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Determining the impact of Covid-19 on the business norms and performance of SMEs in China

Tiezhu Sun[a], Wei-Wei Zhang[b], Marius Sorin Dinca[c] and Muhammad Raza[d]

[a]School of Finance, Changchun Guanghua University, Changchun, China; [b]School of Economics and Management, Changchun University of Science and Technology Jilin, Changchun, China; [c]Department of Finance and Accounting, Transilvania University of Brasov, Brașov, Romania; [d]School of Business, Eman Institute of Management and Sciences, Karachi, Pakistan

ABSTRACT
This study's key purpose was to examine the impact of COVID-19 on SMEs' business norms and performance in China. The primary quantitative data have been collected through a survey questionnaire based on 330 participants. For analyzing the collected data, the use of the SEM technique has been made in this study. The researcher has adopted the data from the managers and employees belonging to the SMEs in China who are the research respondents. The data has been gathered from a sample size of 330. The number of distributed questionnaires was 340, whereas the responses gained were nearly 335, out of which 330 responses were selected. In the SEM technique, a CFA test was conducted to confirm the model's reliability and validity, whereas the results of path assessment were presented to examine the association between the variables. The findings of this study have confirmed the significant impact of COVID-19 on innovative operational procedures, profitability, remote work, and stakeholder satisfaction and safety.

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Acquisition; Covid-19; innovative operational procedures; mergers

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1. Introduction

The outbreak of COVID-19 has severely affected the SMEs' current performance and the overall business performance in different countries. Referred to (Kaberia & Muathe, 2020) study, SMEs' pandemic situation has a huge impact. It is based on the day-to-day operations that are disturbed at a higher rate (Gao et al., 2021; Liu et al., 2020; Su, Dai, et al., 2021). Despite making the policies and regulations for growth in the economy, there is a huge issue that is presented due to the reason for this pandemic situation in the previous year that has affected the performance of micro, small, and medium-sized enterprises (MSMEs). The businesses need to address the different issues that can be resolved by making contingency plans to develop better performance and profitability based on the study of (Donthu & Gustafsson, 2020; Su,

CONTACT Wei-Wei Zhang zwwjldx@126.com

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Huang, et al., 2021; Umar, Rizvi, et al., 2021). According to the arguments of (Gong et al., 2020), the business environment is volatile and can be easily disturbed with the help of changing conditions in the country. Hence, the businesses must look out for operational changes and make certain contingency plans to adjust the performance and safeguard the current performance to gain higher revenue from the market (Liu et al., 2020; Su, Khan et al., 2020).

As referred to in the study of (Dev & Sengupta, 2020), SMEs are considered one of the most important aspects that contribute to economic growth and support the increasing Gross Domestic Product (GDP) of many countries. It increases the trade opportunities and helps create employment with the help of innovation, offerings, and aiding business functions and actions (Waiho et al., 2020). Therefore, the countries are always conscious about SMEs' performance in the countries that can support them in increasing the business performance to maintain positive results (Robinson & Kengatharan, 2020). However, (Amankwah-Amoah et al., 2021) have argued that SMEs' current performance in the country has been badly affected due to the current pandemic situation and increasing rate of COVID-19 in the country China. By the beginning of this pandemic situation, China's country has experienced an annual growth to drop to 2.4% in the year 2020 (Kamal, 2020). On the other hand, (Anup Kumar, 2020) has also highlighted that SMEs' current performance has decreased China's GDP below 5% year on year.

