

Product development under information technological turbulence: The role of marketing communication for competitive advantage in small businesses enterprises

Abstract

This study's intention was to investigate the impact of marketing communication capability on sustainable competitive advantage by examining the mediating effect of product development and selling capabilities. We also explore the effect of information technological turbulence in the relationship between marketing communication capability and firm competitive advantage. This study proposes a structural equation model to empirically test the relationships between marketing communication, selling capability, product development, and sustainable competitive advantage. Drawing from the SMEs database provided by the Ministry of Cooperative and SMEs in Indonesia, the random sample adopts a self-administered mail survey for data collection. The results indicate that marketing communication capability brings a positive impact on product development capability, which in turn strengthens the sales capability to achieve sustainable competitive advantage. However, high information technological turbulence reduces the effectiveness of marketing communication capability in supporting the competitive advantage. This study extends the dynamic capability theory by adopting information technological turbulence at various levels to explain the role of marketing communication and product development.

Keywords: product development, marketing communication, information technological turbulence, competitive advantage

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Introduction

The framework of strategic entrepreneurship highlights that entry timing decisions and entrant performance spring from various forces, which allow firms to gain sustainable competitive advantage (Zhao, Ishihara, & Jennings, 2020). Hence, the strategic entrepreneurship research attempts to understand how firm behaviour deals with dynamic institution forces, where dynamic capability enables firms to become creative destructive (Gölgeci, Larimo, & Arslan, 2017). Vibrant entrepreneurial culture is a key element for a strong innovation ecosystem, which calls for extensive literatures to examine the ambition to identify opportunities and favouring innovation (Pradhan, Arvin, Nair, & Bennett, 2020) (Kantis, Federico, & García, 2020).

The capability of small and medium enterprises (SMEs) to enhance their product development relies on social capital, which demonstrates a robust informal relationship with their stakeholders, which demonstrates their responsiveness to the needs of the customers (Perez & Bulte, 2014). Extensive business networking is essential for SMEs to acquire local knowledge for innovation development by increasing their managerial capability ties with their buyers and suppliers (Wang & Chung, 2020). However, the marketing communication capability to enhance the interaction between producers and consumers has been challenging in the past to generate co-production. Recently the evolution of technology allows the marketing communication strategy to create co-innovation and co-production but not all firms have capability to seize the opportunity (Bacile, et al., 2014). Selling new products requires great effort intensity, which may imply resistance, especially when customers become curious about new products (Steenburgh & Ahearne, 2018).

The marketing communication capability demonstrates how firms generate innovation to deal with the unique challenges that spring from social media fragmentation and consumer personalisation (Vernuccio & Ceccotti, 2015). Hence, the contributions of marketing communication capability to organisational competitiveness need to be clarified since the major studies on marketing communication still concern traditional information distribution (Zerfass & Volk, 2018). The behavioural consequences in corporate communication come from the interaction with customers, especially when their interests become divergent (Tura, et al., 2018). Whether by force or by design, firms are encouraged to establish their relationship with their customers in anticipation of this transformation by using social media as a co-creative platform for product improvement and innovation (Zhu, et al., 2018).

This study attempts to investigate the entrepreneurial strategy of SMEs by addressing the relationship between marketing communication capability and sustainable competitive advantage. Hence the research question involves whether the product development and selling capability mediate the relationship between marketing communication and competitive advantage. This study also explores the dynamic business environment by responding the research question whether information technological turbulence determines the relationship between marketing communication and competitive advantage.

The article is divided into four sections. The first section begins with the research gap and purposes. The second section provides the literature review for entrepreneurial strategies, which underpins the competitive advantage theory, resource-based theory, and dynamic capability theory. The next section involves a research method that explains the empirical

model and data collection. The last section reveals the findings, followed by the discussion and conclusion.

Literature review

The concept of strategic entrepreneurship has been emerging since early 2000, where strategic management integrated with entrepreneurship research by exploring the opportunity and advantage-seeking behaviour to achieve sustainable competitive advantage under dynamic business environments (Zhao, Ishihara, & Jennings, 2020). The roadmap of strategic entrepreneurship springs from several phenomena, including institutional works, entrepreneurial orientation, and business model, which intertwine at a dynamic capability approach (Gölgeci, Larimo, & Arslan, 2017). Strategic entrepreneurship is an approach that serves business organisations to achieve competitive advantage both today and the near future (Ireland & Webb, 2007).

