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PERCEIVED BENEFITS OF SOCIAL MEDIA NETWORKS' IMPACT ON THE COMPETITIVE BEHAVIOR OF INDONESIAN SMES IN FOOD AND BEVERAGE SECTOR

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ABSTRACT. The way innovation increases SME survival performance in dynamic competitive environments remains ambiguous. The purpose of this research is to identify the perceived benefits of social media networks' impact on the competitive behavior of SMEs. It linked TOE model and CRM framework of 188 Indonesian SMEs of food and beverage sector in 2019 using SEM in two phases. The first phase was to identify the characteristics of SMEs, perceived benefits of social media, and the competitive behavior. The second phase was a quantitative analysis using SEM for the proposed framework. It is confirmed that the competitive behavior of SMEs has positive relationships with SME characteristics, market interaction media, and media to improve consumer responses, as well as digital marketing strategy and effectiveness simultaneously. The variability of the competitive behavior is mostly provided by product reviews and answers, followed by responses to rejection, unique visitors, and audience size. Meanwhile, SME characteristics, market interaction media, media to improve consumer responses, and digital marketing strategy and effectiveness have the most direct effect on the responses to rejection respectively. The implications are aligning the capabilities with the orientation of building relationships with consumers, the quality assurance strategy, enhancing customer value in the process, and merchandising strategies.

JEL Classification: L25, M15,
M31, P31

Keywords: competitive behavior, digital marketing strategy, market interaction media, media to improve consumer responses, perceived benefit, social media, SME characteristics

Introduction

In Indonesia, the economy is largely driven by household consumption, and one of the the most mature industries is the food and beverage processing sector (GBGI-Indonesia, 2014). In the first quarter of 2020, this sector contributed 36.4% to Indonesia's GDP and foreign investments of USD 298 million in the first quarter of 2020. Global food and beverage

export has exceeded USD 8 billion and annual revenue growth is expected to be 13.8% for a market volume of USD 423 million by 2022 (CEKINDO, 2020). Meanwhile, the population of food and beverage SMEs reached 38% of the total 52 million SMEs in Indonesia (Tenggara & Corridor, 2015).

SMEs play an important role in developing countries. They create future business generation of marketing practitioners, promote inclusive and sustainable economic growth (OECD, 2018, Grimbald & Nchang, 2019), promote sustainable industrialization, foster innovation, and overcome domestic economic and social problems, such as high poverty level, income inequality, unequal distribution of income, unequal development between urban and rural areas, and urbanization problems (OECD, 2017, Prasanna et al., 2019).

SMEs provide economic services to the wider community and the process of equity, increase community income, encourage economic growth, and realize national stability. SMEs are 99.9% of the business actor population, contributing 59.08% to the GDP (4,869.57 trillion rupiah) with a growth rate of 6.4% per year, 14.06% (166.63 trillion rupiah) of export volume of total national exports, and 52.33% (830.9 trillion rupiah) of the national Gross Fixed Capital. SMEs have a high multiplier effect on income distribution instruments. They become a vessel which creates new entrepreneurs. They also utilize great raw materials and local resources. More importantly, SMEs have been proven not to be affected by economic crisis and remained strong in the period of 1997 – 1998 and afterwards until 2012. In these periods, the number of SMEs did not decrease. SMEs have absorbed 85 million to 107 million workers (BI, 2015).

However, SMEs are very diverse in their characteristics and performance, particularly in terms of age, size, business model, profile, and the aspirations of entrepreneurs across sectors (OECD, 2018). In the food and beverage sector, SMEs are localized and have not been proactive in implementing supply chain management, have limited new design products, limited product capacity and price list, less standardized of raw materials, and product continuity that is unsatisfactory and not guaranteed (Singh et al., 2008, BI, 2015, Kumar & Kumar Singh, 2017).

In fact, limited resources and poor innovative capabilities of SMEs in terms of access to resources, access to information, business competitiveness, and technically skilled workforce hinder rational behavior associated with market imperfections. Meanwhile, the internet users have surged the mobile-commerce market and social media environment by 155% in Indonesia (Better-Than-Cash-Alliance, 2017). As many as 184.76 million social network users as food and beverage consumers have been influenced by this trend of communication technology (Nurhayati-Wolff, 2020). Besides, information platform, feedback, and customer acquisition strongly influence the usage of social media in the food and beverage sector (Perumal et al., 2017). Therefore, the purpose of this research is to identify the perceived benefits of social media networks' impact on the competitive behavior of Indonesian SMEs in food and beverage sector. The research question is aimed to find a way to improve SME performance that can encourage pro-environmental behavior for future directions.

1. Literature review

Digital transformation is believed to be able to build sustainable innovation with high flexibility and accurate information (Carlos, 2005, Evans et al., 2014, Saunila, 2014, Indarti, 2012, Yuan et al., 2016, Naala et al., 2017, Pierre & Fernandez, 2018, Hanna, 2018, Prasanna et al., 2019, Imran et al., 2019, Saunila, 2019, Chen et al., 2019). It also has the ability to generate products and multiple actions of innovation (Pierre & Fernandez, 2018, Mačiulienė & Skaržauskienė, 2020), enhance competitiveness, and to benchmark the assets and

processes, market intelligence, access of global markets, and knowledge networks at relatively low cost (Singh et al., 2008, Sitharam & Hoque, 2016, OECD, 2017). However, innovations that increase SME performance to survive in a dynamic competitive environment remains ambiguous (Taipale-Eräväla et al., 2015).

This research combined the TOE model (Tornatzky et al., 1990, Awa et al., 2016) and Customer Relationship Management (CRM) capability approach to identify digital marketing engagement in the diffusion process of firms' performance innovation and marketing strategies for improving customer engagement (Wang & Kim, 2017). Meanwhile, digital marketing engagement could be categorized according to perceived benefits and digital marketing usage (Tiago & Veríssimo, 2014, Cheung et al., 2015) that lead to the recreational and relational purposes (Mulisa & Getahun, 2018).

The simultaneous TOE model, i.e., the context of technology (the characteristics and usefulness of innovative technology), organization (the internal issues within the company such as management, employees, products, and services), and environmental factors (the issues existing in the business-related fields, such as the competitors and business partners), that affects the organization's acceptance of innovation technology (Chiu et al., 2017) are used to define the perceived benefits of CRM or to ensure the value creation to optimize profitability and customer satisfaction through the internal firm (San-Martín et al., 2016, Pedron et al., 2018).

2. Methodological approach

The research was conducted in the food and beverage sector, involving 188 Indonesian SMEs in 2019 from canned and packaged foods in the food sector, and soft drink industry with ready-to-drink coffee and bottled water at the top spots in the beverage sector (DISKUMDAG, 2019, CEKINDO, 2020). Purposive sampling was used (Tongco, 2007) for strengthening our synthesis objective (Ames et al., 2019).

