

## CONFIGURING A BLUEPRINT FOR MALAYSIAN SMES TO SURVIVE THROUGH THE COVID-19 CRISIS: THE REINFORCEMENT OF QUADRUPLE HELIX INNOVATION MODEL

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### Abstract

When something unpredictable creates turbulence, the result can be disastrous not only for Malaysian SMEs but also for the country's economic outline as well. So, how can SMEs survive the current crisis period caused by the COVID-19 pandemic? Actually, there are no straight answers. At this point, the study aims to serve a wider understanding of how an adjustable configuration of different strategic initiatives can help Malaysian SMEs endure through the crisis based on the QHIM mechanism. The study has embraced a qualitative approach on the basis of online focus group discussion with the support of an expert facilitator. The data collection process includes 10 participants from various fields, such as academia; banking, NGOs and SMEs. The study also collected secondary information through different newspapers, magazines, websites, E-libraries, documentaries, and related journal sources. Because SMEs are operating in uncertain conditions, the findings from the discussions suggest that an adjustable integration of various ranges of initiatives, such as access and management of financial resources, exploration-exploitation of opportunities, efficient negotiation, digital adoption, and leadership commitment can help SMEs to endure throughout this crisis. The findings also contend the intervention of innovation and calculated risk-taking within the configuration. The proposed conceptual model serves as an important mechanism for policy-makers and owner-manager of SMEs to understand how adjustments in identified initiatives can play a vital role regarding survival in this crisis. It provides recommendations for SMEs and on how to remain competitive through resilience and renewal strategies. The study contributes to the existing literature in crisis management and identifies the survival and resilience strategies of SMEs in developing regions during a long-lasting crisis. It also serves as a unique approach to how the Quadruple Helix perspective can be a vital concept in the survival process.

### Research paper

**Keywords:** COVID-19; Crisis management; Digitalization; Innovation; SMEs

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## **Introduction**

As a type of crisis, the pandemic also holds the potential to adjust businesses to account for dynamic events, progressive and cumulative change, and development cycles. There has been increasing recognition of SMEs' substantial role in how they contribute to the economic outline of any country. This segment is explained often as an effective creator of occupational opportunities, underlying pillars of large firms, and the gasoline of national economic mechanism (Nakku et al., 2020). In Malaysia, SMEs report for around 99% of the total business setups of the country, commit 38.8% of GDP (6.2% annual growth rate within 2015-2018), 66.2 % of total occupational options, and produce 48.3% of the total export volumes to other regions (SME Corporation Malaysia, 2019). The scenario also indicates how vital SMEs are in adjusting the Malaysian economic outline and continue as the foundation of industrialization (Chin and Lim, 2018; Yuan et al., 2020). Unfortunately, in both its complexity and intensity, the latest COVID-19 economic shock is unparalleled (Papadopoulos et al., 2020). In tandem with behavioural shifts due to the fear of the pandemic, national lockdowns triggered supply delays and contributed to the greatest fall in demand for the performance of Malaysian SMEs since the Great Depression (Omar et al., 2020). In reality, confronting conditions for their success and growth are enforced by a rapidly evolving market climate due to pandemic with much quicker and harsher implications, especially for small and medium-sized business setups.

The outbreak of COVID-19 has first seen in Wuhan, China in December 2019, and with time it continues to spread across the world (Mazzoleni et

al., 2020). The pandemic has also introduced a huge magnitude of uncertainty considering global business outlines. The World Trade Organization (WTO) forecasts that the entire global trade volume can be downsized to 32% in 2020. Besides, maximum stock exchanges operating worldwide have confronted their biggest fall on the record book; for instance, the DJI (Dow Jones Index) has seen 2,977 points fall within 24 hours (Onali, 2020). Every sector has been harmed deeply by this steep downfall in stock price levels. In their recent analysis, the IMF (2020) predicts a 3% decrease considering the entire global GDP in 2020, with additional unavoidable related risks for all business sectors, including SMEs. Banks and financial institutes need to make strong negative alterations in their GDP growth rate whereas nearly 33% of SMEs confronting a threat to be out of business without additional help within one month, and up to 50% within three months. At this point, a huge global recession is surely unavoidable, but how wide and long the downfall may possibly be rooted in the suitable measures implemented to prevent the spread of COVID-19, the impacts of government role or policies in mechanism with other active parties to reduce various ranges of internal-external concerns in SMEs and to help towards survival and achieve success.

The latest Malaysian statistics show that 46.6 percent of participants had reported losing their occupations because of the COVID-19 pandemic and the strict MCO implementation throughout the country whereas the report also revealed that the sectors related to agriculture and service detected with the highest percentage of occupational decrease comparing other segments (DOSM, 2020). Another report generated by SME Malaysia (2020) based on

15,627 business setups shows that more than 50% of SMEs fear experiencing more than half a million ringgit losses within six months from March to Sept 2020. The SME Malaysia (2020) survey in association with several marketing companies also identifies that most the businesses are currently confronting the risk of higher debt level and severely struggling to continue regular operations whereas nearly 35% of enterprises had sufficient cash to last till March 2020 while another 38% had reasonable cash to endure last of April 2020. Also, another web-based survey conducted by Marie (2020) in association with a marketing organization shows that almost 69% of SMEs confronted a more than 50% downfall in business within the first week after the MCO initiated whereas 92 % of SMEs now hold a decreasing exposer for Malaysian economic outline for the rest of year. At this point, some recent statistics also predict that approximately 80% of SMEs are facing high chances of failure in business operations, considering the financial year 2020 (SME Malaysia, 2020). SMEs cannot surely adjust to this magnitude of crisis because of resource scarcity, required expertise, and awareness level. In fact, COVID-19 puts the economic well-being of societies and businesses at risk (Sneider and Singhal, 2020). This pandemic impacts the public health crisis and the structure of the global economic order that is inevitable.

It is evident from the pandemic's abrupt emergence and its enormous human and economic costs that ordinary procedures are not adequate. The business world still needs innovation and incentives to adapt efficiently and successfully, taking multiple stakeholders into account (Farzad et al., 2020; Juergensen et al., 2020). The COVID-19 crisis is an opportunity to reshape

the cooperation between government, academia, industry and civil society (media) to confront this emergency and to build another paradigm of potential resilience. As occurred after the Great Depression and the Second World War, there is a rare chance to make an innovative evolutionary leap (James and James, 2009). The study's outward path illustrates the ability of Quadruple Helix-based networking. It provides a comparative insight into SMEs' strategic practices and suggests policy improvements (Afonso et al., 2012; Islam and Wahab, 2021). It also points to the need for horizontal cooperation and a clear government position in the association of other Helixes to solve the crisis and the need for a creative solution rather than just the redistribution of available resources and improved communication. However, some researchers still criticize that the Quadruple Helix experiments' background has not yet provided the anticipated effects on crisis context (Miller et al., 2016).

