liu, C.-H. S. (2018). Examining social capital, organizational learning and knowledge transfer in cultural and creative industries of practice. *Tourism Management*, 64, 258–270. <https://doi.org/10.1016/j.tourman.2017.09.001>
- Madsen, V. T., & Johansen, W. (2019). A spiral of voice? When employees speak up on internal social media. *Journal of Communication Management*, 23(4), 331–347. <https://doi.org/10.1108/JCOM-03-2019-0050>
- Manley, S. C., Hair, J. F., Williams, R. I., & McDowell, W. C. (2021). Essential new PLS-SEM analysis methods for your

- entrepreneurship analytical toolbox. *International Entrepreneurship and Management Journal*, 17(4), 1805–1825. <https://doi.org/10.1007/s11365-020-00687-6>
- Masters, B., & Thiel, P. (2014). *Zero to One: Notes on startups, or how to build the future*. Random House.
- Maurer, I., & Ebers, M. (2006). Dynamics of social capital and their performance implications: Lessons from biotechnology start-ups. *Administrative Science Quarterly*, 51(2), 262–292. <https://doi.org/10.2189/asqu.51.2.262>
- Mei, M. Q., & Genet, C. (2022). Social media entrepreneurship: A study on follower response to social media monetization. *European Management Journal*. <https://doi.org/10.1016/j.emj.2022.04.006>
- Michaelidou, N., Siamagka, N. T., & Christodoulides, G. (2011). Usage, barriers and measurement of social media marketing: An exploratory investigation of small and medium B2B brands. *Industrial Marketing Management*, 40(7), 1153–1159. <https://doi.org/10.1016/j.indmarman.2011.09.009>
- Mumi, A., Ciuchta, M. P., & Yang, Y. (2018). Social media for entrepreneurial opportunity and process: An effectuation perspective. *Academy of Management Annual Proceedings*, 2018(1), 15826. <https://doi.org/10.5465/AMBPP.2018.27>
- Mumi, A., Obal, M., & Yang, Y. (2019). Investigating social media as a firm's signaling strategy through an IPO. *Small Business Economics*, 53(3), 631–645. <https://doi.org/10.1007/s11187-018-0066-9>
- Mumi, A. (2020). Effectual entrepreneur and the use of social media for opportunity recognition. In L. Schjodt, M. Brännback, & A. Casrud (Eds), *Understanding social media and entrepreneurship* (pp. 49–67). Springer. [https://doi.org/10.1007/978-3-030-43453-3\\_4](https://doi.org/10.1007/978-3-030-43453-3_4)
- Nahapiet, J., & Ghoshal, S. (1998). Social capital, intellectual capital, and the organizational advantage. *Academy of Management Review*, 23(2), 242–266. <https://doi.org/10.5465/amr.1998.533225>
- Naylor, R. W., Lamberton, C. P., & West, P. M. (2012). Beyond the “Like” button: The impact of mere virtual presence on brand evaluations and purchase intentions in social media settings. *Journal of Marketing*, 76(6), 105–120. <https://doi.org/10.1509/jm.11.0105>
- Netemeyer, R. G., Bearden, W. O., & Sharma, S. (2003). *Scaling procedures: Issues and applications*. Sage Publications. <https://doi.org/10.4135/9781412985772>
- Ngammoh, N., Mumi, A., Popaitoon, S., & Issarapaibool, A. (2021a). Enabling social media as a strategic capability for SMEs through organizational ambidexterity. *Journal of Small Business & Entrepreneurship*, 1–21. <https://doi.org/10.1080/08276331.2021.1980682>
- Ngammoh, N., Mumi, A., Popaitoon, S., & Issarapaibool, A. (2021b). Social media strategic capability and the distribution on innovation performance for High-Tech SMEs. *Journal of Distribution Science*, 19(8), 37–46.
- Nguyen, B., Yu, X., Melewar, T., & Chen, J. (2015). Brand innovation and social media: Knowledge acquisition from social media, market orientation, and the moderating role of social media strategic capability. *Industrial Marketing Management*, 51, 11–25. <https://doi.org/10.1016/j.indmarman.2015.04.017>
- Olanrewaju, A.-S. T., Hossain, M. A., Whiteside, N., & Mercieca, P. (2020). Social media and entrepreneurship research: A literature review. *International Journal of Information Management: The Journal for Information Professionals*, 50(C), 90–110. <https://doi.org/10.1016/j.ijinfomgt.2019.05.011>
- Parida, D. K., & Prasanna, D. (2021). An empirical study on social media conversation to increase brand awareness: Startup organization context. *Academy of Marketing Studies Journal*, 25(4), 1–8.