Strategic entrepreneurship demonstrates the dynamic capability of the firms to become creative and destructive, which offer valuable resources to achieve competitive advantage (Gölgeci, Larimo, & Arslan, 2017). Marketing communication capability refers to a process of building brand awareness and image (Vorhies, Orr, & Bush, 2011), which demonstrates the intangible asset resulting in competitive advantage, as per resource-based theory (Barney, 1991). The modern marketing communication strategy has extended over brand awareness to market signals through building intensive communication with other departments (e.g., operation, sales, direct marketing). At the same time, the traditional approach remains to focus on advertising activities (Day, 2011). Marketing communication capability is an essential element of marketing capabilities that firms need to be able to deploy available resources that match the market condition to drive firm competitive advantage (Morgan, Vorhies, & Mason, 2009; Pratono & Radjabin, 2012). As the capability is hard to imitate, this capability allows for the effectiveness of organisational resources, such as coordination, technical skills, or mental ability (Lvina, Johns, & Vandenberghe, 2018).

Firms have a sustainable competitive advantage if they enjoy more superior performance than their competitors (Schilke, 2014). Another literature argues that sustainable advantage demonstrates the capability to anticipate environmental turbulence faster than the competitor (Kumar, Jones, Venkatesan, & Leone, 2011). The capability of small and medium enterprises (SMEs) to enhance their product development relies on a robust informal relationship with their stakeholders, which demonstrates their responsiveness to the needs of the customers (Perez & Bulte, 2014). Such capability includes collaboration for horizontal communication, stretch assignments, a risk-tolerant environment, and reduced centralised control (Maurer & London, 2018), which allows organisations to generate value-focused sales management in the industrial context (Töytäri & Rajala, 2015; Pratono et al, 2019).

Contingency theory attempts to formulate the role of technology on organisational attributes by criticising the classical managerial style (Woodward, 1958). The communication within information technological turbulence in a new level promises an integral part of future customer relationship management (Nguyen & Mutum, 2012). The firms, which attempt to seize opportunities by taking a high risk, could find difficulty under uncertainty contingency (Pratono, 2019). The theory argues that organisations should manage the internal balance

needs and adapt to environmental circumstances by taking into account the uncertainty contingencies (Hwang, Kim, Hur, & Schoenherr, 2019).

Hypothesis development

Hypothesis 1: Marketing communication capability has a positive impact on sustainable competitive advantage

Marketing communication capability creates synergy among the different marketing elements (Kitchen & Burgmann, 2010). The astute marketing communication responds to the needs of colleagues by appearing genuine interactions, which lead to group cohesiveness (Lvina, Johns, & Vandenberghe, 2018). This capability promotes the development of quality social relationships by caring for others and building a reliable work environment (Babalola, Stouten, Euwema, & Ovadje, 2018), which positively affects sales performance (Porcu, del Barrio-Garcia, Alcántara-Pilar, & Crespo-Almendros, 2019).

Firms may increase the performance by organising their information resources to align content topics and exploiting the risk-taking behaviour to enable simultaneous determination of sustainable competitive advantage (Kanuri, Chen, & Sridhar, 2018). Marketing communication capability allows the consumers to get involved in processing of stimuli require extensive information integration (Landwehr, Wentzel, & Herrmann, 2013), which lends further credibility to the competitive advantage (Schilke, 2014).

Hypothesis 2: Marketing communication capability has a positive impact on product development

Managing creativity requires not only the identification of employees with creative potential but also an understanding of how the team context influences the creativity of individuals who have different types of motivation. Marketing communication capability fosters extrinsic motivation, which directly relates to creativity (Zhu, Gardner, & Chen, 2018). Marketing communication strategy enhances employees' sense of efficacy that promotes caring, respect for coworkers, open discussions, and concern for activating specific knowledge, which is essential for innovation (Babalola, Stouten, Euwema, & Ovadje, 2018).

The real-time interactional data becomes a fertile source of research and development to feed innovation and create value in the frontlines (Singh, Brady, & Arnold, 2017). The attempts to promote organisational innovation entails the decision and information process in the organisation closer to the innovators (Maurer & London, 2018). A network contact provides a new piece of information by considering the content and sources of informational resources when examining their effects on creativity from different cultural backgrounds (Chua, 2018).