Because of the current pandemic's unlikeness, previous studies or findings may not be enough to detect the proper survival and growth strategy for SMEs. However, the entire segment may require prompt authoritative actions or policies based on the collaboration, integration, or even interplay of government, universities, industry, and civil society (media) to help SMEs (Niankara et al., 2020). Till now, crisis management research expeditions covers many viewpoints, including crisis impacts (Mitroff et al., 1996), strategic vision and leadership (Probert and Turnbull James, 2011; Salamzadeh et al., 2017; Sayegh et al., 2004), planning (Zsidisin et al., 2005) and technical dimensions (Zsidisin et al., 2005). (Perry et al., 2003; Jia et al., 2012). In comparison, most crisis response researches tend to rely on larger organizations'

backgrounds (Acquier et al., 2008; Lai et al., 2016). However, the small and medium enterprises (SME) crisis management mechanisms were not investigated adequately for sound theory building and practical implications for management (Pearson and Claire, 1993; Runyan, 2006; Herbane, 2010). The crisis management configuration of SMEs has not been researched widely for theoretical adjustments and realistic management implications (Herbane, 2010; 2013; Runyan, 2006). A recent analysis on the focus area, however, despite continuing engagement in various domains, indicates that "we have only just begun to scratch the surface of crisis and crisis management in our understanding" and urges further analysis of the theoretical processes at work (Coombs, 2010; Pearson et al., 2007; Yiannaki, 2012). But, crisis management studies for SMEs are vital concerning their contribution to emerging economies (Herbane, 2010). As a response to this severe turbulence, it is important to detect a suitable framework based on a solid theoretical foundation for comprehensive credibility which can help the SMEs (Yatim et al., 2018) to survive through this crisis. We believe that very limited research attempts look into the issue that how robust business models can support to endure in crisis periods (Dai et al., 2020; Stephens, 2017). Thus, bearing in mind the theoretical and practical premises mentioned above, this study targets to configure a comprehensive blueprint to help endurance of SMEs on the basis of required strategic initiatives which can interplay together in-between states of "survival" and "growth" leading to more sustained business success which imposes the QH mechanism at the very core of that outline.

Therefore, this research aims to investigate how SMEs cope with their crisis events. This study came as an effort to build a strategic basis that allows SME's decision-makers to understand successful solutions that enable them to face and overcome the COVID-19 pandemic, the modern crisis. The findings of the analysis may help to create a comprehensive Helix-based responsive model of crisis management. It can transform the COVID-19 pandemic into a catastrophe that can be effectively controlled and handled. This study intends to answer the following research question: *“What are the strategic initiatives that can help Malaysian SMEs to survive and achieve success considering the pandemic scenario?”* We use the viewpoint based on QHIM here as a theoretical prism. This will offer an important theoretical framework for understanding how diverse capacities can be served by the Malaysian government, academics, business, and media in response to different crises. It will aim to advance the current definition of crisis management in the context of SMEs in Malaysia. In the aftermath of the scenario, the authors also claim that it is possible to 'see the silver lining' and chart a prosperous future for SMEs; not simply 'survive' COVID-19 crisis.

### **The paradox of crisis management in SMEs**

The idea of crisis in business refers to an unexpected situation that generates obstacles in an organization's regular operational activities and involves both fiscal and reputation-related risks (Coombs, 2007; Islam et al., 2020A). Here, crisis management can be illustrated as a process by which a

business organization adjusts various strategies to confront a hazardous scenario that threatens to damage the stakeholder's interests of the organization (Fink, 2013). Three dimensions are common in most of the explanations of crisis: (1) a hazard to the business; (2) the factor of surprise; and (3) the requirement of quick decision making (Seeger et al. 1998). The suitable strategic mechanism is linked with the future mid-term objective of the organization. It helps to increase its accomplishments by dealing with weaknesses, threats, strengths, and opportunities. SMEs are may be more sensitive to crisis-related events due to resource constraint issues, unstable position within the market, and other elements. Nevertheless, SMEs still hold a few advantages related to adjustability, learning ability, innovation initiatives, and customer relations (Herbane, 2013; Hong et al., 2012).

Compared with previous crises events, the current COVID-19 turmoil is more critical. It has generated severe communal and economic concerns at all levels, including social aversion, occupational hazard, supply chain failures, stock market collapses, lockdowns, and issues linked with de-globalization (Crick and Crick, 2020). However, Munoz et al. (2019) detect that SMEs with proper crisis handling plans survive better from crisis events. The study of Dent and Cudworth (2018) explains that the effectiveness of leadership, decision-making process, and teamwork as the top challenges of appropriate crisis response configuration. Actually, SMEs need to rapidly customize their strategies and timely reorganize their courses of action (Ansell et al., 2010). The capability of robustness and flexibility is highly required when dealing with a severe crisis as the COVID-19 pandemic. On the other hand, several

studies indicate that SMEs with dynamic and innovative capabilities and are willing to learn from crises and contain a tendency to recover quickly (Elliott and MacPherson, 2010; Saunders et al., 2014). Here, the process of learning can be executed informally through networking initiatives, mentoring, or coaching (Saunders et al., 2014). It can hugely decrease the expenses involved. Moreover, Sheth (2020) also explains SME's interest in exploring business opportunities and integrating technology into their future growth process, which indicates a dynamic learning approach and adjustment from the crisis scenario. At this point, the intention to grow can be a strong driving factor for SMEs to strengthen their resilience outline and sustainable strategies.