The study of (Liu et al., 2020) has also highlighted that it has created the global recession risk that has resulted in declining growth of the International Monetary Fund (IMF) by 2.5% a year. Secondly, based on the current situation of COVID-19 that has affected the performance of SMEs, it has been observed that it has affected each sector and has also created a decreasing rate of returns as far as the performance of SMEs is concerned (Robinson & Kengatharan, 2020). Based on the current COVID-19 situation, the investment and retail sales have decreased by 13.5%, 24.5%, and 20.5%, whereas the unemployment rate has increased and reached 6.2%. Therefore, as referred to in the study of (Amankwah-Amoah et al., 2021), the countries need to impose short-term and long-term risks and shall also design contingency plans that can be effective and can be restricted towards the activities that can be designed for reducing the risk of operations to manage the support in short-term and long-term performance in the country China. One of the researches carried out the case of Chinese SMEs; it has been observed that nearly 50 to 60% of the SMEs in the country are having difficulties in paying salaries to the employees, as referred to in the study of (Dev & Sengupta, 2020). Moreover, (Donthu & Gustafsson, 2020) have also highlighted that 13 – 16% of the enterprises based on SMEs also have pressure to address the loan payment pressure compared to the large enterprises (Figure 1).

1.1. Research gap

The following research has addressed this major issue in China, where the current COVID-19 and its impact have been high and have been affecting the overall growth of its economy (Bobdey & Ray, 2020). On the other hand, (Gong et al., 2020) has also highlighted that the companies can also facilitate improvement with mergers and

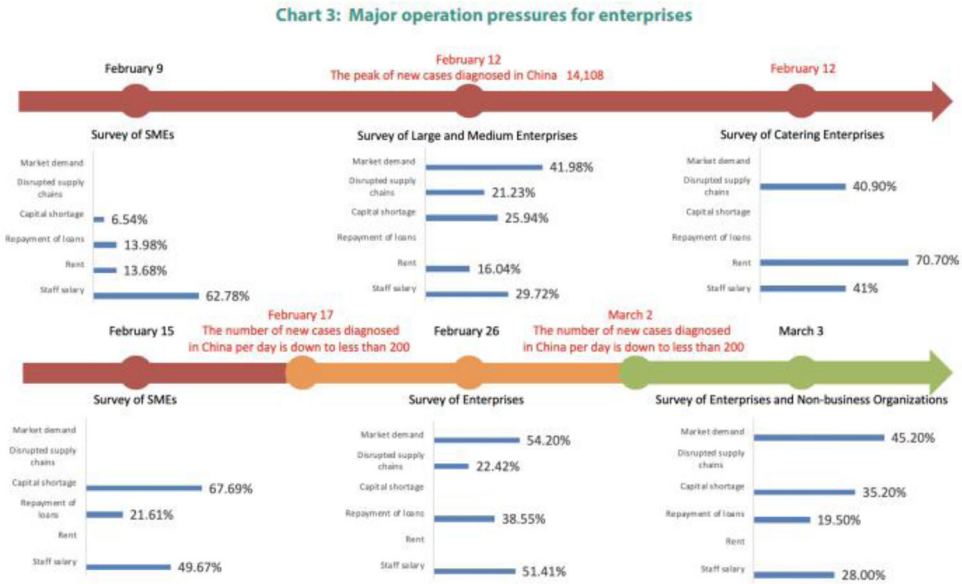

Figure 1. Major pressure for enterprises in China (Shen et al., 2020).
Source: Authors Estimation.

acquisitions that can be effective for the companies for better current performance and making effective contributions towards increasing the country's GDP.

1.2. Research objective

The researcher has aimed to focus on the methods of innovation and different operational procedures that can be used to increase the SMEs' performance in this regard.

1.3. Research significance

Moreover, one of the major aspects under consideration is the stakeholders' safety and satisfaction needed to be observed by the businesses to gain good performance in the future. (Shen et al., 2020) have highlighted that it is one of the core aspects needed to consider by the businesses to enhance stakeholders' safety, introducing growth and profitability opportunities in the country's SMEs sector. The researcher has addressed the following aspects and analyzed SMEs' current performance and profitability in China that are currently affected due to COVID-19. The researcher filled the gap by addressing the current problems and issues in China's current SMEs due to COVID-19. It has also been aimed to assess the strategies that the businesses can use to solve this issue and increase China's current GDP performance.