The research consists of two phases. The first phase aimed to identify the characteristics of SMEs, perceived benefits of social media, and the competitive behavior of SMEs. The characteristics of SMEs consist of size, business age, ownership, productivity, financial characteristics, innovation efforts, location, entrepreneurship, and managerial attitude through new adoption strategies. On the other hand, perceived benefits of social media consist of market interaction media, media to improve consumer responses, digital marketing strategy, and effective marketing. Meanwhile, the competitive behavior of SMEs consists of accountability, drive to win, and technical expertise. The second phase was a qualitative analysis with Structural Equation Model (SEM) (Narimawati & Sarwono, 2017) using Lisrel software. This phase aimed to prove the hypothesis of the determinant factors of technology, organization, and environment with CRM capability as perceived benefits of social media networks' impact on competitive behavior of Indonesian SMEs in food and beverage sector.

In the second phase, the TOE framework consists of SME characteristics/ X_1 , perceived benefits of social media indicated by market interaction media/ X_2 , media to improve consumer responses/ X_3 , and digital marketing strategy and its effectiveness/ X_4 . The SME characteristics/ X_1 consist of size and ownership. Meanwhile, perceived benefits of social media indicated by market interaction media/ X_2 consist of market interaction media that provides new followers, likes, and shares, leading to product reviews and answers. Media to improve consumer response/ X_3 consists of audience size and audience involvement. Digital marketing strategy and its effectiveness/ X_4 consists of unique visitors, returning visitors, sessions and traffic by device type, and inbound links. Meanwhile, Customer Relationship Management (CRM) capabilities are indicated by the competitive abilities of SMEs (Y_1)

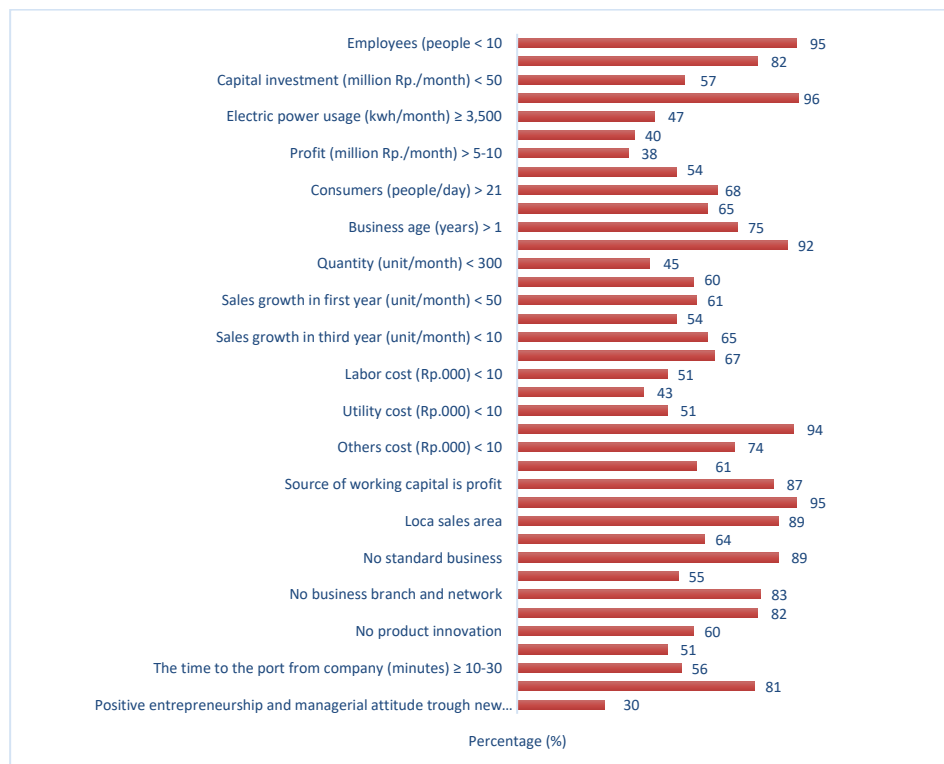
measured by personal sacrifice for completing work (1), feeling about the results (3), responses toward rejection (9), and the relationship with consumers (10).

In SEM, there are two types of models generated simultaneously, namely the measurement model for explaining the relationship between latent variables and each indicator that represents the theory and the structural model for explaining the relationship between latent variables or construct relationships (Riadi, 2018). The overall test (Goodness of Fit), Construct Reliability (CR), and Variance Extracted (VE) were done for consistency of measurement. Model re-specification was then conducted to obtain a better model than the previous one before interpreting the results (Riadi, 2018).

3. Conducting research and results

3.1. Characteristics of SMEs

The size, business age, ownership, productivity, financial characteristics, innovation efforts, location, entrepreneurship, and managerial attitude determine the characteristics of SMEs through new adoption strategies. The size of SMEs consists of the number of employees, work periods in teams, capital investment, wage, electric power usage, product value, and raw material usage. Meanwhile, sales, production cost structure, and labor education illustrate the productivity of SMEs. The financial characteristics of SMEs are profit from working capital and interest coverage ratio (ICR) with local sales area. Moreover, the innovation efforts of SMEs consist of educated workforce-based human capital, business standards, information and communication introduction, business branches and networks, purchase and upgrade of new equipment, and new product innovations. The distance and time from the company to the port and the perceived business risk illustrate the location of SMEs as described in graph 1.



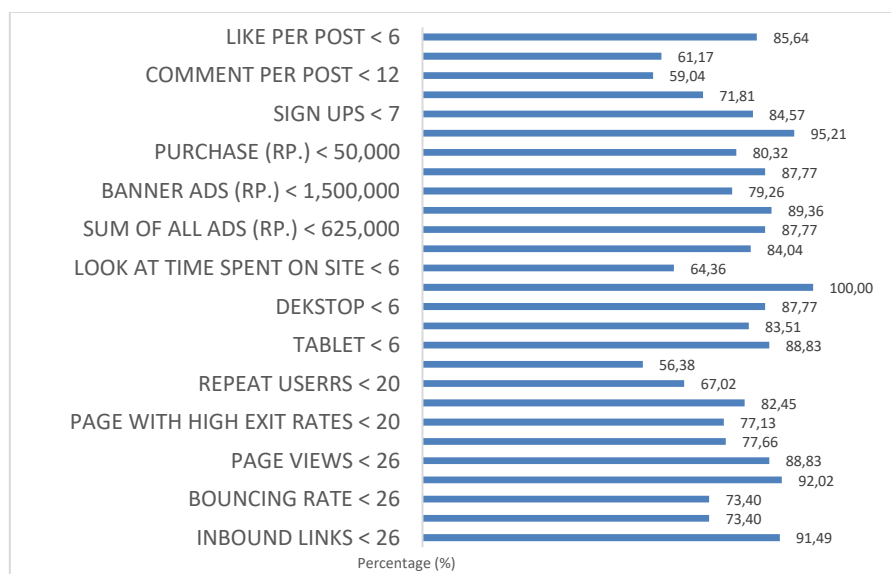
Graph 1. Characteristics of SMEs

Source: own data

Graph 1 shows that most of SMEs have a very few employees that do not have the required skills to perform multiple tasks in a less structured environment for the entire business, where the owner is also the manager. The capital and labor investment, wage, electric power usage, product value, and raw material usage are limited with a focus on costs, revenues, and short-term results. There are limited innovation efforts in business platforms.