### **The QHIM perspective of the study**

Etzkowitz and Leydesdorff (1998, 2000) proposed the Triple Helix endeavor. This Triple Helix Model (TH) focuses on the interaction between universities, industry, and government, and considers these factors to be the key to improving conditions conducive to innovation initiatives. According to some authors (Khan and Al-Ansari, 2005; Sooreh et al., 2011; Farsi et al., 2012; Van Horne and Dutot, 2017), the long-term growth of innovation and the importance of integrating citizens' perspective based on culture and social norms lead to the Quadruple Helix model, adding yet another helix to the original one. Afonso et al., (2012), Carayannis and Campbell (2009) argue that an economy's structure is divided into four Helixes, consisting of universities, industry, government, and civil society, in which their relationships

generate innovation and economic development. The QH mechanism may start with a reverse system, as per Afzal et al., (2018) and Roman et al., (2020). For example, an individual at a firm might have a great idea for innovation in the technical process (knowledge stage). If the idea is supported by its supervisor and manager (stage of persuasion), the management may decide to contact a local university regarding further research (stage of decision). If the university has researchers and finances (or a corporation will choose to provide funding) to conduct the necessary testing, a method innovation (implementation stage) may be applied by the corporation, and then more advanced products can be developed. Here, the concerned firm may also intend to apply for a product invention patent (confirmation stage), with some local government agencies' assistance. The interaction that occurs in the Helixes usually derives from attempts to address emergencies (crisis period) and create a solution when addressing innovation challenges that are not decided by a specific trend (Fayole et al., 2014; Afzal et al., 2018; Campanella et al., 2017). In order to develop the foundations of a sustainable business sector, the collaboration between government, business, academia, and academics, known as the Quadruple Helix principle, is needed.

The Quadruple Helix paradigm indicates that four players' interventions (Grundel and Dahlström 2016; Leydesdorff 2012) are a crucial factor in deciding whether the economic sectors produce the strategic innovation outline required to resolve business challenges. Developing new products, processes, and services are, in fact, an important means by which SMEs can address or avoid market challenges (Guerrero et al., 2014, 2015). Related to this

notion, the Quadruple Helix mechanism suggests that civil society elements such as culture, values, lifestyle, social problems, and media are important components of the innovation system and communicate with the activities of business firms, Government departments, and universities to either improve or undermine collective innovation initiatives (Tajpour et al., 2020, 2021). In an innovation system, civil society can be a subject or producer of ideas/knowledge/ technology (Reich-Graefe 2016). These four actors have the potential to support the development of new products and/or services and the creation of markets where such products and/or services can be successful in commercial terms (Björk 2014). The anticipated performance can be achieved by involving multiple players with each different capacity and ability to promote innovation system (Carayannis and Rakhmatullin 2014) to confront the unpredictable market scenario.

The study of Grundel and Dahlström (2016) finds that government, business, universities, and civil society activities can potentially affect the development of the Swedish forestry-based bio-economy. Similarly, a Quadruple Helix method has used by Lindberg et al. (2014) to describe the difficulties posed by the enhanced quality and quantity issues of female entrepreneurship. To illustrate innovation and information in creative fields, Colapinto and Porlezza (2012) also used a Quadruple Helix concept and a system theory. Once again, the investigation of Campanella et al., (2017) has explained that transforming various assets, successfully reallocating resources, and making rational collaborative decisions can improve the way firms are managed during market crises. Prior research has focused on large firms in developed

economies from a QH viewpoint (Grundel and Dahlström, 2016; Betz et al., 2014). We have also tried to broaden Quadruple Helix's research by examining its applicability under a severe crisis perspective based on SMEs in the developing economy. It can provide an opportunity to understand the importance of innovation required by Malaysian SMEs during crises, the role of various stakeholders in developing and promoting these innovations, and how these different stakeholders may work together to help the survival process.

The latest paradigm of the Quadruple Helix Innovation Model (QHIM) illustrates the connection between innovation strategies and long-term business survival processes of firms leading to the country's economic improvement (Islam and Wahab, 2021; MacGregor et al., 2010). As the world economic scenario becomes vulnerable to the impact of the COVID-19 epidemic, the argument is no more focused on whether a sustainable or stable economy would appear, but rather how the responsible entrepreneurship practices are starting to convert the business premises, resulting in a more responsible utilization of the allocated resources, lessening the influence on the regular business activities and profitability margin (Napolitano, 2010; Radovic Markovic and Salamzadeh, 2012; Manninen and Meristö, 2019; Tajpour and Salamzadeh, 2019; Yun and Liu, 2019). Nevertheless, the complex course of resource-friendly digitalization that rattles normal business practices, increasing contributions to dynamic technological platform, and comprehensive innovation can all together play a vital instrument in supporting this revolution process (Moeuf et al., 2020). These transformational alterations may illustrate

how decision-makers need to formulate a stable business output, and as a consequence, will direct the institutional adjustments required to backup innovation and growth for long-time survival. For instance, new technological prototypes can also signify the improvement and design of new business models, that may direct towards systemic innovations based on exploration and exploration approaches (Emmanuel, 2017; Selase et al., 2019). When a technological breakthrough has been initialized due to any reason, decision-makers have to contend with how businesses can respond to those events. This embraces the approach where the learning process and competitive practices generate relational or collaborative capabilities within firms (Moghavvemi, 2012). Thus, innovation can serve a wide range of integral concerns, negotiated by both the country's private and public sectors.

The role of government or concerned authority can act as a vital domain in the relocation of knowledge and serving other supports to safeguard Malaysian SMEs from this pandemic. Academia as another Helix has been identified as the foundation for relocating technological models, as well as serving efficient HR and understandings (Dzisah and Etzkowitz, 2008). On the other hand, industries can produce occupational incubators, science, hubs, and commercialization processes of understandings to support businesses in obtaining their objectives (Ranga and Garzik, 2015; Mirzadeh et al., 2017) to manage the crisis efficiently. A focused civil community in association with media and culture also impacts other agents' formal bottom-top participation (Yawson, 2009). In this context, the natural environment is also detected for

the sustained existence of the firms by serving essential resources (Carayannis and Campbell, 2010). Interestingly, SMEs to satisfy customers, need to develop an adjusted offer related to their products and services that address the consumer needs in this crisis point (Keh et al., 2007; Simon et al., 2000). This direction promotes a very important element—“the concerned individual (researcher, civil servant, entrepreneur, etc.)” who has a role within the mechanism to make a difference through innovation—are the key from the perspective of survival dynamics of SMEs leading to business success (Domi et al., 2020; Kolehmainen et al., 2016).