Hypothesis 3: Marketing communication capability has a positive impact on selling capability

Selling capability demonstrates the organisational capabilities that contribute to increased customer-perceived values in sales management practice (Töytäri & Rajala, 2015). Consumers may need considerable exposure before accepting and purchasing products with a new design. (Landwehr, Wentzel, & Herrmann, 2013). Awareness that a specific number of consumers have adopted the product in the past leads to a general buzz type of social influence (Risselada, Verhoef, & Bijmolt, 2014). Once the marketing communication was able to distract the consumers, they may spend more time to find the information and to shelf

information more, which ultimately increases the amount they purchase (Grewal, Ahlbom, Beitelspacher, Noble, & Nordfält, 2018).

Promotion-focused consumers using social media can obtain more information and buy items more often with higher spending levels than those using other channels. On the other hand, prevention-focused consumers can routine their shopping and spend more on traditional channels than on other channels (Kushwaha & Shankar, 2013). Marketing communication capability improves content effectiveness by enhancing consumers' propensity to engage with social media content (Kanuri, Chen, & Sridhar, 2018). The marketing capability demonstrates how firms can effectively tailor their communications to audiences with conservative ideology (Kim, Park, & Dubois, 2018).

Hypothesis 4: Product development has a positive impact on sustainable competitive advantage

New product development is an essential element of marketing capability. Nadeau & Casselman (2008) demonstrates how firms achieve their competitive advantage by employing new product development strategies. Business model innovation for sustainability leads to a higher complexity on how to assess the impact of innovation on the whole business networks by involving the value network with a new purpose, design, and governance (Evan, et al., 2017).

New product development also provides opportunities for the competitive landscape (Nadeau & Casselman, 2008). The reliable networks help the firm to conduct new product development (Pratono, 2018). At the same time, the effect of informational resources on creativity and innovation relies on how the firms confer the information on the innovators (Chua, 2018).

Hypothesis 5: Product development has a positive impact on selling capability

Selling capability depends on the newness of the product. Firms launch a new product by adapting the individualistic culture and subsequently moving to more collectivistic societies (Ma, Yang, & Mourali, 2014). The product development project typically entails intensive communication and coordination between collaborators (Mindruta, Moeen, & Agarwal, 2016). Sales of a new product will increase in the beginning, reach a natural ceiling and then decline until the product is removed from the market (Landwehr, Wentzel, & Herrmann, 2013).

Marketing communication capability plays a pivotal role in promoting new products by making consumers enthusiastic and shares their opinion with their social network (Risselada, Verhoef, & Bijmolt, 2014). Murray (2013) indicates that there is a parallel path to new product success, which occurs from new product development to commercialisation that continues to influence the market success significantly. Organisational buying often involves buying centres and multiple stakeholders that evaluate the value proposition. There are situations in which the supplier is more innovative to promote value creation than the buyers (Töytäri & Rajala, 2015).

Hypothesis 6: Selling capability has a positive impact on sustainable competitive advantage

Selling capability demonstrates the organisational capabilities that contribute to increased customer-perceived values in sales management practice (Töytäri & Rajala, 2015). Selling capability involves various steps of the selling process, and that these steps occur over time

and not necessarily in any given sequence (Jaakkola, Frösén, & Tikkanen, 2015). Salespeople are at their best if they are optimistic about their abilities to adapt to customer situations and to use their selling skills to make customer interactions more successful (Singh, Kumar, & Puri, 2017). Selling capability of the firms with a strong social network structure will lead them to achieve competitive advantage (Pratono, 2018). A value selling approach allows firms to tailor offerings that maximise buyer and seller return, maximising the lifetime value of the relationship (Kienzler, Kindström, & Brashear-Alejandro, 2019).

Hypothesis 7: Information technological turbulence has a moderating impact on the relationship between marketing communication capability and sustainable competitive advantage.

Marketing communication appears to respond to changes in the market due to information technological turbulence. Marketing communication practices include the systematic documentation of customer cases as reference stories, indexing the case stories, stakeholders, and making the stories available for sales and marketing communications through information technology solutions (Töytäri & Rajala, 2015). Information technology allows the firms to build not only a long-term relationship but also organisational integration by sharing the information each other goes beyond departmental and even organisational boundaries (Porcu, del Barrio-Garcia, Alcántara-Pilar, & Crespo-Almendros, 2019).