3.2. Perceived benefits of social media networks

Market interaction media (i.e., providing information, discussion forums, new followers, likes, share, and product reviews and answers) determines the characteristics of perceived benefits of social media networks. Media to improve consumer responses (i.e., audience size such as audience growth rate, new follower rate, follower/following ratio, and audience involvement such as likes, share, comments, and clicks per post) also determine SME characteristics of perceived benefits of social media networks. Therefore, it is done with digital marketing strategies (i.e., conversion rate, cost per prospect, returning visitors, sessions, and traffic by device type) and effective marketing (i.e., unique visitors, page views, search engine traffic, bouncing rate, conversion rate, and inbound links). This conversion rate consists of sign ups, downloads, and purchase. Meanwhile, cost per prospect consists of word search campaigns, banner and social ads, and the sum of all ads. Returning visitors consist of average pages per visit, time spent on the site, navigation and following from page to page, and sessions. Traffic by device type consists of desktops, smartphones, tablets, cellular analysis, time spent on apps, repeat users, frequency of usage, pages with high exit rates (in graph 2).



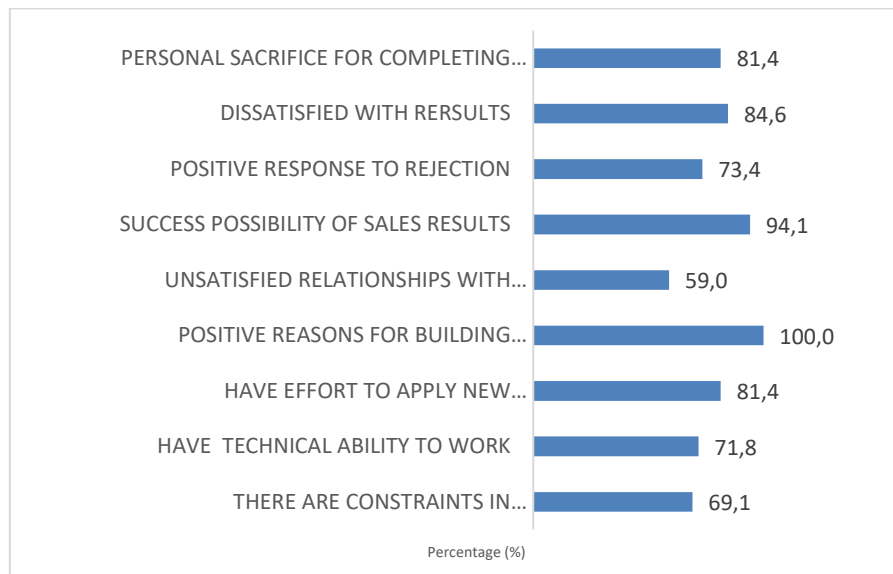
Graph 2. Perceived benefits of social media

Source: *own data*

Graph 2 shows that the perceived benefits of social media networks include information, limited capability usage to improve customer responses, digital marketing strategy in their business platforms, and less effective marketing.

3.3. Characteristics of SME competitive behavior

The characteristics of SME competitive behavior are determined by accountability, drive to win, and technical expertise. In terms of accountability, it was found that personal sacrifice for completing work is low and there is dissatisfaction with the results. Drive to win consists of positive responses to rejection, success of sales results, unsatisfied relationship with consumers, and positive reasons for building relationships with consumers. Technical expertise consists of having efforts to apply new technological breakthroughs, having a technical ability to work, and constraints in implementing new technology (in graph 3).



Graph 3. Characteristics of SME competitive behavior

Source: *own data*

Graph 3 shows that most of the characteristics of SME competitive behavior are low due to dissatisfaction toward the results and lower personal sacrifice for completing work. Advantages that can be used to enhance SME competitiveness include spending more time to get the work done, having positive reasons for building relationships with consumers, having the ability to evolve quickly and to react quickly in the marketplace, and making the necessary changes.

3.4. The impact of perceived benefits of social media networks on the competitive behavior of SMEs

Table 1 describes the nature of convergent validity through Construct Reliability (CR) and Variance Extracted (VE) models.

Meanwhile, there are nine criteria in the Goodness of Fit (GOF) test which results in a good fit in χ^2 , χ^2/DF , NCP, SNCP, ECVI, AIC, CAIC, GFI, PGFI, and RMR, meaning that the model is suitable for problem analysis as described in Table 2.

Table 1. Construct Reliability (CR) and Variance Extracted (VE)

Criteria	Competitive behavior (Y)	SME characteristics (X ₁)	Market interaction media (X ₂)	Media to improve consumer responses (X ₃)	Digital marketing strategy and its effectiveness (X ₄)
Std. loading factor of VE	1.24	0.59	1.10	0.5365	1.5514
Errors of VE	1.43	0.62	0.16	0.68	0.874
VE	0.46	0.49	0.87	0.44	0.63
Overall VE			> 0.50		
Std. loading factor of CR	2.04	1.05	1.37	1.03	2.4
Errors of CR	1.43	0.62	0.16	0.68	0.874
CR	0.744	0.64	0.92	0.6	0.86
Overall CR			≥ 0.70		

Note: red marks mean not accepted or rejection (accepted if CR ≥ 0.7 and VE > 0.50)
Source: own data

Table 2. Goodness of fit model

GOF Criteria	Initial		Final	
	Estimate	Conclusion	Estimate	Conclusion
Chi Square (χ^2)	140.52	marginal	115.78	good
χ^2/DF	2.06	good	2.69	good
NCP	72.52 (42.38 , 110.42)	good	72.78 (44.60 , 108.63)	good
SNCP (NCP/n)	0.38	good	1.69	good
ECVI	M= 1.15 S= 1.1 I= 2.22	good	M= 1.28 S= 1.12 I= 2.72	good
AIC	M= 214.52 S= 210.00 I= 509.20	good	M= 239.78 S= 210.00 I= 509.20	good
CAIC	M= 371.26 S= 654.83 I= 568.51	marginal	M= 502.44 S= 654.83 I= 568.51	good
GFI	0.90	good	0.92	good
PGFI	0.58	good	0.37	good
RMR	0.032	good	0.041	good

Source: own data

The finding of the model on how the perceived benefits of social media networks impact on the competitive behavior of SMEs generated two types of model equations, namely the structural equation model and measurement equation model as described in Table 3.

In SEM, an observed variable explained 3.6% of the total variation of the competitive behavior of SMEs. The unobserved variables/latent constructs (the competitive behavior of SMEs) were estimated through the observed variables/their indicators. These indicators are SME characteristics, market interaction media, media to improve consumer responses, and digital marketing strategy and its effectiveness.