## **Methodology**

Social media or online platforms have replaced different categories of communication processes, such as telephone, e-mails, or even face-to-face interviews (Phan and Airoldi, 2015) in management research. As a result, the growing interest in tech-oriented digital media and social interactions is improving the research consequences in an evolving area of multidisciplinary nature which brings together a wide range of scholars from various disciplines (Gonzalez-Ballon et al., 2014). Here, the social media platform considering the online focus group has been a catalyst in the entire data collection process in terms of access to the information and the evaluation of different outcomes and concepts. At this stage, responses can be transmitted automatically to a database where they can be retrieved immediately for review without the need

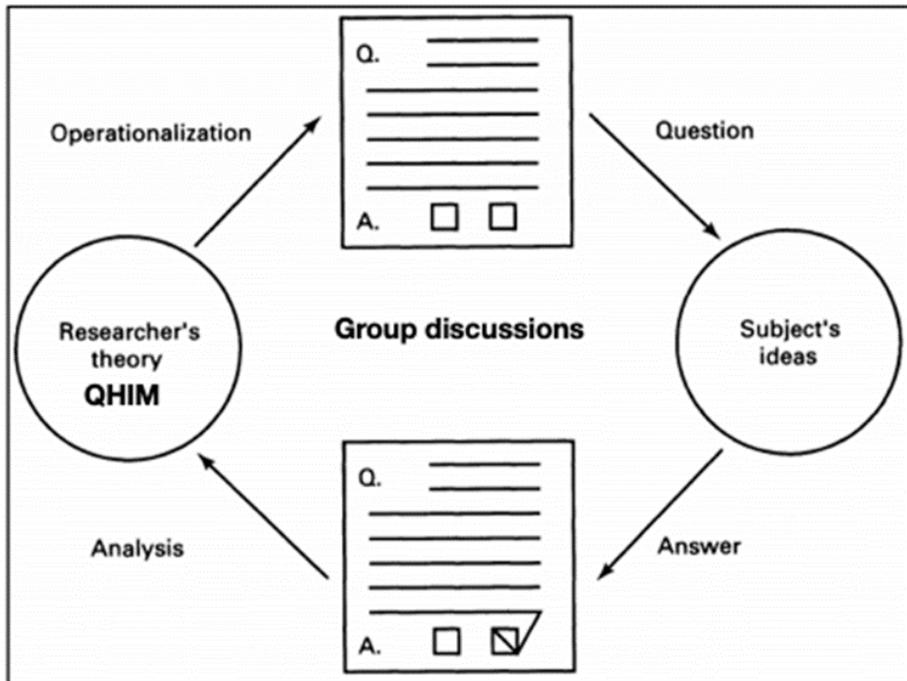
for interpretation or editing, improving the quality of data collected and eliminating transcriber bias (Tates et al., 2009). In fact, online focus groups as a research tool are ideal for certain situations (Theroux et al., 2019).

A skilled facilitator and an assistant have been hired for the online-based group discussion. Not only through the management of existing relationships, but also by creating a relaxed and comfortable environment for unfamiliar participants, the facilitator is central to the discussion. The facilitator has facilitated an electronic discussion (Zoom based) on how Malaysian SMEs can survive the present struggling period triggered by the COVID-19 epidemic among a small group of respondents, allowing them to respond spontaneously to the issues raised concerning necessary initiatives for survival and the supporting roles from government, university, industry, and civil society or media. A list of questions (schedule or script) is prepared as a guide for each focus group discussion session. The process starts with the main research objective. This is followed by seeking ethics clearance. The study has addressed the following key research question:

*“How do relationships in a Quadruple Helix setting – actors, resources, and activities – contribute to the survival process of SMEs during this crisis?”*

The assigned facilitator introduces the Quadruple Helix based purpose of the discussion and ensures that the participants have the same understanding level (Figure-1). The assistant observes non-verbal interactions and the impact of group dynamics and the general content of the discussion is documented, supplementing the data. Compared to the sole use of verbal data,

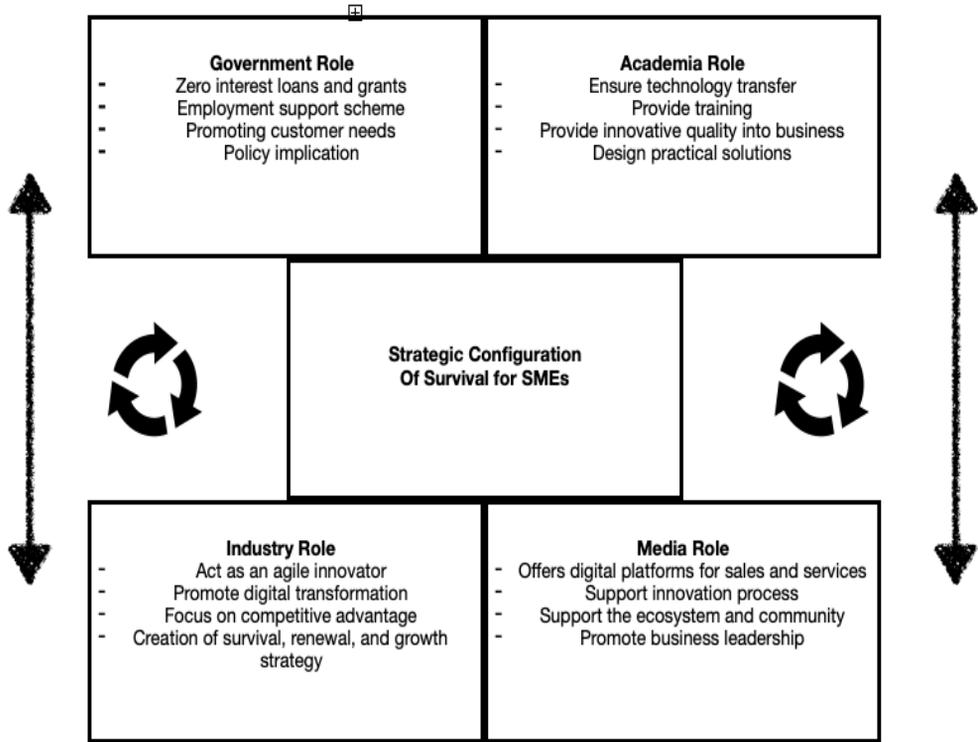
nonverbal data provides "thicker" descriptions and interpretations (Fonteyn et al., 2008). Here, the non-verbal data includes the posture, attitude, silences, hesitations, and voice tone pitch of the respondent.



**Figure 1.** Discussion outline (QHIM perspectives) (Source: Based on Pawson's (1996) theorizing the interview outline)

A mixed-gender focus group has been created in the research design stage that tends to increase the consistency of conversations and their findings (Freitas et al., 1998). The focus group consists of 10 participants from various fields, such as Academia, Banking, SMEs, and NGOs. Fifteen respondents were selected and invited under a purposive judgmental sampling strategy considering the QH-based context's depth. Purposeful sampling is generally

recommended because the focus group's discussion depends on the ability and capacity of members to offer useful information (Sharma, 2017). In the end, 10 participants can join in the discussion on time, and they are not familiar with each other. The study has also considered the homogeneity concern of similar age group or profession. The online platform of the Zoom application has been selected as a convenient online venue for the discussion. The study considers comfort, access to the Zoom platform, and distraction levels for participants (Tates et al., 2009). The 60-65 minutes long interactive session in the group helped elicit in-depth thoughts and discussions. The subject's response is attempted to frame entirely to a set of operational Helix based fragments. The ground rules have been established for discussion so that the participants feel the setting is comfortable to express their ideas or views regarding the survival process of Malaysian SMEs. The roles of different Helixes are attempted to be adjusted on the flow of discussion (Figure-2). The study sets roles for different Helixes in the context of crisis. It has been tried to keep the discussion concrete rather than abstract considering the pre-determined contribution of government, academia, industry, and media towards Malaysian SMEs' survival strategy.