On the other hand, firms will be able to manage multiple pieces of information simultaneously to some extent until the information processing slows down due to the restricted bottleneck (Grewal, Ahlbom, Beitelspacher, Noble, & Nordfält, 2018). Lack of ability to respond to the dynamic information technological turbulence diminish the relationship with the buyer, who may get the information asymmetry (Kozlenkova, Palmatier, Fang, Xiao, & Huang, 2017). Drawing on social learning theory, spillover effects can explain why a firm fails to promote communication capability (Diehl, Richter, & Sarnecki, 2018). They may prefer to use simple rules of thumb to address the complexity in marketing communication strategy, which indicates the scepticism about the profit-maximising ability of their heuristics (Kanuri, Chen, & Sridhar, 2018).

Research Method

The path model was developed based on the previous literature, which argues that product development and sales capabilities serve as a mediation variable in support of the relationship between the marketing communication capabilities and sustainable competitive advantage. The mediating effects explain how product development and selling capabilities translating the marketing communication capabilities as exogenous construct into the competitive advantage. Primary data for testing the hypotheses involve the mail survey of the small and medium enterprises in Indonesia, which was taken from the SME directory. After eliminating surveys from out-layer data, we retained 390 usable data. Testing for the difference between respondent and non-respondents on the dependent variable of sustainable competitive advantage found no differences, suggesting that non-response bias is present in the dataset.

The specific indicator variables for each survey measure are available in Table 1. There were seven items of sustainable competitive advantage, which was measured using subjective assessment and adapted from Schilke (2011). We asked respondents for their subjective assessment of their performance based on their comparison to their direct competitors in the

industry. The first measure points out that ‘[firm has] gained strategic advantages over our competitors’. The second measure concerns the market share. Another measure indicates that ‘ROI (return on investment) is continuously above the industry average’.

Three items of marketing communication capability were measured using existing scales (Morgan, Vorhies, & Mason, 2009). The measures involve ‘... develops and executes the advertising program’, ‘... enhances advertising management and creative skills’, and ‘promotes public relations skills. Other capabilities, product development, and selling capabilities were also measured using existing scales adapting from Morgan, et al. (2009). Product development: ‘manages new products well’, ‘exploits R&D investment to develop new products’, ‘speedily develops and launches new products’, ‘carries out test marketing of new products’ ‘product development is responsive to customers’ needs’. The measures of selling capability consist of ‘provides salesperson training they need to be effective’, ‘sales management planning and control system’, ‘skilful salesperson’, and ‘develops sales management skills.

Table 1. Construct measures

Code	Variables	VIF	Outer loadings
Competitive advantage			
CA01	We have gained strategic advantages over our competitors	2.527	0.768
CA02	We have a large market share	2.827	0.835
CA04	Our EBIT (earnings before interest and taxes) is above industry average	2.213	0.777
CA05	Our ROA (return on asset) is continuously above industry average	2.262	0.772
CA06	Our ROI (return on investment) is continuously above industry average	2.763	0.830
CA07	Our ROS (return on sales) is continuously above industry average	2.609	0.829
CA08	Overall, we are more successful than our major competitors	2.716	0.847
Marketing communication			
MC01	Our firm develops the advertising program	1.516	0.790
MC02	Our firm enhances advertising management and creative skills	1.631	0.882
MC03	Our firm promotes public relations skills	1.602	0.803
Information technological turbulence			
IT01	The information technology in our industry is changing rapidly	2.226	0.802
IT02	The IT changes provide opportunities in our business	2.219	0.811
IT03	Many new products ideas become possible by information technology	2.903	0.881
IT04	IT changes in our industry generate new ideas for product supply	2.173	0.785
IT05	IT changes generate new ideas for our service support	2.406	0.848
Product development			
PD01	Our firm manages new products well	2.203	0.839
PD02	Our firm exploits R&D investment to develop new products	1.738	0.789
PD03	Our firm speedily develops and launches new products	1.884	0.776
PD04	Our firm carries out test marketing of new products	1.892	0.777

PD05	Our product development is responsive to customers need	1.998	0.789
Selling capability			
SC01	Our firm provides salesperson training they need to be effective	2.921	0.892
SC02	Our firm sets sales management planning and control system	2.760	0.885
SC03	Our firm has skilful salesperson	2.946	0.894
SC04	Our firm develops sales management skills	2.612	0.875

Source: authors' own table

This study used the Smart PLS 3.0 to execute the structural equation model with algorithm approaches to estimate the path coefficients that maximise the explained variance of the dependent construct. The Smart PLS provides three main results: the outer loadings for the measurement models, the path coefficients for the structural model, and the goodness of fit. Assessment of the measurement models also involves composite reliability to examine the internal consistency, individual indicator reliability, and average variance extracted to examine the convergent validity. Both outer loadings and path coefficients of the structural model were estimated, which resulted in R^2 values of the endogenous latent variables.