Table 3. Measurement equation model

Indicators of latent variable	Estimate coef.	R ²
Indicators of the competitive behavior of SMEs/Y ₁ :		
Personal sacrifice for completing work (1)	0.28	0.072
Feeling about the results (3)	0.23	0.088
Responses to rejection (9)	0.35	0.80
Relationships with consumers (10)	0.23	0.26
Indicators of SME characteristics/X ₁ :		
Size	0.44	0.61
Ownership	0.28	0.12
Indicators of market interaction media/X ₂ :		
Providing new followers, likes, and share	0.33	0.62
Providing product reviews and answers	0.37	0.93
Indicators of media to improve consumer response /X ₃ :		
Audience size	0.38	0.54
Audience involvement	0.28	0.12
Indicators of digital marketing strategy and its effectiveness/X ₄ :		
Unique visitors	0.48	0.71
Returning visitors	0.27	0.15
Sessions and traffic by device type	0.18	0.35
Inbound links	0.40	0.35

Source: *own data*

SME characteristics typically have more markets, are quick to respond to new opportunities, but have scarcity and various resources (Woschke et al., 2017). SMEs are difficult to change, have a slow growth, underdeveloped capabilities, often inadequate business support provision (Gherhes et al., 2016), a lack of fundamental changing in communication (Wiggen & Lexhagen, 2014, Taiminen & Karjaluoto, 2015), and function in a localized manner (Singh et al., 2008b). As a result, SMEs cannot take advantage of opportunities from economic growth, public consumption, investment, geography, and so on (Eravia et al., 2015). Thus, entrepreneurs who have transformational leadership and benchmark assets and processes will be ensured to survive and success in the holistic frameworks of sustainable competitiveness (Singh et al., 2008b, Ong et al., 2010, Afriyie et al., 2019).

Moreover, online platforms such as social media networks are important in delivering benefits to consumers and businesses in terms of activity, sectors, business models, and size (Sachithananthan, 2018, Tajvidi & Karami, 2017). They give better competitive positions (Sitharam & Hoque, 2016, Tobing et al., 2018) in terms of, for examples, cost reduction of marketing and customer service and better information accessibility for specific tasks (OXERA, 2015, Ainin et al., 2015, Nuseir, 2018, Fivi et al., 2018), Afriyie et al., 2019). They mediate the entrepreneurial orientation (Eggers et al., 2017) and build strong links between brand equity, growth, and sustainability (Dumitriu et al., 2019) with creativity, risk control, and opportunity detection ability (Diabate et al., 2019). A wider ability using data is achieved through functional and organizational boundaries for enhancing the customer value in the process completely (Deloitte, 2017b).

Therefore, the perceived benefits of social media are illustrated by the market interaction media, media to improve consumer responses, and digital marketing strategy and its effectiveness (see Table 2) for addressing generic problems related to smallness or newness of technology-based SMEs (OECD, 1996), consumer convenience, greater choices, and transparency (OXERA, 2015, Nuseir, 2018).

Data of market interaction media, media to improve consumer responses, and digital marketing strategy and its effectiveness describe consumer activities, frequency, specific tasks, perceived barriers, and reasons for not using it, which are related to the nature, strengths, and weaknesses of social media networks or the dissemination of technical information and know-hows (OXERA, 2015).

The dissemination of technical information and know-hows by users in social media networks consists of technical demonstration, organizational demonstration, market demonstration (Bossink, 2015), technical assistance (Rothenberg & Becker, 2004), extension services (Taylor, 2015), and information and communication (Lechman, 2018). Other ways of dissemination can be through assistance for the general technology receptor capacity of firms and diagnostic tools (OECD, 2002), benchmarking (Askarany, 2014), technology road map (Wolken et al., 2018), and university-industry collaboration (Shapira et., 2015, Ankrah & AL-Tabbaa, 2015).

The next issue is characteristics of the competitive behavior of SMEs, which are proven to be low, but some aspects, such as spending more time on getting the work done, have positive reasons for building relationships with consumers, which can be a way to establish quick responses in the marketplace for enhancing competitiveness (see Table 3).

However, there are several considerations in using social media networks as a source of competitive advantages, which are the level of innovation, entrepreneurship, human and capital resources, and market and business strategy (Setyawan Agus et al., 2015). There are risks to using social media networks, i.e., the prism of technology investment (Deloitte, 2017a) and consumer concerns regarding inappropriate content, privacy, and security issues (OXERA, 2015).

In the measurement equation model (see Table 3, most variability among the competitive ability of SME indicators is response to rejection, and followed by size among SME characteristic indicators, providing product reviews and answers among market interaction media indicators, audience size among media to improve consumer response indicators, and unique visitors among digital marketing strategy and its effectiveness indicators.

The competitive abilities of SMEs mostly are network capabilities, which is gained through digital platforms by aligning the capabilities that are oriented to obtain flexibility and ability to respond to changing demands for SME performance (Cenamor et al., 2019).

The most positive direct effects of exogenous latent variables on the endogenous latent variable (the competitive ability of SMEs) is SME characteristics (i.e., size and ownership), followed by media to improve consumer responses (i.e., audience size and audience involvement), and digital marketing strategy and its effectiveness (i.e., unique visitors, returning visitors, sessions, traffic by device type, and inbound links). On the other hand, market interaction media (i.e., market interaction media that provide new followers, likes, and share, providing product reviews and answers) has a negative direct effect as described in Table 4.

Table 4 shows that SME characteristics in terms of size and ownership influence the competitive advantage through entrepreneurship, flexibility in operations, adaptability to changes for gaining a greater possibility of benefits in long-term success, and providing the conducive environment for investment and employment. Meanwhile, media to improve consumer responses and digital marketing strategy and its effectiveness are part of a business network based on information exchange that makes social connections for gaining a competitive advantage of SMEs (Meutia, 2013).

Table 4. Direct effects of exogenous latent variables (X) on endogenous latent variable (Y)

Exogenous latent variables (X) on the endogenous latent variable (Y)	Direct effect
SME characteristics/ $X_1 \rightarrow$ the competitive behavior of SMEs/ Y_1	0.19
Market interaction media/ $X_2 \rightarrow$ the competitive behavior of SMEs/ Y_1	-0.01
Media to improve consumer response / $X_3 \rightarrow$ the competitive behavior of SMEs/ Y_1	0.10
Digital marketing strategy and its effectiveness/ $X_4 \rightarrow$ the competitive behavior of SMEs/ Y_1	0.07

Source: *own data*

The direct effects of exogenous latent variables (SME characteristics, market interaction media, media to improve consumer responses, and digital marketing strategy and its effectiveness) on indicators of endogenous latent variable (the competitive ability of SMEs) is described in table 5.