**Figure 2.** Role of different Helixes in COVID-19 crisis (Source: Formulated by authors)

Audio and tape recording, note-taking, and individual observation are included in the data collection process. The whole process includes the proper utilization of probe, follow-up, and exit questions. Here, both qualitative and observational evidence is kept in the focus group debate. The data coding was later carried out by initial coding and emphasis coding, whilst the use of content processing is targeted at structured information coding by detailing it into many categories. The analysis follows the following steps: a] gathering the

raw data, b] making the document readable, c] creating themes, d] introducing themes in a plot, and e] writing the paper. Obtained findings were also shared with the respondents of the study through participant validation to validate the outcomes, which increases the credibility level of the report. The study also embraced the process of collecting secondary information through different newspapers, magazines, websites, E-libraries, documentaries, and related journal sources. The government and the non-government statistics also considered by the researchers to obtain the main objective of the research.

## **Results and discussions**

A total number of 10 participants have reflected their ideas on the focus group session. Out of 10, 8 are male, and 2 are female respondents. Here, the maximum number of respondents are between the age group of 30-40 and hold at least a degree certification as an academic qualification. The majority of the participants hold five years+ of professional experience in their respective fields. Two of the participants have reflected their understanding and ideas about the concerned research objective on the basis of their more than ten years of professional experiences.

**Table 1.** Demographic information of participants (Source: Compiled from online focus group discussion)

<b>Professional Experiences</b>		<b>Academic Qualification</b>	
<b>Years</b>	<b>No of Participants</b>	<b>Name of Certification</b>	<b>No of Participants</b>
<b>0-5 years</b>	5	Degree	6
<b>5-10 years</b>	3	Masters	3
<b>10+ years</b>	2	PhD	1
<b>Total Number of Participants=10/ Male- 8, Female-2</b>			

**Table 2.** Major initiatives detected for the survival of Malaysian SMEs (Source: Compiled from online focus group discussion)

<b>Detected Initiatives for Survival of SMEs</b>	<b>Number of Participants Identified with The Initiatives</b>
<b>[a] Access and management of financial resources</b>	9
<b>[b] Exploration-exploitation of opportunities</b>	7
<b>[c] Digital adoption</b>	7
<b>[d] Efficient negotiation</b>	6
<b>[e] Leadership</b>	5

This part aims to identify the underlying strategic factors from a management perspective that can support Malaysian SMEs to determine how to manage and survive this ongoing struggle due to the COVID-19 pandemic. The discussions mainly revealed that collaboration between concern Helixes could direct the strategic survival process of Malaysian SMEs. Besides, an appropriate innovative approach and advanced technology may significantly

influence SMEs considering the turbulent situation. However, the study organized the findings into 5 major themes that emerged during the analysis process. They are a) access and management of financial resources, b) exploration-exploitation of opportunities, c) efficient negotiation, d) digital adoption, and e) leadership commitment.

#### ***a) Access and manage financial resources***

The summary obtained from group discussion primarily indicates that Malaysian SMEs need to utilize resources and financial measures offered by the concerned authority (government and non-government) to keep operational activities ongoing as well as paying salaries to their employees. SMEs also need to manage some other regular expenses, which include factory or office rent, loan payment, and utilities. One of the participants [A09] from SMEs reflects the criticality of the scenario as-

*“...it’s a great struggle. I’ve never had a loan and I feel if I applied for one I might struggle to make any profit because I’ll be paying it back....”*

Many prior studies indicate that SMEs’ option to access financial resources with the ability to manage them properly can be crucial for businesses to achieve their desired growth considering an unstable economic situation (Carbo-Valverde et al., 2016; Cowling et al., 2018). The lack of access to finance due to emerged challenges (Ex- war, pandemic, recession) can constrain the required cash flow which surely hampers SME’s survival aspects and create barriers towards the innovation process diffusing into the economic outline (Didier et al., 2020; Islam et al., 2020A). Recently, the PM, Tan Sri

Muhyiddin Yassin declared a stimulus outline worth RM10 billion to help to struggle SMEs due to the COVID-19 pandemic whereas additional charges are waived on delayed payment of taxes (Kaur, 2020). Financial institutions have also offered six months deferred timeline on a loan payment and the restructuring of disbursed corporate loans. In reality, decision-makers of SMEs need to build a strategy to get all this support from the government and non-government entities to maintain their minimum cash flow. It can allow some survival space before the formulation of other strategic initiatives. But some of the reflected participants criticize the stimulus on the basis of some requirements to qualify for fiscal stimulus packages may render it a little bit hard or complex to claim the wage-related subsidies. On the other hand, a few respondents also suggest to minimizing the overall expenses of firms (Didier et al., 2020). They want not to include more full-time employees instead of running operational activities as per project basis with freelancers. At this point, Malaysian SMEs also require to form complementary industry alliances within this crisis by leveraging on each other's ranges of the resource base and various capabilities and convert into a critical business entity that can manage the current market uncertainty.

Inside the QH mechanism, the aspect related to SMEs' financial matters is a relevant concern for survival and success (Hasche et al., 2019). The participants indicate that the government has to play an efficient role to formulate supportive fiscal policies for the long-term in alliances with concerned industries and universities. Later universities can also provide the required expertise regarding appropriate management of all financial access

during this pandemic leading to business success. However, the study detects that QH based collaborative mechanism may equate a purchase guarantee given by the government to SMEs at the end-stage of the value chain process whereas concerned firms require to continue their regular operations and pay the employees without disruptions. Also besides, the discussions among participants also serve as a strategic outline that supports the reduction of interest rate near to zero and providing considering stabilization measures to the financial institutions in association with suitable tax breaks, sector-oriented bailouts, and occupational support for workforces. Nevertheless, an integrative functioning strategic interaction among all the different agents focused on the QH covers all other perspectives, and precisely the factor related to financial matters, as the study indicates.

