



Entrepreneurial orientation, technological innovation, and SMEs performance during COVID-19: The role of adversity quotient

Section:
Management strategy

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Abstract

Dynamic economic development and setbacks in various business sectors due to the COVID-19 pandemic have caused acute difficulties in almost all countries. However, the creative economy, which MSMEs dominate, has played an essential role in maintaining a sustainable economy due to the general decline in the global market. This study aims to develop a theoretical model to provide insights into the association between innovation practices and SMEs' performance and survival while underlining the auxiliary role of internal capabilities such as entrepreneurial orientation, technological innovation, and adversity queries (AQ). The literature review supports that EO, innovation, and AQ play a vital role in SMES business continuity, especially in unpredictable situations. EO and AQ as individual characteristics can be a strength for MSME owners to maintain their performance through innovation. This article postulates that AQ can impact SMEs' performance and strengthen the innovation-SMEs relationship.

Received: 11/8/2022
Revised: 12/6/2022
Accepted: 12/16/2022
Online: 12/30/2022

JRMB
Jurnal Riset
Manajemen dan Bisnis

Vol. 7, No. 2, 2022
pp. 91-98

Keywords:

Entrepreneurial orientation, technological innovation, SMEs performance, COVID-19, adversity quotient

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DOI: <https://doi.org/10.36407/jrmb.v7i2.353>



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INTRODUCTION

It is undeniable that since the end of 2019, the COVID-19 pandemic has caused adverse effects on almost all aspects, including health, economies, and education in all countries (Adam & Alarifi, 2021). The high number of cases of virus transmission that occurred in 2020 - 2021 caused many countries and regions to implement social distancing policies, which directly impacted the supply chain and business continuity and caused a decline in economic growth. The repercussions of the COVID-19 pandemic have also devastated the transportation, hotel, and restaurant businesses, including small and medium enterprises (SMEs) (Adam & Alarifi, 2021; Pu et al., 2021), and SMEs in Indonesia is no exception. Based on a survey by the Central Statistics Agency (BPS) of the Republic of Indonesia in 2021, as many as 28.45 percent of small and medium-sized companies reduced working hours, machines, and personnel during the 2021 pandemic, and 17.22 percent temporarily closed. Meanwhile, in terms of the type of business, the manufacturing sector is the most affected company with a percentage of 33.91 percent, followed by the transportation and warehousing sector (33.70%) and accommodation and food and beverage (33.48%).

The COVID-19 pandemic has impacted both large and small businesses; however, SMEs, which generally have limited financial and technological resources, have more significant challenges surviving the crisis (Alraja et al., 2022; Utomo et al., 2021). This situation pressurizes SMEs to find new ways to sustain their business, and one of them is to innovate digital technology to operate sustainably (Winarsih et al., 2021). In this regard, the company is making various changes and is more active in using technological innovations to sustain itself (Alraja, 2021). Technological innovations are considered to help SMEs survive the pandemic (Adam & Alarifi, 2021; Alraja et al., 2022; Pu et al., 2021; Utomo et al., 2021), as well as become a benchmark for companies to sustain by maintaining their performance. Based on the literature study by Zutshi et al. (2021), three main challenges to SMEs in the crisis period include costs, disruption of activities, and existential difficulties due to lockdown. However, several studies have found that various strategies implemented by SMEs to deal with the COVID-19 pandemic have been documented in various countries, especially regarding technological innovation capabilities (Adam & Alarifi, 2021; Guo et al., 2020; Pu et al., 2021). For example, Guo et al. (2020) found a significant effect on the use of digital technology to increase the ability of SMEs to withstand the devastating effects of the pandemic in China. Their findings specifically focus on the importance of using information technology. Similarly, Adam (2021), using a sample of 259 SME managers in Saudi Arabia, found that innovation practices can improve business performance survival during the COVID-19 crisis. Pu et al. (2021) found that SMEs' sustainability was shaped by innovative finance, technological adaptation, and government support in Bangladesh.