Table 5. Direct effects of exogenous latent variables (X) on indicators of the endogenous latent variable (Y)

Direct effects of exogenous latent variables (X) on the endogenous latent variable (Y)	Total effect
Exogenous latent variable (X_1) on indicators of endogenous latent variable (Y):	
SME characteristics/ $X_1 \rightarrow$ personal sacrifice for completing work (1)	0.05
SME characteristics/ $X_1 \rightarrow$ feeling about the results (3)	0.05
SME characteristics/ $X_1 \rightarrow$ responses to rejection (9)	0.19
SME characteristics/ $X_1 \rightarrow$ relationships with consumers (10)	0.09
Exogenous latent variable (X_2) on indicators of endogenous latent variable (Y):	
Market interaction media/ $X_2 \rightarrow$ personal sacrifice for completing work (1)	0.00
Market interaction media/ $X_2 \rightarrow$ feeling about the results (3)	0.00
Market interaction media/ $X_2 \rightarrow$ responses to rejection (9)	-0.01
Market interaction media/ $X_2 \rightarrow$ relationships with consumers (10)	-0.01
Exogenous latent variable (X_3) on indicators of endogenous latent variable (Y):	
Media to improve consumer responses / $X_3 \rightarrow$ personal sacrifice for completing work (1)	0.03
Media to improve consumer responses / $X_3 \rightarrow$ feeling about the results (3)	0.03
Media to improve consumer responses / $X_3 \rightarrow$ responses to rejection (9)	0.10
Media to improve consumer responses / $X_3 \rightarrow$ relationships with consumers (10)	0.05
Exogenous latent variable (X_4) on indicators of endogenous latent variable (Y):	
Digital marketing strategy and its effectiveness/ $X_4 \rightarrow$ personal sacrifice for completing work (1)	0.02
Digital marketing strategy and its effectiveness/ $X_4 \rightarrow$ feeling about the results (3)	0.02
Digital marketing strategy and its effectiveness/ $X_4 \rightarrow$ responses to rejection (9)	0.07
Digital marketing strategy and its effectiveness/ $X_4 \rightarrow$ relationships with consumers (10)	0.03

Source: *own data*

Table 5 shows that SME characteristics have the most positive direct effect, while market interaction media has a negative direct effect. The most variable indicator is responses to rejection. Besides, it has a relationship with the competitive ability of SMEs. SME characteristics, market interaction media, media to improve consumer responses, and digital marketing strategy and its effectiveness directly affect the competitive ability of SMEs.

SME characteristics would bring about the economic efficiency to the enterprise directly (Sánchez et al., 2011, OECD, 2017), proactivity or the ability to collaborate (Diabate et al., 2019), quality focus, customer loyalty, response to changes

(Tobing et al., 2018) or efficiency, coordination, collaboration, and innovation (Hong & Jeong, 2006).

Meanwhile, social media transform the interaction and communication of individuals not only as a communication tool but also an important part of marketing strategy in business life (Rugova & Prenaj, 2016). However, it seems that SMEs, particularly in the case of food and beverage sector in this research, do not regard social media networks as an innovative marketing tool due to limited capability in digital business platforms (Taiminen & Karjaluoto, 2015) and unawareness of the cost effectiveness and interactivity benefits (Ainin et al., 2015). As a result, market interaction media has a negative direct effect on their competitive ability.

It is essential for SMEs to use social media networks as a driving environment for sustainable growing business. However, most SMEs do not have strategies in using social media. As a consequence, the most variable indicator is responses to rejection, which have a relationship with their competitive ability (Adegbuyi et al., 2015).

Therefore, there are strategies for SMEs to improve their characteristics and social media networks that support the competitive behavior. The first is aligning the capabilities with the orientation of building relationships with consumers through customer engagement and quality assurance strategies. Customer engagement is created based on accurate, up to date, and meaningful data of customers, through a test of customer journey management, and by focusing on the customer lifecycle analysis. Meanwhile, the quality assurance strategy must focus on improving the processes to deliver quality products to the customers by letting the employees to be part of the development process and to always strive for quality for their customers. The second is enhancing customer value in the process by fulfilling trust relations between employees and their customers, building a good commitment relationship with the customers, and creating a smooth communication between employees and customers. The third is market interaction media practices through multimedia, personalization, opt-in, including a compelling offer by making it immersive, usable, and viral sharing.

Conclusion

Generally, Indonesian SMEs in food and beverage sector only have few employees who do not have the required skills to perform multiple tasks in a less structured environment, in which the owner is also the manager. Besides, there are limited and minimum capital and labor investment, innovation efforts because of no standard business, information and communication, business branches and networks, new equipment, new product innovation, entrepreneurship, and managerial attitude of the new adopted strategy.

The perceived benefits of social media networks mostly are providing information, limited capability to improve customer responses and digital marketing strategy in their business platforms, and limited marketing effectiveness. Meanwhile, the competitive behavior is low due to dissatisfaction with the results and lower personal sacrifice for completing work. Still, SMEs have some advantages that can be used to enhance their competitiveness, which include spending more time on getting the work done, having positive reasons for building relationships with consumers, having the ability to evolve rapidly, and reacting quickly in the marketplace in making necessary changes.

The theoretical part of this research explains that the competitive behavior of SMEs has positive relationships with SME characteristics, market interaction media, and media to improve consumer response, and digital marketing strategy and its effectiveness. The variability of the competitive ability of SMEs is mostly by providing product reviews and answers, followed by responses to rejection, unique visitors, audience size and size. Meanwhile, SME characteristics have the most positive direct effect on the competitive ability of SMEs. Yet, market interaction media has a negative direct effect, meaning that

SMEs are not focusing on the social media networks and most of them do not have strategies in using social media networks. Therefore, implementing merchandising strategies is needed to maintain a competitive edge in fulfilling target-specific objectives.

This empirical research has confirmed that SME characteristics, market interaction media, media to improve consumer responses, and digital marketing strategy and its effectiveness have direct effects on responses to rejection, respectively. This is part of the reasons for SMEs to align their capabilities with the orientation of building relationships with consumers, the quality assurance strategy, enhancing customer value in the process, and market interaction media practices for improving their characteristics, and implementing merchandising strategies to fulfill target-specific objectives.