2. Literature review

Before delving into the main topic of this research, it is deemed pertinent to mention that since the outbreak of the novel coronavirus, there has been increasing instances

of human suffering as the novel coronavirus is considered to be one of the most significant public health crises in the modern era (Liu et al., 2020). In light of the preceding point, it can be further stated that along with the suffering on a personal level, the novel coronavirus carries the significant potential of various effects on businesses, especially on small to medium enterprises. The potential is measured in terms of confidence level in the business, fluctuating business environment in terms of market volatility, and uncertainties in supply and demand, respectively (Gong et al., 2020). Therefore, it is considered the major focus of this research to understand better the impact of the novel coronavirus, i.e., COVID-19, in the short term on the small to medium enterprises in China to identify the various ways. Small to medium enterprises can adapt to sustain their business operations and enhance their business performance.

Concerning the indicated heading, it can be duly stated that any crisis, irrespective of its origin, i.e., human-made or natural causes, are considered to carry the potential of levying a significant amount of damage on a business in terms of eradicating the level of trust that exists between the business and its respective consumer base (Donthu & Gustafsson, 2020). Furthermore, it can be stated that along with impacting consumer's trust in the business, this specific crisis, i.e., Covid-19, serves its nefarious purpose of exerting pressure on the management of the small to medium enterprises as they are considered to be restricted in their capability to implement any changes in a short period to its workforce appropriately. In conjunction with the preceding mentioned point, it can be stated that these factors lead to business failure as they are rendered ineffective in their capability to provide any services or products to their consumer base, respectively (Ratnasingam et al., 2020).

Further on, it can be mentioned that in terms of the impact levied by the novel coronavirus on small to medium enterprises, it can be duly stated that with the coronavirus that has induced lockdown measures as a temporary measure to avert the effects of COVID-19. However, it has resulted in the small to medium enterprises in China experiencing steep economic losses due to reduced sales volume (Lu et al., 2020). In congruence with the prior point, it can be stated that with the reduction in both sales volume along economic difficulties, the small to medium enterprises in China are facing issues in their cash flow which serves the purpose of levying stress on their respective business operations (Omar et al., 2020).

To accord more specifically in terms of the impact that has been levied on the small to medium enterprises in China, it can be duly stated that the small to medium enterprises that were operating in the tertiary sector, e.g., tourism and transportation, has been the recipient of one of the most significant impact levied by the novel coronavirus (Hao et al., 2020). Since the commencing of the pandemic and its induced lockdown measures in China, it can be stated that the small to medium enterprises operating in the tertiary sector has suffered a significant fall of over 56% in their normal capacity in the first quarter of the preceding year (Gössling et al., 2021). In line with the preceding mentioned point, it is deemed pertinent to mention that the forecasted losses that the small to medium enterprises are expected to witness a further decrease of 20% that will mount to $167 billion losses respectively (Khan et al., 2020).

With regards to the indicated heading, it is deemed pertinent to mention that the novel coronavirus levies its impact not only on the economic capability of the

businesses but also on the channels that are used by the businesses for their operations, i.e., supply as well as demand channels respectively (Brown et al., 2020; Su, Sun, et al., 2021). Following on the preceding mentioned point, it can be further stated that in term of the supply side, the small to medium enterprises operating in China are observed to face a depletion of labor for their business operations due to the lockdown measures being employed in the country to quell the effects of the novel coronavirus respectively (Dai et al., 2020). Moreover, the impact that is observed on the supply channel of the small to medium enterprises, it can be said that the small to medium enterprises are effective rendered ineffective to realize the purpose of utilizing their storage capacities as well as due to the Covid-19, the small to medium enterprises face a severe shortage of raw materials for their respective products (Guo et al., 2020).