This article is intended to develop a conceptual model regarding the determinants of SMEs' performance, especially during difficult times such as a pandemic. For this purpose, a literature review was conducted involving various studies on relevant issues. The model proposed in this paper can be used as a research design in the future. This paper specifically aims to explore the factors that have received less attention related innovation and SMEs' performance from an internal perspective. Therefore, this study offers two important contributions: first, previously, researchers focused more on external factors such as external support and government (Adam & Alarifi, 2021; Pu et al., 2021). Another study explores the role of entrepreneurial orientation as a predictor of innovation and performance of SMEs in the Ghanaian food processing industry. Our study integrates the technology organization environment (TOE) and attribution theory to explore the

role of internal factors (e.g., adversity quotient) in moderating the relationship between entrepreneurial orientation, innovativeness, and SMEs performance.

Second, the relationship between entrepreneurial orientation (EO) and innovation has been widely confirmed (Arzubiaga et al., 2018; Asad et al., 2018; Zhai et al., 2020), however, existing studies still ignore other potential factors. For example, Ng and Kee (2018) argue that there are four main skills that must be possessed by SME owners to do well in the business, including transformational leadership, entrepreneurial competence, technical competence, and innovativeness. Drawing attribution theory, we extend the study of Ng and Kee (2018) by adding individual resources, namely the adversity quotient (AQ), as a person's ability to survive in difficult situations. Furthermore, compared to other intelligence (e.g., IQ and EQ), which have been empirically proven to be related to an entrepreneur's success, AQ has received relatively little attention. Thus, this study provides new insights into the direct role of AQ on SME innovation behavior and its moderating effect on the relationship of EO to innovation. In general, the current research aims to contribute to both theory and practice by developing a new model to provide empirical evidence about how AQ and technological innovation can lead to SMEs' sustainable performance during a pandemic and how the AQ moderates this relationship.

METHODS

This study aims to develop a model of the performance of SMEs through a literature review to understand the factors that affect the performance of SMEs in crises. This literature review involves a variety of empirical evidence to build a research model. The data collection method uses a desktop and library approach. In this case, the author selects articles published in various leading journals using the Google Scholar search engine with the keywords "SMEs performance," "innovation," and "COVID-19" in the last five years. The list of articles is then summarized and developed as a basis for research models and hypotheses.

MODEL DEVELOPMENT

Theoretical background

Technology-organisation-environment (TOE) model (Tornatzky et al., 1990) as the basic framework to explain technological innovations' impact on SMEs' sustainable performance. This theory groups three main components forming and implementing technological innovation: technological, organizational, and environmental. In particular, the technological factors in SMEs can come from internal (e.g., IT infrastructure and HR) and external (network and internet access, costs). Similarly, the organizational factors are also divided into internal (management support, size, and ICT innovation intensity) and external (funding sources, competitors). Lastly, the environmental factors such as regulation and market interest/customers demand (Adam & Alarifi, 2021; Chege & Wang, 2020).

In contrast to large companies, innovation adoption in SMEs is closely related to owners (Mallingu et al., 2020; Ng & Kee, 2018). Therefore, owner capabilities have a significant role in business progress. In this point, Ng and Kee (2018) argue that there are four main skills that must be possessed by SME owners to do well in the business, including transformational leadership, entrepreneurial competence, technical competence, and innovativeness. Since TOE focuses on the

source of technological innovations, further explanation of the motivation and competence of SME owners in implementing it can be explained through attribution theory (Weiner, 1988). Attribution theory explains how individuals experience an event, including exploring its causes. In a crisis, a bad experience caused by the COVID-19 pandemic may be interpreted by a factor outside of control (external), or there are still efforts that can be made to overcome it (internal). In this context, AQ is an individual attribute essential to an individual's resistance to various difficulties (Stoltz, 1999). Thus, AQ acts as a boundary condition on the relationship between EO, technological innovation, and SME performance.