Results

Table 2 shows the descriptive statistics of the observed respondents, which indicates that 67% of respondents belong to the group of small-sized enterprises with annual sales are varied from IDR300 million to IDR2.5 billions. According to marketing capability level, 64% of respondents indicate that their degree is above the moderate level as 125 respondents state that their firms have capability slightly higher than the reasonable level of 4.

The analysis of the structural equation model examines the structural relationships among the constructs. Table 3 shows that the Cronbach's alpha (CA) have values higher than 0.7, which confirms that the constructs are reliable based on the inter-correlated of the observed indicator variables. The values of composite reliability (CR) are also higher than 0.8, which indicates high reliability. The results show the constructs meet the validity and reliability standard.

The convergent validity involves both average variances extracted and the outer loadings. Table 1 shows that standardised outer loadings of all items are higher than 0.75, while Table 3 shows that the AVE value of each construct is higher than 0.5. The values indicate that the constructs explain more than half of the variance of the indicators. Table 2 also provides evidence that multicollinearity is not the main issue for the model as the VIF values of the constructs are below the threshold of 5. Overall, the results indicate that the communality level of the five constructs is acceptable.

Table 2. respondent profile based on the marketing capability level

Marketing communication	1	2	3	4	5	6	7	Total
Firm assets								
Less than IDR50 million	1	2	4	7	7	11	7	76
Between IDR50 and IDR500 million	2	10	5	18	39	27	15	262
Between IDR500 million and IDR10 billion	0	0	0	3	9	11	4	52

Total respondents	3	12	9	28	55	49	26	390
Firm annual sales								
Less than IDR300 million	1	5	4	16	19	24	7	76
Between IDR300 million and IDR2.5 billion	7	23	13	55	93	56	15	262
Between IDR2.5 and IDR50 billion	0	0	1	13	13	21	4	52
Total respondents	8	28	18	84	125	101	26	390

Source: authors' own table

Table 3. Validity and reliability test

Constructs	CA	CR	AVE
Marketing communication capability (MC)	0.771	0.865	0.682
Sustainable competitive advantage (CA)	0.912	0.93	0.654
Information technological turbulence (IT)	0.883	0.915	0.683
Product development (PD)	0.854	0.895	0.631
Selling capability (SC)	0.909	0.936	0.786

Source: authors' own table

Table 4. HTMT Discriminant validity

Constructs	IT	ME	PD	SC	CA	MC
Information technological turbulence	0.826					
Moderating Effect	-0.235	1				
Product development	0.487	-0.155	0.794			
Selling capability	0.634	-0.308	0.552	0.887		
Sustainable competitive advantage	0.558	-0.294	0.536	0.611	0.809	
Marketing communication capability	0.575	-0.129	0.509	0.633	0.505	0.826

Source: authors' own table

Turning to the discriminant validity assessment, the Fornell-Larcker criterion, which entails the values of the square root of average variance extracted (AVE) for the reflective construct, is listed on the diagonal of Table 4. The MC has a value of the square root of AVE is 0.826, which is higher than the correlation of MC with other constructs. Other constructs also have squared root values of AVE (IT: 0.826, ME: 1, PD: 0.794, SC: 0.887, CA: 0.809), which are higher than the correlation with other constructs (Table 4).

Figure 2 shows that the R^2 value of the competitive advantage is 0.476, which demonstrates the combined effects of all exogenous latent variables' combined effects on the competitive advantage. The combined impact of MC and PD on selling capability is 0.472, which indicates a moderate level of predictive accuracy. Table 5 shows that the standardised root-mean-square residual (SRMR) is less than the threshold of 0.08, which suggests that the model misspecification is avoidable (Hair, Hult, Ringle, & Sarstedt, 2014). Henseler et al. (2014) introduced the SRMR for assessing the goodness of fit by evaluating the difference between the observed correlation, and the model implied correlation matrix. However, the normed fit index (NFI) is 0.781, which does not meet the threshold of 0.9.