To accord towards the impact of the novel coronavirus on the small to medium enterprises' demand channel, it can be duly stated that it imparts significant damage to its counterpart with an incapacitated supply channel, i.e., demand channel (Zhang et al., 2020). In light of the preceding mentioned fact, it is duly stated that it is citing the fact that once the supply channel is disrupted, the small to medium enterprises face a significant shortfall in demand for their products, thus causing a steep decline in their revenue figures substantially (Pan et al., 2020).

In extension with the point above, it can be further elucidated that the notion of demand channel of small to medium enterprises also faces a severe dampening because their consumer base also faces a significant chance of losing their source of income (Nicola et al., 2020). Thus, it renders their capability ineffective to accord purchases from small to medium enterprises. Moreover, as mentioned earlier, due to the financial markets deemed extremely volatile due to the pandemic, it can be mentioned that it increases uncertainties in the market, thus raising the capability of their consumer base to implement a reduction in their spending as well substantially (Sharma et al., 2020; Umar, Su, et al., 2021).

Furthermore, the impact on the demand channel is considered to be significant also because due to loss of business citing the novel coronavirus, the small to medium business are forced to lay off their workforce in huge numbers, thus reducing their capability to spend, which effectively culminates in a loss in demand for their products and services respectively (Paul & Chowdhury, 2021). In line with the previously stated factor, it can be mentioned that due to loss of demand, the impact is mirrored on increased uncertainty in the financial markets for the small to medium enterprises that serve the nefarious purpose of reducing confidence in the small to medium enterprises (Gong et al., 2020; Su, Qin, et al., 2020). The prior point is suggestive that due to a reduction in confidence in businesses, it reduces their credit.

Further, on the notion of both channels of supply and demand of small to medium enterprises, it can be duly stated that with the impact on the supply channels on the small to medium enterprises, the effects are also felt by one of their stakeholders, i.e., suppliers, as the loss of supply of raw materials dampens their prospects of earning revenue as well (Singh, 2020). One of the short-term impacts prominently felt by the small to medium enterprises is that most of their workforce are asked per guidelines to accord their operations from their homes' confines.

In conjunction with the preceding discussion, the notion of social distancing is widely implemented by the small to medium enterprises that implement self-compliance measures on the workforce. It restricts their movements and interactions with the consumer base (She et al., 2020). Moreover, with the implementation of social distancing, it can be further stated that it discouraged the populace from frequent venturing for according purchases, thus reducing the possibility of small to business enterprises engaging with their consumer base, respectively (Ozili & Arun, 2020). Therefore, the notion of social distancing seems to serve the purpose of disrupting the contemporary business structure that is intertwined between the stakeholders such as the suppliers, consumers, distributors, businesses, and the financial intermediaries appropriately (Ozili & Arun, 2020). In line with the previously stated argument, it is deemed pertinent for the small to business enterprises to develop pertinent strategies that can mitigate the effects of the novel corona-virus and deem the small to business enterprises sustainable.

Considered to be an extension of the preceding heading, the notion of innovation capability is deemed pertinent, citing the fact that due to the intertwined nature of the business that has been accorded in the contemporary era and the light of the pandemic, innovation capability is denotive of the fact that it concerns itself with the performance of the new products that are provided to the consumer base (Wang et al., 2020). For providing clarity to the preceding mentioned point, it can be further stated that with introducing innovation in their products and in the process of delivering them to their consumer base, the small to medium enterprises raise the possibility of their brand to be leveraged with their consumer base and is viewed positively (Gerald et al., 2020). However, the notion of the small to medium enterprises' innovation capability bases its dependence on the organizational hierarchy of the small to medium enterprises.

Further on, it can be stated that innovation capabilities are usually ranging in various types to contribute to small to medium enterprises. Following on the preceding mentioned point, it can be stated that one of the highlighting types of the notion of innovation capability is the product innovation capability which finds a direct connection with the business performance of the small to medium enterprises appropriately (Wang et al., 2020).