### ***b) Exploration-exploitation of opportunities***

In particular, the research investigation based on the survival model linked with SMEs-specific crisis severity indicates a substantial idea of how firms can search for a better strategic orientation. It may elaborate on SME's current struggling period considering the equation of exploration-exploitation initiatives that reflect the business situation within the range of broader economic uncertainties. At this point, One of the respondents [A01] attempts to highlight the importance of taking advantage of the current pandemic scenario as-

*"...History has observed some of the best names in the business to have been emerged due to the worst crises- Apple, Disney, IBM, Alibaba, and Microsoft*

*are a few instances. You need to take risks, and also you need to predict the changing market demands.”*

The study finds that SMEs can make COVID-19 the propelling force for business growth and revive dormant potential in others through a calculated risk-taking process. In this context, the respondent has identified several opportunities considering different sectors- a) cold storage can be an opportunity in the food segment; b) virtual reality is a new prospect for the entertainment industry; c) virtual classroom can give universities more remote options, and d) smart hospitals are a good choice for the healthcare industry. Many participants reflect the idea that by adjusting the internal allocated resources and abilities to re-shape the current products and services, SMEs can come up with fresh ranges of offerings formulated to meet the current demand in the crisis. SMEs require to fine-tune the present business blueprint to explain the caused alteration, prioritize operational activities, search for business opportunities through exploration-exploitation to achieve competitive advantage over counterparts, and ensure less disruption in the business process. However, the focus group discussions also suggest that to also investigate the firm's competitive position as well as the wider economic standpoint before selecting either exploitative or explorative initiatives to gain from the pandemic scenario.

In alliance with the above discussions, the investigation of Osiyevskyy et al.,(2020) claims that both exploration-exploitation initiatives based on resources may serve distinct strategic gateways to manage a firm's growth survival in a crisis. Some studies also argue that the exploration-exploitation

path can only play a significant role in a firm's output when the market environment is stable (Gonzalez and de Melo, 2017). In fact, exploration can direct to higher variability of survival outputs but clearly serves the option to capitalize on new opportunities. On the other side, if the firm has been confronting a scenario where it faces severe obstacles or threats concerning its way of survival, and extra financial options and resources are not likely available, selecting an exploitative tactic might be a comprehensive choice (Alcalde-Heras et al., 2019). Nevertheless, the discussions and arguments within the respondents also suggest that under difficult crisis scenario, SMEs that are adopting exploitation strategy can predict better opportunity for survival but a gradual decline in performance. On the other hand, exploration considering COVID-19 crises can possibly serve better access to main business opportunities leading to greater performance, along with an expense of high-risk factors regarding survival.

Returning to the QHIM based theoretical perspective, the study's findings tend to diverse beyond the relatively static nature of the mentioned outline. Basically, if appropriately executed, the QH mechanism, considering the COVID-19 crisis scenario, can promote a comprehensive innovation-based culture in business (Afonso and Monteiro, 2017). The present study also sets an example that the idea of halal has been implemented into many industries whereas halal considering many dimensions, also call for cleanliness. The hundreds of schemes that authorities are circulating to people to confront the COVID-19 crisis contain several major themes; one of them is cleanliness.

This can be obtained through effective media utilization, conferences or meetings, and online platforms in an interactive participation with other concerned agents. As suggested, the QH mechanism directs civil society or media to be involved with the other three types of innovation actors – authority, university, and industry regarding exploration-exploitation of opportunities whereas these are vital not only to survive the crisis but also for sustainable business growth (Galvão et al., 2017). However, considering the present case, the citizens (owner-employee) are mostly in dialogue with the regional office representatives.

### ***c) Efficient negotiation***

The explorative analysis outputs have revealed that active and transparent forms of negotiation are the most important instrument between the entrepreneurs, financial investors, and related workforces. The essential foundation must be developed to promote mutual and continuous interaction between all stakeholders to survive the crisis. Several participants also suggest that SMEs must execute loyal and continuous interaction with their present customer segment, altering payment terms to promote early fund transfers, and adjusting new prices on current supply concerns. It may be important to contact the landlord to explain the current position and ask to renegotiate the lease clauses. However, many studies emphasize that considering the time of crisis, efficient negotiation or communication can be an effective defensive measure within SME's survival strategy to continue relevant and honest sets of messages with its stakeholders (Juntunen et al., 2010). Managing a regular

dialogue or negotiation process between owner-manager and employees allows for the exchange of suitable direction on the overall business and supports formulating combined and smart decisions leading to long-term survival.

At this juncture, outcomes of the study illustrate that QH-based interactions may promote innovative tools to bring improvements in SMEs' external-internal negotiation process considering the turbulent period. For instance, when the sales or marketing related employees identify a requirement to change or adjust a product or service under the COVID-19 scenario, they negotiate with the consumer and inform the concerned management point. All the process needs to be delivered with a central system based on emails, WhatsApp, Viber, or any other negotiation system developed by the firm. It helps to achieve the required efficiency for survival and success (Grace et al., 2018). The study believes that in times of severe crisis, many efficient decision making can be executed through proper negotiations whereas the major duty of any firm's COVID-19 measures need to reduce risk factors and avoid catastrophic degradations linked with loss. The government can act as an important Helix, as per the rationale of internal-external negotiations with different entities. It can also guide the facilitation of the SMEs' operation in this crisis (Hartmann, 2019). The intended QH configuration can promote SMEs to interact with universities for the exclusive utilization of their knowledge (Know-How), so as to achieve specialized individual and understanding, something that SMEs cannot contain on their own. In many, if not most situations, it can support moving from definitive to contingent perspectives and

from a negotiation-based attitude into an integrated decision-making process that can be useful to handle the crisis through various approaches. However, these negotiation strategies are particularly relevant- perhaps critical for those who recently had to negotiate a COVID-19 measure under institutional set-ups.