Table 6 shows the bootstrap results. The impact of marketing communication capability (MC) on sustainable competitive advantage (CA) has a standard deviation of 0.054 and t-value of 1.731 with P-value of 0.084, which indicate that the effect of MC on CA is significant at a 10% level. This result confirms hypothesis I, which argues that MC has a positive impact on CA. The findings support the previous study, which claims that marketing communication positively affects their performance (Porcu, del Barrio-Garcia, Alcántara-Pilar, & Crespo-Almendros, 2019).

The effect of marketing communication capability on product development has a standard t-statistics value of 11.78, which indicates a significant impact at an alpha of 1%. This result suggests that hypothesis II is acceptable, which confirms that marketing communication capability positively affects creativity (Zhu, Gardner, & Chen, 2018) and plays a pivotal role to promote innovation (Babalola, Stouten, Euwema, & Ovadje, 2018).

Table 5. Goodness of fit

Goodness of fit	Saturated Model	Estimated Model
SRMR	0.07	0.099
d_ ULS	1.482	2.917
d_ G1	0.935	0.981
d_ G2	0.683	0.737
Chi-Square	1,464.03	1,509.13
NFI	0.781	0.774

Source: authors' own table

Table 6. Path analysis

Path	Original Sample (O)	Std. Dev. (STDEV)	T Statistics (O/STDEV)	P Values
H1: MC -> CA*	0.093	0.054	1.731	0.084
H2: MC -> PD**	0.509	0.043	11.789	0.000
H3: MC -> SC**	0.476	0.053	8.981	0.000
H4: PD -> CA**	0.228	0.047	4.791	0.000
H5: PD -> SC**	0.310	0.049	6.386	0.000
H6: SC -> CA**	0.264	0.051	5.126	0.000
H7: IT -> CA**	0.199	0.046	4.362	0.000
ME -> CA**	-0.110	0.040	2.782	0.006

ME = mediating effect, * = significant at alpha 10%, ** = significant at alpha 1%

Source: authors' own table

The hypothesis III is acceptable with t-value of 8.981, which indicates that marketing communication capability has a significant impact on selling capability at the alpha of 1%. The results support the previous study, which argues that marketing communication capability improves the content effectiveness in enhancing consumers' propensity to purchase

(Kanuri, Chen, & Sridhar, 2018). The impact of product development on competitive advantage is significant at an alpha of 1% with t-statistics of 4.791. This result confirms the previous study, which argues that new product development plays a pivotal role to promote the firm performance (Pratono, 2018) and competitive advantages rely on how firms convert the creativity and innovation on the innovators (Chua, 2018).

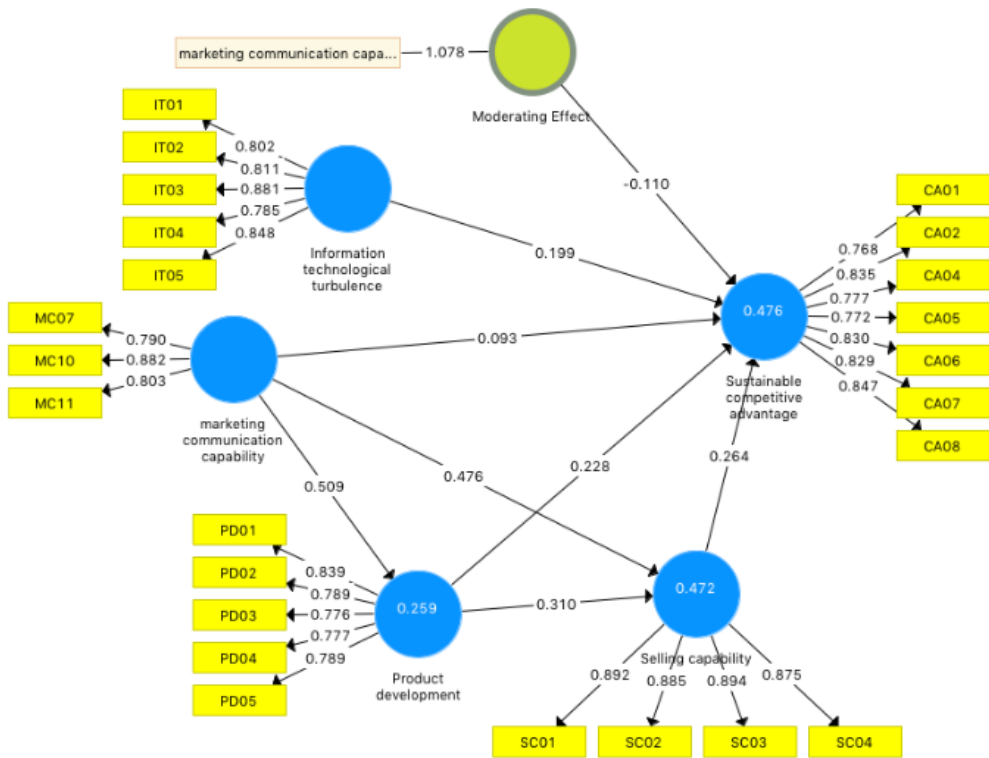
Table 6 also shows that hypothesis V is acceptable with the t-statistics value of 6.386, which indicates that the product development significantly affects selling capability with an alpha value of 1%. The results support the previous study, which argues that selling leads firms to achieve competitive advantage (Pratono, 2019) by offering the return and lifetime value of the relationship (Kienzler, Kindström, & Brashear-Alejandro, 2019).