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References

- Adegbuyi, O. A., Akinyele, F. A., & Akinyele, S. T. (2015). Effect of Social Media Marketing on Small Scale Business Performance in Ota-Metropolis, Nigeria. *International Journal of Social Sciences and Management*, 2(3), 275–283. <https://doi.org/10.3126/ijssm.v2i3.12721>
- Afriyie, S., Du, J., & Ibn Musah, A.-A. (2019). Innovation and marketing performance of SME in an emerging economy: the moderating effect of transformational leadership. *Journal of Global Entrepreneurship Research*, 9(40), 1–25. <https://doi.org/10.1186/s40497-019-0165-3>
- Ainin, S., Parveen, F., Moghavvemi, S., Jaafar, N. I., & Shuib, N. L. M. (2015). Factors influencing the use of social media by SMEs and its performance outcomes. *Industrial Management and Data Systems*, 115(3), 570–588. <https://doi.org/10.1108/IMDS-07-2014-0205>
- Ames, H., Glenton, C., & Lewin, S. (2019). Purposive sampling in a qualitative evidence synthesis: A worked example from a synthesis on parental perceptions of vaccination communication. *BMC Medical Research Methodology*, 19(26). <https://doi.org/10.1186/s12874-019-0665-4>
- Ankrah, S., & AL-Tabbaa, O. (2015). Universities-industry collaboration: A systematic review. *Scandinavian Journal of Management*, 31, 387–408. <https://doi.org/10.1016/j.scaman.2015.02.003>
- Askarany, D. (2014). Characteristics of innovation and the diffusion of benchmarking. *Problems and Perspectives in Management*, 12(4), 563–572. <file:///C:/Users/user/Downloads/Characteristicsofinnovationandthediffusionofbenchmarking.pdf>
- Awa, H. O., Ukoha, O., & Emecheta, B. C. (2016). Using T-O-E theoretical framework to study the adoption of ERP solution. *Cogent Business and Management*, 3(1). <https://doi.org/10.1080/23311975.2016.1196571>
- Better-Than-Cash-Alliance. (2017). *Indonesia is the World's Fastest Growing Mobile-Commerce Market*. <https://www.Indonesia-Investments.Com/>. <https://www.indonesia-investments.com/id/business/business-columns/indonesia-is-the-world-s-fastest-growing-mobile-commerce-market/item7802>

- BI. (2015). *Profil Bisnis Usaha Kecil, Mikro dan Menengah (UMKM)*. LPPI dan Bank Indonesia. https://www.bi.go.id/id/umkm/penelitian/Documents/Profil_Bisnis_UMKM.pdf
- Bossink, B. A. G. (2015). Demonstration projects for diffusion of clean technological innovation: A review. *Clean Technologies and Environmental Policy*, 17, 1409–1427. <https://doi.org/10.1007/s10098-014-0879-4>
- Carlos, F. (2005). Improving The Competitiveness Of SMEs Through Enhancing Productive Capacity. In UN (Ed.), *United Nations Conference on Trade and Development, Proceedings of Four Meetings* (p. 182). United Nations. https://unctad.org/system/files/official-document/iteteb20051_en.pdf
- CEKINDO. (2020). *Overview of the Food and Beverages Industry in Indonesia*. <https://www.cekindo.com>. <https://www.cekindo.com/sectors/food-beverages>
- Cenamor, J., Parida, V., & Wincent, J. (2019). How entrepreneurial SMEs compete through digital platforms: The roles of digital platform capability, network capability, and ambidexterity. *Journal of Business Research*, 100, 196–206. <file:///C:/Users/user/Downloads/Cenamoretal.-2019-HowentrepreneurialSMEscompetethroughdigitalp.pdf>
- Chen, Q., Wang, C. H., & Huang, S. Z. (2019). Effects of organizational innovation and technological innovation capabilities on firm performance: evidence from firms in China's Pearl River Delta. *Asia Pacific Business Review*, 26(2), 1–25. <https://doi.org/10.1080/13602381.2019.1592339>
- Cheung, C., Lee, Z. W. Y., & Chan, T. K. H. (2015). Self-disclosure in social networking sites the role of perceived cost, perceived benefits and social influence. *Internet Research*, 25(2), 279–299. <https://doi.org/10.1108/IntR-09-2013-0192>
- Chiu, C.-Y., Chen, S., & Chen, C.-L. (2017). An integrated perspective of TOE framework and innovation diffusion in broadband mobile applications adoption by enterprises. *International Journal of Management, Economics and Social Sciences (IJMESS)*, 6(1), 14–39. <https://www.econstor.eu/bitstream/10419/157921/1/886618134.pdf>
- Deloitte. (2017a). Disruptions in Retail through Digital Transformation: Reimagining the Store of the Future. In *Deloitte*. <https://www2.deloitte.com/content/dam/Deloitte/in/Documents/CIP/in-cip-disruptions-in-retail-noexp.pdf>
- Deloitte. (2017b). Disruptions in Retail through Digital Transformation. In *Deloitte* (Vol. 1, Issue November). <https://www2.deloitte.com/content/dam/Deloitte/in/Documents/CIP/in-cip-disruptions-in-retail-noexp.pdf>
- Diabate, A., Sibiri, H., Wang, L., & Yu, L. (2019). Assessing SMEs' sustainable growth through entrepreneurs' ability and entrepreneurial orientation: An insight into SMEs in Côte d'Ivoire. *Sustainability (Switzerland)*, 11(24), 1–26. <https://doi.org/10.3390/su11247149>
- DISKUMDAG. (2019). *Dinas Koperasi Usaha Mikro dan Perdagangan*. <http://diskumdag-umkm.go.id>
- Dumitriu, Militaru, Deselnicu, Niculescu, & Popescu. (2019). A Perspective Over Modern SMEs: Managing Brand Equity, Growth and Sustainability Through Digital Marketing Tools and Techniques. *Sustainability*, 11(7), 1–24. <https://doi.org/10.3390/su11072111>
- Eggers, F., Hatak, I., Kraus, S., & Niemand, T. (2017). Technologies That Support Marketing and Market Development in SMEs—Evidence from Social Networks. *Journal of Small Business Management*, 55(2), 270–302. <https://doi.org/10.1111/jsbm.12313>
- Eravia, D., Handayani, T., & Julina. (2015). The Opportunities and Threats of Small and Medium Enterprises in Pekanbaru: Comparison between SMEs in Food and Restaurant