#### ***d) Digital adoption***

The study identifies three major digital adjustments due to this pandemic within the business- a) increase in the acceptance level regarding online services, b) a humongous necessity for internet services for SMEs, and c) enhanced connectivity among various categories of industries. At this juncture, around 70% of participants think that it is vital for SMEs to utilize online sales and distribution channels as much as possible to meet with changing demands on the basis of loyal customer segment whereas the main barrier in this respect is lack of awareness in terms of the influence and advantage of adopting with new technologies. The findings illustrate that the companies do not require to re-engineer the process they deal with their daily operations, they will also need to reinvent internal collaboration outline, use of technology and digital-oriented processes to offer business to continue as normal and to sustain resilience despite severe COVID-19 pandemic challenges. Here, a participant [A02] supports the necessity of digital adoption to handle the crisis as-

*“....digital measures are there to help them reduce many risk factors from continuous disruption to their business operations.”*

The present study also explains that the COVID-19 related crises scenario has also created digitalization opportunities (Islam et al., 2020B) to set multiple satellite offices into different locations (Ex-legal firms, CA firms ) and become remote which allows them to cover the entire state. SMEs are required to use video conferencing and content-sharing options to keep employees connected around the regions. The remote state can be cost-efficient in terms of high productivity (Baporikar, 2020), considering the crises. However, several studies support the mentioned findings by indicating that digital adoption can save time and resources where firms manage the average volume of production and hold the lesser internal capacity to confront the severely complex business environment (Kergroach, 2020; Seethamraju, 2015). Nevertheless, considering recent uncertainties, the obligation of digital distribution channels, sales channels, products, and operational procedures is now essential to SMEs in every location. Investing in a frisky and resilient outline depicts an imposed decision now, but it is in a matter of fact, a long-term investment that protects SMEs or other businesses from any potential turmoil.

The study also identifies some major concerns as a) flexibility, b) talent pool, and b) collaboration related to prompt implementation of the digitalization process in this crisis period. In fact, SMEs need to ensure flexibility through the management process in this rapidly changing scenario, whereas they must continue proper training and development for their employees to create a skilled workforce. At this point, government-university-industry facet interactions need to formulate strategies with measurable targets for the concerned segment to confirm that all the industry players are on the same

platform. The process of close collaboration and interdisciplinary working practices inside SMEs need to be supported for better synergies. However, the participants also have mentioned a “lack of awareness” regarding the digitalization process, which can suitably be addressed and covered by media as one of the helixes. Future business success needs the right mindset and motivation and proper skills on the part of employees or even management (Casidy et al., 2019). These collective interactions between QH agents can not only initiate innovation throughout the process but also ensure all SMEs are aligned in terms of knowledge and drive for digital change.

*e) Leadership commitment*

Effective leadership commitment is absolutely important for SMEs and their employees in a severe crisis with such damaging outputs and obliges physical as well as emotional strength. The argument of participants from SMEs and academia indicates that the commitment of owner-manager is vital to implement essential initiatives to ensure their workforce’s health and safety towards efficient productivity, in the current context. Thus, the owner-manager as a leader also requires to shape their business operations and their employees to adopt suitable alterations and stay adaptable to survive. The study of Bartik et al., (2020) shows that the initial step is to formulate the needed environment where the workforce feels motivated to put in the additional performances or outputs. However, the leaders basically serve a critical role in adopting new courses of operational activities where the empathy level of leaders is a major enabler for the employees to feel capacitated and attached

(Aslan et al., 2011). The managers of SMEs need to encourage to search a new innovation, ideas that they view, and considers as less risky. Thus, altering the present operational culture through leadership supports aligning the employee's attitude to appreciate the new adjustments and to be able to execute responsibilities in the new settings on basis of a more productive approach.

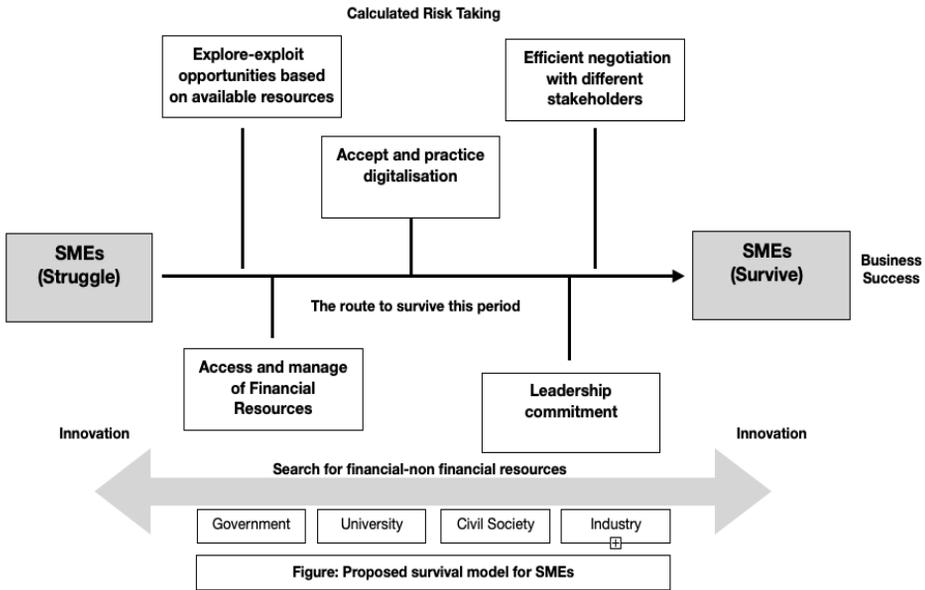
In this context, SMEs may possibly require proactive and creative leadership to survive in a turbulent period (Almeida et al., 2015). The present study emphasizes that innovation can only emerge within SMEs regarding this crisis if it is preceded by appropriate leadership commitment, whereas it is the main driving element behind business success. Here, the innovation is the output of collaborative interaction between QH agents, allowing business leaders to generate the most efficient and compelling strategies for harnessing and nursing talents who can initiate performance, innovation, and sustainability during this COVID-19 crisis. This leadership based alteration towards an innovation paradigm also can decrease the requirement for innovation facet investments, making the business innovation process more accessible to SMEs concerting the pandemic.

### **Proposed survival model**

To confront these disruptive events due to COVID-19, SMEs require to formulate timely and efficient crisis management responses for their survival and success. As per extensive ranges of discussions and analysis, this study indicates a) access and manage financial resources, b) exploration-exploitation of opportunities, c) efficient negotiation, d) digital adoption, and e)

leadership commitment sourced on the combination of Quadruple Helix agents are the main independent factors considering the issue of business success during pandemic. However, the conceptual blueprint suggests infusing innovation throughout the route of survival where the calculated risk-taking capacity of owner-manager can possibly contribute as an important strategic mindset. The model shows the direction to create responsible initiatives on basis of the QHIM mechanism to reduce damage and hold the extent and intensity of the mentioned crisis whereas, during the survival phase, businesses oblige to implement procedures to restore resume regular operations and restore necessary functioning capabilities. The model clearly emphasizes that systematic initiatives are more appropriate rather than random procedures in the case of the COVID-19 crisis. SMEs due to their vulnerable position in market and strengths dynamics, illustrate a critical style of crisis management strategy through the mentioned model based on theoretical underpinning.