Both information technological turbulence and interaction terms have a significant impact on competitive advantage. The effect of information technological turbulence has a t-statistic value of 4.362, while the interaction term of moderating effect (ITxMC) generates a value of 2.782. Both values generate a p-value of 1%, which confirms that the moderating effect is statistically significant.

Figure 2 shows that firms with marketing communication capability gain benefit from moderate information technological turbulence by achieving high sustainable competitive advantage. Information technology allows the firms to share the information beyond the organisational boundaries to promote organisational integration (Porcu, del Barrio-Garcia, Alcántara-Pilar, & Crespo-Almendros, 2019) and resource interaction (Saranga, George, Beine, & Arnold, 2018).

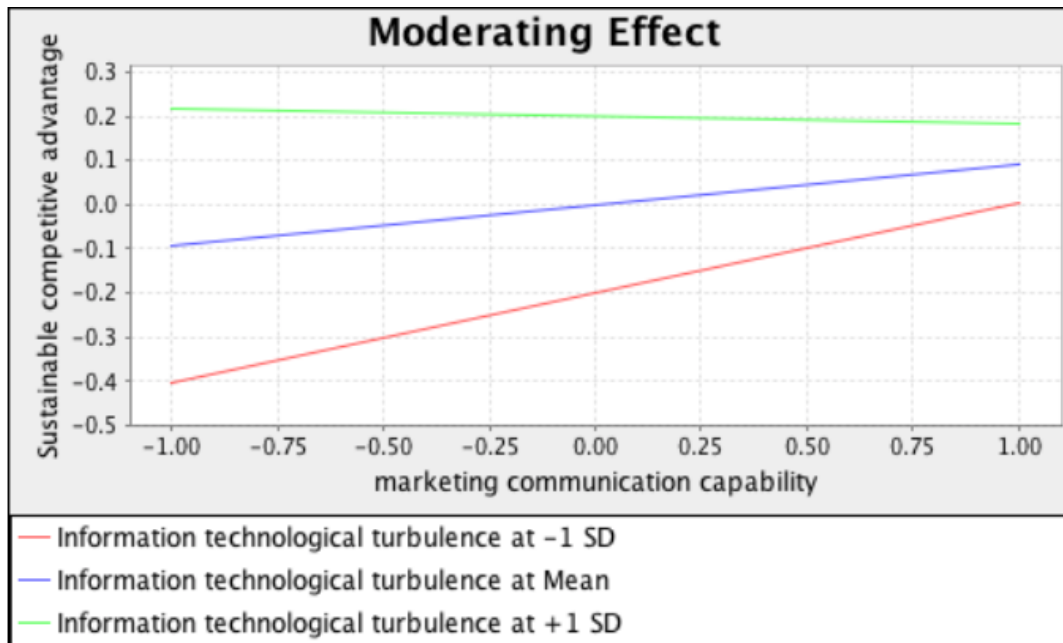
On the other hand, firms that attempt to allocate resources for marketing communication capability under high information technological turbulence will suffer from a low sustainable competitive advantage (Figure 2). Lack of ability to respond to the information from technological turbulence diminishes the ability to promote sustainable competitive advantage (Kozlenkova, Palmatier, Fang, Xiao, & Huang, 2017). When information technological turbulence beyond the capability of the firms to manage multiple pieces of information simultaneously, the information processing slows down due to the restricted bottleneck (Grewal, Ahlbom, Beitelspacher, Noble, & Nordfält, 2018).