- Industries. *Procedia - Social and Behavioral Sciences*, 169, 88–97. <https://doi.org/10.1016/j.sbspro.2015.01.289>
- Evans, S. D., Raymond, C., & Perkins, D. D. (2014). Organizational and community capacity building. In S. Wolfe & V. Scott (Eds.), *Community Psychology: Foundations for Practice* (pp. 190–219). Sage. <https://doi.org/10.4135/9781483398150.N7>
- Fivi, Sofiyah, R., & Muda, I. (2018). The Efforts of Small Medium Enterprises (SMEs) Customer Engagement in Improving Customer Relationship Through Social Media Development. *International Journal of Civil Engineering and Technology*, 9(9), 642–657. file:///C:/Users/user/Downloads/IJCIET_09_09_062-TheEffortsofMSMEsCustomerEngagement.pdf
- GBGI-Indonesia. (2014). *Thirst Quenching: Indonesia's Food & Beverage Industry*. <Http://Www.Gbgindonesia.Com>. http://www.gbgindonesia.com/en/manufacturing/article/2014/thirst_quenching_indonesia_s_food_andamp_beverage_industry.php
- Gherhes, C., Williams, N., Vorley, T., & Vasconcelos, A. (2016). Distinguishing micro-businesses from SMEs: A systematic review of growth constraints. *Journal of Small Business and Enterprise Development*, 23(4), 1–33. <file:///C:/Users/user/Downloads/JSBEDManuscript.pdf>
- Grimbald, N., & Nchang, N. D. (2019). Assessing The Role of Small and Medium Size Enterprises (SMEs') in Promoting A Sustained, Inclusive and Sustainable Economic Growth in Cameroon. *Academic Journal of Current Research*, 6(12), 1–14. <file:///C:/Users/user/Downloads/CIRD-AJCR-19-12037Corrected.pdf>
- Hanna, N. (2018). A role for the state in the digital age. *Journal of Innovation and Entrepreneurship*, 7(5), 1–16. <https://doi.org/10.1186/s13731-018-0086-3>
- Hong, P., & Jeong, J. (2006). Supply chain management practices of SMEs: From a business growth perspective. *Journal of Enterprise Information Management*, 19(3), 292–302. <https://doi.org/10.1108/17410390610658478>
- Imran, M., Salisu, I., Aslam, H. D., Iqbal, J., & Hameed, I. (2019). Resource and information access for SME sustainability in the era of IR 4.0: The mediating and moderating roles of innovation capability and management commitment. *Processes*, 7(4), 1–25. <https://doi.org/10.3390/pr7040211>
- Indarti, N. (2012). Does knowledge stickiness affect a firm's innovation capability?: Empirical evidence from Indonesian furniture SMEs. *Gadjah Mada International Journal of Business*, 14(1), 17–33. <https://doi.org/10.22146/gamaijb.5436>
- Kumar, R., & Kumar Singh, R. (2017). Coordination and responsiveness issues in SME supply chains: a review. *Benchmarking*, 24(3), 635–650. <https://doi.org/10.1108/BIJ-03-2016-0041>
- Lechman, E. (2018). *Diffusion of Information and Communication Technologies*. Taylor & Francis/Routledge.
- Mačiulienė, M., & Skaržauskienė, A. (2020). Building the capacities of civic tech communities through digital data analytics. *Journal of Innovation and Knowledge*, 5(4), 244–250. <https://doi.org/10.1016/j.jik.2019.11.005>
- Meutia. (2013). Improving Competitive Advantage and Business Performance through the Development of Business Network, Adaptability of Business Environment and Innovation Creativity: An Empirical Study of Batik Small and Medium Enterprises (SME) in Pekalongan. *Aceh International Journal of Social Sciences*, 2(1), 11–20. <https://doi.org/10.12345/aijss.2.1.1359>
- Mulisa, F., & Getahun, D. A. (2018). Perceived Benefits and Risks of Social Media: Ethiopian Secondary School Students' Perspectives. *Journal of Technology in Behavioral Science*. <https://doi.org/10.1007/s41347-018-0062-6>

- Naala, M. N. I., Nordin, N. B., & Omar, W. A. B. W. (2017). Innovation Capability and Firm Performance Relationship: a Study of Pls-Structural Equation Modeling (Pls-Sem). *International Journal of Organization & Business Excellence*, 2(1), 39–50. http://ijobe.uum.edu.my/images/Full_Text/Vol.2_Issue.1_2017/Innovation-Capability-and-Firm-Performance-Relationship.pdf
- Narimawati, U., & Sarwono, J. (2017). *Structural Equation Modeling (SEM)*. Salemba Empat.
- Nurhayati-Wolff, H. (2020). *Number of social network users in Indonesia from 2017 to 2025*. <https://www.Statista.Com/>. <https://www.statista.com/statistics/247938/number-of-social-network-users-in-indonesia/>
- Nuseir, M. T. (2018). Digital media impact on smes performance in the UAE. *Academy of Entrepreneurship Journal*, 24(2), 1–13. <file:///C:/Users/user/Downloads/Acceptedpaper.pdf>
- OECD. (1996). Small Businesses, Job creation and Growth: Facts, Obstacles and Best Practices. In *Small*. [https://doi.org/10.1002/1098-240X\(200006\)23:3<246::AID-NUR9>3.0.CO;2-H](https://doi.org/10.1002/1098-240X(200006)23:3<246::AID-NUR9>3.0.CO;2-H)
- OECD. (2002). *China in the Global Economy China in the World Economy The Domestic Policy Challenges*. <https://www.oecd.org/pensions/insurance/2075272.pdf>
- OECD. (2017). *Enhancing the Contributions of SMEs in a Global and Digitalised Economy*. <https://www.oecd.org/industry/C-MIN-2017-8-EN.pdf>
- OECD. (2018). Strengthening SMEs and entrepreneurship for productivity and inclusive growth. *SME Ministerial Conference, Key Issues Paper*, 24. <https://www.oecd.org/cfe/smes/ministerial/documents/2018-SME-Ministerial-Conference-Key-Issues.pdf>
- Ong, J. W., Ismail, H. Bin, & Goh, G. G. G. (2010). The Competitive Advantage of Small and Medium Enterprises (SMEs): The Role of Entrepreneurship and Luck. *Journal of Small Business and Entrepreneurship*, 23(3), 373–391. <https://doi.org/10.1080/08276331.2010.10593491>
- OXERA. (2015). *Benefits of online platforms*. Oxera Consulting LLP. <https://www.oxera.com/wp-content/uploads/2018/07/The-benefits-of-online-platforms-main-findings-October-2015.pdf.pdf>
- Pedron, C. D., Picoto, W. N., Colaco, M., & Araújo, C. C. (2018). CRM system: The Role of Dynamic Capabilities in creating Innovation Capability. *Brazilian Business Review*, 15(5), 494–511. <https://doi.org/10.15728/bbr.2018.15.5.6>
- Perumal, I., Devi Krisnan, U., & Abdul Halim, N. S. B. (2017). Social Media in Food and Beverages Industry: Case of Klang Valley, Malaysia. *International Journal of Business and Management*, 12(6), 121–127. <https://doi.org/10.5539/ijbm.v12n6p121>
- Pierre, A., & Fernandez, A.-S. (2018). Going Deeper into SMEs' Innovation Capacity: An Empirical Exploration of Innovation Capacity Factors. *Journal of Innovation Economics*, 25(1), 139–181. <https://doi.org/10.3917/jie.pr1.0019>
- Prasanna, R. P. I. R., Jayasundara, J. M. S. B., Gamage, S. K. N., Ekanayake, E. M. S., Rajapakshe, P. S. K., & Abeyrathne, G. A. K. N. J. (2019). Sustainability of SMEs in the competition: A systemic review on technological challenges and SME performance. *Journal of Open Innovation: Technology, Market, and Complexity*, 5(4), 1–18. <https://doi.org/10.3390/joitmc5040100>
- Riadi, E. (2018). *Statistik SEM - Structural Equation Modeling dengan Lisrel* (E. Kurnia (ed.)). CV. Andi Offset.
- Rothenberg, S., & Becker, M. (2004). Technical Assistance Programs and the Diffusion of Environmental Technologies in the Printing Industry: The Case of SMEs. In *Business & Society* (WP-2004-07). <https://doi.org/10.1177/0007650304268801>