- Payne, G. T., Moore, C. B., Griffis, S. E., & Autry, C. W. (2011). Multilevel challenges and opportunities in social capital research. *Journal of Management*, 37(2), 491–520. <https://doi.org/10.1177/0149206310372413>
- Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(5), 879–903. <https://doi.org/10.1037/0021-9010.88.5.879>
- Rheingold, H. (2000). *The virtual community, revised edition: Homesteading on the electronic frontier*. MIT Press. <https://doi.org/10.7551/mitpress/7105.001.0001>
- Ringle, C. M., Sarstedt, M., & Straub, D. W. (2012). Editor's comments: A critical look at the use of PLS-SEM in “Mis Quarterly”. *MIS Quarterly*, 36(1), iii–xiv. <https://doi.org/10.2307/41410402>
- Rogelberg, S. G., & Stanton, J. M. (2007). Introduction: Understanding and dealing with organizational survey nonresponse. *Organizational Research Methods*, 10(2), 195–209. <https://doi.org/10.1177/1094428106294693>
- Salamzadeh, A., & Tajpour, M. (2021). Identification of the challenges of media startup creation in Iran. *Journal of Entrepreneurship Development*, 13(4), 561–580.
- Schjoedt, L., Brännback, M. E., & Carsrud, A. L. (2020). *Understanding social media and entrepreneurship: The business of hashtags, likes, tweets and stories*. Springer Nature. <https://doi.org/10.1007/978-3-030-43453-3>
- Skala, A. (2019). The startup as a result of innovative entrepreneurship. In *Digital startups in transition economies*. Palgrave Pivot. [https://doi.org/10.1007/978-3-030-01500-8\\_1](https://doi.org/10.1007/978-3-030-01500-8_1)
- Slávik, Š., Hudáková, I. M., Procházková, K., & Zagoršek, B. (2022). Strategic background of the start-up – qualitative analysis. *Administrative Sciences*, 12(1), 17. <https://doi.org/10.3390/admsci12010017>
- Sosik, J. J., Kahai, S. S., & Piovoso, M. J. (2009). Silver bullet or voodoo statistics? A primer for using the partial least squares data analytic technique in group and organization research. *Group & Organization Management*, 34(1), 5–36. <https://doi.org/10.1177/1059601108329198>
- Streukens, S., & Leroi-Werelds, S. (2016). Bootstrapping and PLS-SEM: A step-by-step guide to get more out of your bootstrap results. *European Management Journal*, 34(6), 618–632. <https://doi.org/10.1016/j.emj.2016.06.003>
- Szarek, J., & Piecuch, J. (2018). The Importance of startups for construction of innovative economies. *International Entrepreneurship Review*, 4(2), 69–78. <https://doi.org/10.15678/PM.2018.0402.05>
- Teece, D., & Pisano, G. (2003). The dynamic capabilities of firms. In *Handbook on knowledge management* (pp. 195–213). Springer. [https://doi.org/10.1007/978-3-540-24748-7\\_10](https://doi.org/10.1007/978-3-540-24748-7_10)
- Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, 18(7), 509–533. [https://doi.org/10.1002/\(SICI\)1097-0266\(199708\)18:7<509::AID-SMJ882>3.0.CO;2-Z](https://doi.org/10.1002/(SICI)1097-0266(199708)18:7<509::AID-SMJ882>3.0.CO;2-Z)
- Teece, D. J. (2007). Explicating dynamic capabilities: The nature and microfoundations of (sustainable) enterprise performance. *Strategic Management Journal*, 28(13), 1319–1350. <https://doi.org/10.1002/smj.640>
- Theodoraki, C., Messeghem, K., & Rice, M. P. (2018). A social capital approach to the development of sustainable entrepreneurial ecosystems: An explorative study. *Small Business Economics*, 51(1), 153–170. <https://doi.org/10.1007/s11187-017-9924-0>

- Wang, D., Tsui, S., Zhang, Y., & Ma, L. (2003). Employment relationships and firm performance: Evidence from an emerging economy. *Journal of Organizational Behavior*, 24(5), 511–535. <https://doi.org/10.1002/job.213>
- Watts, S. A., & Zhang, W. (2008). Capitalizing on content: Information adoption in two online communities. *Journal of the Association for Information Systems*, 9(2), 3. <https://doi.org/10.17705/1jais.00149>
- Wenger, E. (1999). *Communities of practice: Learning, meaning, and identity*. Cambridge University Press. <https://doi.org/10.1017/CBO9780511803932>
- Willaby, H. W., Costa, D. S., Burns, B. D., MacCann, C., & Roberts, R. D. (2015). Testing complex models with small sample sizes: A historical overview and empirical demonstration of what Partial Least Squares (PLS) can offer differential psychology. *Personality and Individual Differences*, 84, 73–78. <https://doi.org/10.1016/j.paid.2014.09.008>
- Zahra, S. A. (2021). The resource-based view, resourcefulness, and resource management in startup firms: A proposed research agenda. *Journal of Management*, 47(7). <https://doi.org/10.1177/01492063211018505>
- Zhang, F., & Zhu, L. (2021). Social media strategic capability, organizational unlearning, and disruptive innovation of SMEs: The moderating roles of tmt heterogeneity and environmental dynamism. *Journal of Business Research*, 133(C), 183–193. <https://doi.org/10.1016/j.jbusres.2021.04.071>
- Zwass, V. (2010). Co-creation: Toward a taxonomy and an integrated research perspective. *International Journal of Electronic Commerce*, 15(1), 11–48. <https://doi.org/10.2753/JEC1086-4415150101>