**Figure-3:** Proposed survival model for SMEs (Source: Formulated by the authors for the study)



### Practical implications and theoretical contributions

The model obtained appears to have a significant impact on SMEs' decision-making mechanism to facilitate strategic change in the survival and development phases, taking into account the crisis context. The configuration can also be used: as a reference during the annual strategic planning cycle; for a pandemic or emergency management; for the incorporation of stability into the ethos and regular operations of the SME; and as a touchstone during a crisis for owners or managers (Doshmanli et al., 2018; Naderibeni et al., 2020). The outline can also help SMEs obtain desired cash-flow and marginal profitability during this crisis moment through timely implementation. On the

other part, it can help the concerned policymakers adjust or formulate appropriate intervention tactics regarding how SMEs can survive this epidemic or even other crisis periods. It can play a crucial role in allocating various financial and non-financial resources (Mayr and Lixl, 2019). Furthermore, this model would allow large companies to better understand the challenges and opportunities of crisis management for small and medium-sized enterprises, thus increasing the services available for small and medium-sized enterprises that are important to the efficiency and competitiveness of their supply chain network. From the social perspective, the study can guide the country's resilience process by providing a foundation where employees and employers face the crisis together hand in hand whereas the findings can aid in employment protection through training schemes.

From a theoretical viewpoint, the study has identified the successful applicability or dynamism of the Quadruple Helix Innovation Model in the context of the severe crisis. The factors influencing the Malaysian SME's company sustainability and performance during this crisis have been detected successfully. This study offers a framework to explore the superior economic success of small and medium-sized companies, particularly their integration of external resources and internal capacities of firms. In terms of capacitating long-term business growth, the dynamics of collaborations and alliances based on QH have emerged as a direction for SMEs (Islam and Wahab, 2021). The research illustrates that the synergistic relationships between the different Helixes provide SMEs with a base for survival and success. Besides, it gives management scientists a new gateway to severe crisis management research

based on multiple Helixes' role (Campanella et al., 2017). The suggested model's course provides credibility and viability to use emerging technology to deal with crises (Akpan et al., 2020). Here, we agree that to build improved resilience capacities for business organizations, the potential reorientation of QHIM needs to recognize the element of emerging technologies or even digitalization. SMEs widely encounter resource constraints; therefore, an efficient QHIM-based strategy will help scholars devise a strategic edge for SMEs to solve the current pandemic. The proposed model may also create a new framework to direct SMEs to use advanced technologies for business achievements by stressing the paradigm of knowledge rather than advanced ICT strategies or data magnitude (Kawamorita et al., 2020; Wang and Belardo, 2005).

## **Limitations**

A variety of drawbacks that we consider are posed in this simulation framework. However, the study's main limitation indicates a relatively smaller sample size; therefore, the findings cannot be explained accurately through a generalized population. Restricted access to computers or computer-illiteracy may reduce participation, causing a digital gap between 'have networks' and 'have nots', thereby leading to sampling bias in age or socio-economic class. The study also has no way to verify or check the findings objectively against the suggestions described by the respondents. Besides, the sample was framed to only Malaysian participants, so repeating the study in another country with local participants may serve exciting outputs.

## **Recommendations for future study**

We need future studies on decision-making focusing on those obtained strategic initiatives in times of crisis, the factors affecting it, its skills and steps, using other qualitative methodological designs, as well as quantitative designs. Besides, future research activities also need to investigate more on motivational factors of decision-makers to adjust strategic practices in case of handling crises or even economic recession. Again, QHIM based investigation may also inquire how associations and roles evolve or change over time, as well as the entry and exit criteria of various related actors within networks regarding SME's survival leading to success or continuous growth.

## **Final thoughts**

The crisis also offers a nexus of major threats along with significant opportunities. Usually, however, these two variables are not 'controlled' by a single cohesive collection of procedures, but rather by two different domains: crisis management and strategic planning. To discuss different approaches considering the interconnected base offered by numerous Helixes that SME owners and managers may take to build more resilient companies and more resilient societies, this paper proposed a configuration the authors refer to as the 'strategic survival model of SMEs.' An appropriate 'strategic survival model of SMEs' requires both planning and adaptiveness along with five enabling dimensions: [a] access and management of financial resources, [b] exploration-exploitation of opportunities, [c] digital adoption, [d] efficient negotiation, and [e] leadership. Our configuration also enables innovation and

measured risk-taking interventions to be considered to assess their strategic success in helping SMEs. The authors assume that more resilient or sustainable SMEs would be able to customize or mix all detected dimensions effectively. The outline will foster a business culture that emphasizes disciplined planning while fostering creative independence. Many Malaysian SMEs' innate agilities contribute to their durability, but their lack of emphasis on preparation can weaken their ability to discover the silver lining (Kadir et al., 2018; Udriyah et al., 2019). Indeed, as the SME survival equation is a continuous process, ongoing reform through the complex valuable understanding learned will theoretically mitigate the danger of the next severe crisis. Here, the QH-based engine inside the configuration serves as an effective transformation gateway within Malaysian SMEs' strategic initiatives. The findings clarify the significance of interaction, collaboration, and the interplay between different Helix spheres regarding the successful implementation of the obtained blueprint to support Malaysian SMEs. At this point, the study believes that the viewpoint of QH could be more important about concerning prompt policy formulation and the results obtained within the strategic activities of SMEs (Islam and Wahab, 2021).

In addition, the outcomes obtained clearly lay the basis for disclosing how Malaysian SMEs can achieve a miracle of competitive advantage and succeed in an extremely chaotic climate. This analysis offers a range of useful perspectives into strategic crisis management for SMEs. SMEs can address the situation proactively with minimal capital (Belas et al., 2019). SMEs are rewarded with friendly assistance and secure access to external resources and

intelligence through collaborations with government, academics, and media. The QH viewpoint can also help the collaboration mechanism through diverse operations, tools, and stakeholders to benefit from economies of scale and reach and benefit from innovation and R&D activities (Hasche et al., 2020). The QH direction of our survival outline also has the potential to serve SME decision-makers with more resilience and wisdom to play productive and active crisis management positions. It should set up an appropriate guideline for internal and external integration and cooperation, pass information to and from the decision-maker, take decisions rapidly, correctly, and decisively, taking into account the various stages of the COVID-19 crisis (Cai and Etzkowitz, 2020). On an optimistic note, however, we should expect that the COVID-19 crisis is an opportunity to reshape the relationship between government, academia, media, and SMEs to cope with the emergency scenario and create a more innovation-oriented sustainable business blueprint for the future.

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