Figure 1. Path analysis



Source: authors' own figure

Figure 2. Moderating effect of information technological turbulence



Source: authors' own figure

Discussion

Overall, this study supports the resource-based theory linking with the contingency approach. Consistent with the resource-based theory that argues that organisation capability explains performance, our results reveal a significant indirect relationship among the capabilities, which in turn, lead to sustainable competitive advantage. This study confirms that marketing communication does not only play a pivotal role in advertising campaigns but also delivering tangible value to the business organisation. It indicates that the respondents perceive that marketing communication capability leads the firms to high product development and sales capability, which bring about sustainable competitive advantage. Marketing communication capability is a valuable resource for innovative organisations. It can bring a positive impact on product development, which leads the organisation to enhance their selling capability, which in turn, fosters a sustainable competitive advantage. The substantial changes in skills and focus for marketing communication strategy may occur while the business environment is dynamic (Lvina, Johns, & Vandenberghe, 2018). Such efforts of marketing communication capability may include cross-functional collaboration and integrative structures for horizontal communication, stretch assignments, a risk-tolerant environment, and reduced centralised control (Maurer & London, 2018).

The result extends the contingency theory by examining the role of technology on organisational attributes. This article indicates that firms struggle to convert their resources of marketing communication capability into a competitive advantage when they face information technological turbulence. The communication within information technological turbulence provides not only a new level that promises an integral part of future customer relationship management (Nguyen & Mutum, 2012) but also has a potential risk, especially when firms face uncertainty contingency (Pratono, 2018). The results support the

contingency theory, which argues that organisations should maintain the organisational balance by adapting the environmental circumstance (Hwang, Kim, Hur, & Schoenherr, 2019).

The SMEs face a glimpse of the information technology shifts, which provides potential to impact a particular industry, especially the individuals and small teams. Most organisations spend more time and resources scouting the emerging technologies by running a pilot test, which requires a strong relationship with support groups like IT, product innovators, and marketers. They can provide some integrated communication to fill the gaps in a product line. They can make commitments necessary to pilot new products. This approach requires master data analytics, customer experience, and product design.

Marketing communication capability needs to understand not only the customers but also the product designer, and salespersons to understand their sources of satisfaction for their new product. Firms need to manage their marketing communication capabilities, which allow their employees to feel more capable of generating product development by enabling them to access the information, knowledge, and talent outside of their capabilities, which in turn can stimulate their creative thinking (Maurer & London, 2018). The marketing communication strategy should promote collaboration, instead of competition, between the divisions in the organisational structure, which attempts to provide organisational context with enjoyment, fun, and engagement, which is positively related to creativity (Zhu, Gardner, & Chen, 2018).

In the fragmented social media landscape, firms are encouraged to manage their marketing communication capabilities to become the new channel of the organisation by inspiring creativity in other departments. Firms should adapt their communication strategies over time as the product development changes by treating everyone as an extension of the marketing team. Effective marketing communication should allow all departments to adjust their strategies in real-time to generate the value of the business in an innovative approach. The organisations need to set their strategic purposes in advance and then work within their limited resources to achieve the expected performance.

Limitation

It is essential to consider the context of this study, which examines the small and medium enterprises. It needs studies in different contexts prior to generating the results. Besides, this study has not examined the types of communication. In contrast, the communication literature shows kinds of informal communication, such as entertainment-oriented, non intentional, and less evaluative ones in the public sphere (Wu, Birtch, Chiang, & Zhang, 2018). Future studies are encouraged to explore various types of information in engaging the marketing communication strategies, which can bring a different impact on sustainable competitive advantage.

Conclusion

This study's intention was to understand the relationship between marketing communication capability and sustainable competitive advantage by examining the mediating effect of product development and selling capability as well as the moderating effect of information technological turbulence. The results show that marketing communication capability required goal orientation, which was crucial for new product development and selling it. The results

extend the discussion on the intersection between resource-based theory and contingency theory, which is essential to the concept of strategic entrepreneurship.

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