- Rugova, B., & Prenaj, B. (2016). Social media as a marketing tool: Opportunities and challenges. *Academic Journal of Business, Administration, Law and Social Science*, 2(3), 85–97. file:///C:/NURLIZA/ECONOMICS & SOCIOLOGY/Reference/85-97.pdf
- Sachithananthan, V. (2018). A study on the consumer awareness of food additives in packaged food and their effects on health in Abha region, Saudi Arabia. *Journal of Food Technology and Preservation*. <https://www.alliedacademies.org/articles/a-study-on-the-consumer-awareness-of-food-additives-in-packaged-food-and-their-effects-on-health-in-abha-region-saudi-arabia-9079.html>
- San-Martín, S., Jiménez, N. H., & López-Catalán, B. (2016). The firms benefits of mobile CRM from the relationship marketing approach and the TOE model. *Spanish Journal of Marketing - ESIC*, 20, 18–29. <https://doi.org/10.1016/j.reimke.2015.07.001>
- Sánchez, A. G., Dan, P., Iulia, C., Alina, C.-C., & POPESCU, D. O. (2011). How to Improve Small and Medium-Sized Enterprises Profitability by Practicing an Efficient Human Resources Management. *Theoretical and Applied Economics*, 1(554), 49–64. file:///C:/Users/user/Downloads/542.pdf
- Saunila, M. (2014). Innovation capability for SME success: perspectives of financial and operational performance. *Journal of Advances in Management Research*, 11(2), 163–175. <https://doi.org/10.1108/JAMR-11-2013-0063>
- Saunila, M. (2019). Innovation capability in SMEs: A systematic review of the literature. *Journal of Innovation and Knowledge*, 5(4), 1–6. <https://doi.org/10.1016/j.jik.2019.11.002>
- Setyawan Agus, A., Isa, M., Wajdi, W. F. M., Syamsudin, & Nugroho Permono, S. (2015). An Assessment of SME Competitiveness in Indonesia. *Journal of Competitiveness*, 7(2), 60–74. <https://doi.org/10.7441/joc.2015.02.04>
- Shapira, P., Youtie, J., Cox, D., Uyarra, E., Gök, A., Rogers, J., & Downing, C. (2015). *Institutions for Technology Diffusion*. Inter-American Development Bank (IDB). <https://doi.org/10.13140/RG.2.1.4744.5841>
- Singh, R. K., Garg, S. K., & Deshmukh, S. G. (2008a). Strategy development by SMEs for competitiveness: A review. *Benchmarking: An International Journal*, 15(5), 525–547. <https://doi.org/10.1108/14635770810903132>
- Singh, R. K., Garg, S. K., & Deshmukh, S. G. (2008b). Strategy development by SMEs for competitiveness: A review. *Benchmarking: An International Journal*, 15(5), 525–547. <https://doi.org/10.1108/14635770810903132>
- Sitharam, S., & Hoque, M. (2016). Factors affecting the performance of small and medium enterprises in KwaZulu-Natal, South Africa. *Problems and Perspectives in Management*, 14(2), 277–288. [https://doi.org/10.21511/ppm.14\(2-2\).2016.03](https://doi.org/10.21511/ppm.14(2-2).2016.03)
- Taiminen, H. M., & Karjaluo, H. (2015). The usage of digital marketing channels in SMEs. *Journal of Small Business and Enterprise Development*, 22(4), 633–651. <https://doi.org/10.1108/JSBED-05-2013-0073>
- Taipale-Eräväla, K., Lampela, H., & Heilmann, P. (2015). Survival Skills in SMEs—Continuous Competence Renewing and Opportunity Scanning. *Journal of East-West Business*, 21(1), 1–21. <https://doi.org/10.1080/10669868.2014.959232>
- Tajvidi, R., & Karami, A. (2017). The effect of social media on firm performance. *Computers in Human Behavior*, 115(3), 1–10. <https://doi.org/10.1016/j.chb.2017.09.026>
- Taylor, C. N. W. (2015). *Examining e-extension: diffusion, disruption, and rate of adoption among Iowa State University Extension and Outreach professionals*. <https://lib.dr.iastate.edu/cgi/viewcontent.cgi?article=5434&context=etd>
- Tenggara, W. N., & Corridor, E. (2015). Design Development of Food & Beverage Product Packaging for SMES co in Java and West Nusa Tenggara, Economic Corridor. *IPTEK Journal of Proceedings Series*, 1(1), 420–424.

- <https://doi.org/10.12962/j23546026.y2014i1.394>
- Tiago, M. T. P. M. B., & Veríssimo, J. M. C. (2014). Digital marketing and social media: Why bother? *Business Horizons*, 57(6), 703–708. <https://doi.org/10.1016/j.bushor.2014.07.002>
- Tobing, D. S. K., Fathorazz, M., & Wulandari, G. A. (2018). Mapping the Competitive Advantage of SMEs in East Java, Indonesia. *Jurnal Dinamika Manajemen*, 9(1), 23–32. <https://doi.org/10.15294/jdm.v9i1.14649>
- Tongco, M. D. C. (2007). Purposive sampling as a tool for informant selection. *Ethnobotany Research and Applications*, 5, 147–158. <https://doi.org/10.17348/era.5.0.147-158>
- Tornatzky, L. G., Fleischer, M., & Chakrabarti, A. K. (1990). *The Processes of Technological Innovation* (First Edit). Lexington Books. https://doi.org/10.1142/9789811211461_0002
- Wang, Z., & Kim, H. G. (2017). Can Social Media Marketing Improve Customer Relationship Capabilities and Firm Performance? Dynamic Capability Perspective. *Journal of Interactive Marketing*, 39, 15–26. <https://doi.org/10.1016/j.intmar.2017.02.004>
- Wiggen, O., & Lexhagen, M. (2014). *Digital Toolbox: Innovation for Nordic Tourism SMEs*. Nordic Innovation Publication. <https://norden.diva-portal.org/smash/get/diva2:1301977/FULLTEXT01.pdf>
- Wolken, A., Smith, M., Kaye-Blake, W., Curry, K., Dickson, M., Drummond, C., & Thomas, A. (2018). *Driving change: technology diffusion in the transport sector*. NZ Transport Agency. <https://www.pwc.co.nz/pdfs/2018pdfs/driving-change-technology-diffusion-in-the-transport-sector.pdf>
- Woschke, T., Haase, H., & Kratzer, J. (2017). Resource scarcity in SMEs: effects on incremental and radical innovations. *Management Research Review*, 40(2), 195–217. <https://doi.org/10.1108/MRR-10-2015-0239>
- Yuan, X., Shin, S., He, X., & Yong Kim, S. (2016). Innovation capability, marketing capability and firm performance: A two-nation study of China and Korea. *Asian Business and Management*, 15(15), 32–56. <https://doi.org/10.1057/abm.2015.17>