Entrepreneurial orientation and technological innovation

The theory of technological innovation was first introduced by Schumpeter, who emphasized the importance of innovation in technology to gain potential benefits. In general, innovation can be carried out in various lines, starting from the use of new technology, new methods, and new services to serve consumers (Zhai et al., 2018). Furthermore, technological innovation is also considered to play an essential role in creating new products to maintain the company's survival (OECD, 2005). Many researchers in various countries have widely documented the relationship between EO and innovation (Arzubiaga et al., 2018; Asad et al., 2018; Q. Zhai et al., 2020), as well it relationship with SMEs performance (Hossain & Asheq, 2019; Kiyabo & Isaga, 2020). Entrepreneurial orientation (EO) is a process for developing marketing strategies to explore new opportunities (Lumpkin & Dess, 2001; Wiklund & Shepherd, 2003).

Recently, researchers documented the essential role of EO as a driver of innovation in SMEs (e.g., Arzubiaga et al., 2018; Asad et al., 2018; Zhai et al., 2020). For example, Asad et al. (2018), using a sample of 384 MSEs in Punjab province, Pakistan, found that EO directly affects innovation. Furthermore, innovation has also been shown to have an intermediate role in the relationship between EO and SME performance. Zhai et al. (2018), using a sample of 324 SMEs in China, found that entrepreneurial orientation is positively related to innovation performance. Their study also found that absorptive capacity was moderating in this relationship. However, using a sample of 230 Spanish families SMEs, Arzubiaga et al. (2018) provide an important note that the relationship between EO to innovation is closely related to family involvement in the BoD.

H1. EO is positively related to innovativeness

Moreover, when SME owner-managers focus on exploratory activities, including entrepreneurial-oriented processes, they understand the market better and, therefore, can strengthen the company's competitive position (Ali et al., 2020; Baker & Sinkula, 2009). Previous researchers have confirmed that businesses with solid EO have a greater chance of success than those with low EO (Ali et al., 2020; Issau et al., 2022; Susanto et al., 2021). There is a large amount of empirical studies supporting the relationship between EO and business performance. Ali et al. (2020) documented the vital role of EO in improving company performance in Saudi Arabia. Similarly, using a sample of SMEs in Indonesia, EO positively affects firms' performance during the COVID-19. Their study also found a moderating effect (social media usage) and a mediating role (marketing capabilities and social media usage) in the tested model (Susanto et al., 2021). Thus, referring to the empirical evidence, we hypothesize:

H2. EO is positively related to SME' performance

The role of adversity quotient

The keyword of AQ is the ability to overcome various difficulties that occur. Since it was introduced by Stoltz (1999), until now, the concept of AQ has been less popular than two other abilities, namely IQ and EQ. Stoltz (1999), using empirical data from his study, found that he did not find any intelligence of successful people other than the adversity quotient. In other words, a person who can steadfastly fight adversity wisely will be successful. This opinion may be relevant to the current situation, where COVID-19 pandemics are an unpredictable phenomenon and harm all personal and work lives. Thus, business owners with a high AQ are likely to persist and find practical solutions amid adversity. We included the concept of AQ for two reasons: first, the COVID-19 pandemic has caused a wide-ranging impact on the business world and the uncertainty of when it will end; adversity intelligence may have a vital role in these situations (Stoltz, 1999). Second, AQ is believed to have a direct effect on business performance and entrepreneurial orientation (Agustina et al., 2022; Ku, 2020). Although no empirical evidence finds the relationship between AQ and innovation, a similar concept has been studied. For example, Setiawan (2017) found the role of AQ on student creativity. Since innovativeness refers to how individuals or companies support creative processes, a relationship between AQ and innovation may exist.

H3. AQ is positively related to innovativeness

Drawing attribution theory, we posit that AQ has a contingent role that can moderate the relationship between EO owned by the owner and the technological innovation being carried out. In this context, AQ is an attribute essential to an individual's resistance to various difficulties (Stoltz, 1999). Thus, AQ acts as a boundary condition on the relationship between EO, technological innovation, and SME performance.

H4. AQ is moderate the link between EO and innovativeness

Innovativeness and SME' performance

Innovation is an essential factor for organizational sustainability amid a situation of uncertainty, technological advances, and intense competition. As the company's main driving force, innovation in SMEs takes on the role of implementing new ideas from processes to the creation of new products (Adam et al., 2021). Not surprisingly, innovativeness can promote fundamental changes in all business processes aimed at creating new value and maintaining the company's sustainability. At the same time, a large number of studies have documented the role of innovation in improving company performance, particularly SME performance (Adam & Alarifi, 2021; Chatterjee & Bhattacharjee, 2021; Chege & Wang, 2020; Dabić et al., 2019; Ebrahimi et al., 2018). Therefore, we argue that the technological innovation practices carried out by SMEs during COVID-19 can contribute positively to performance.

H5. Innovativeness is positively related to SME' performance

H6. Innovativeness is mediate the link between EO and SME' performance

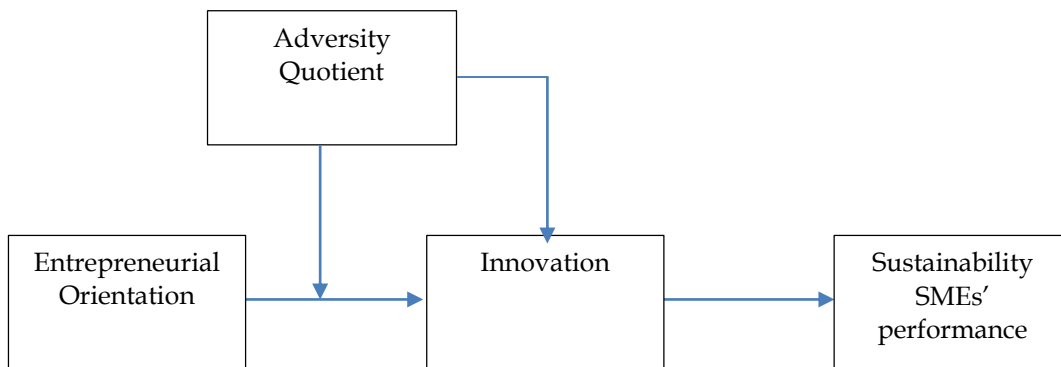


Figure 1.
Research model

CONCLUSION

It cannot be denied that the MSME sector has a central role in the economy, especially in developing countries. Their ability to adapt to various situations also makes MSMEs attractive for exploration to provide insight to business practitioners about what factors can maintain their performance in difficult times. Based on these premises, this article proposes a model that uses an internal perspective, including entrepreneurial orientation, AQ, and innovation as drivers of sustainable SME performance. Using a literature study, this study offers a model that can be used for future MSME studies. Despite its benefits, this article needs to improve regarding the methodology and data used. The literature study used in developing this model is still elementary, so further studies can use a more stringent method, namely, systematic literature review (SLR). In addition, this literature review is more focused on internal factors and ignores external factors. Thus, future studies can develop a more comprehensive model by including external factors such as competition, external funding support, and others.

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Declarations

Funding

The authors received no financial support for the research and publication of this article.

Conflicts of interest/ Competing interests:

The authors have no conflicts of interest to declare that are relevant to the content of this article.

Data, Materials and/or Code Availability:

Data sharing is not applicable to this article as no new data were created or analyzed in this study.

How to cite this Article

Achmadi, A. (2022). Entrepreneurial orientation, technological innovation, and SMEs performance during COVID-19: The role of adversity quotient. *Jurnal Riset Manajemen Dan Bisnis*, 7(2), 91-98. <https://doi.org/10.36407/jrmb.v7i2.353>