Regarding the notion above of product innovation, it is deemed crucial and pertinent to mention adoption cost. Adopting cost is considered two pertinent avenues that connect with the notion of technological innovation that is considered both positive and negative (Akpan et al., 2020; Umar et al., 2020). Following on the preceding mentioned point, it can be stated that the cost of innovation that is pursued by the small to medium enterprises is considered to be crucial as well as it is considered to be relevant for the scope of small to medium enterprises substantially (Guo et al., 2020). Following on, it can be stated that the reason that the innovation adoption cost is considered to be crucial for the small to medium enterprises is about the scarcity of resources that are available to the small to medium enterprises, e.g., finances, workforce, and the raw materials for their business operations respectively (He et al., 2020). However, these costs add to the performance prospects of the small to medium enterprises, especially in the coronavirus context, as the viability of the small to

medium enterprises are considered to be one of the performance metrics of the businesses in general of a specific region, in this case, China (Shen et al., 2020). In line with the previously stated points of performance metrics, it constitutes the notion of profitability, firm growth, and the amount of stability in the region's financial market, which is gauged to serve the purpose of determining the economic viability of the businesses (Shen et al., 2020).

Moreover, the impact of covid-19 witnessed on the merger and acquisition in terms of transactions carried out, developed, and executed. Due to covid-19 that has forced the stakeholders to restrict their physical activity and the businesses to exercise their operations remotely, it is deemed pertinent for the small to medium enterprises to employ innovative procedures that can effectively accommodate the notion of merger and acquisition during the pandemic (Anuj Kumar & Ayedee, 2021). Due to the short-term effect of the novel coronavirus on small to medium enterprises, it leads the businesses to focus on mitigating immediate factors that can dampen their business prospects. Therefore, the merger and acquisition can sustain the business's growth in the long run (Liu et al., 2020). However, with the pandemic, the merger and acquisition have taken a steep hit as the companies are willing to dishonor the deals they fostered with small to medium enterprises to allocate their resources in countering the effects of Covid-19, respectively (Leung et al., 2020).

2.1. Hypotheses

Based on the literature review, the following hypotheses have been constructed:

H1: There is a significant impact of COVID-19 on innovative operational procedures
H2: There is a significant impact of COVID-19 on mergers and acquisition
H3: There is a significant impact of COVID-19 on profitability
H4: There is a significant impact of COVID-19 on remote work
H5: There is a significant impact of COVID-19 on stakeholder satisfaction and safety

3. Theoretical framework

3.1. Keynesian theory

The indicated theory states that it is based on two underlying concepts; foremost is the marginal effectiveness of the invested capital and an efficient demand channel (Zhao, 2020). In line with the previously stated point, it can be mentioned that the Keynesian theory is indicative of the fact that with a low demand of the products in the economy of a particular region, in this case, China, it is considered to constitute a major role in causing a major downturn in its respective economy (Hepburn et al., 2020).

3.2. Theory of comparative advantage

The mentioned theory suggests the business's capability to provide goods and services at a lower opportunity cost than its competitors to realize the purpose of more

cohesive sales margins than their respective counterparts. In line with the understanding provided in the preceding point, it can be duly mentioned that within the small to medium enterprises in China, the mentioned theory is considered to be a tool that is utilized to serve the objective of according adjustments to the production channels (Naradda Gamage et al., 2020). Consequently, with the adjustments that are being accorded to the production channels of the small to medium enterprises, it can be stated that it raises the possibility of the businesses to allocate their resources, that are deemed scarce by the novel coronavirus, to other sectors that can be considered vital for their sustenance as well as sustainability (Addison et al., 2020). For providing clarity to the preceding factor, it can be mentioned that with the allocation of resources to pertinent divisions of the business, the small to medium enterprises raise the possibility of their business developing a competitive advantage that sets them apart from their counterparts (Naradda Gamage et al. 2020). Moreover, with the development of competitive advantage, it allows small to medium enterprises to sustain their business operations during the most extreme crises, more recently, the novel coronavirus pandemic (Khemani, 2020).

4. Conceptual model

The literature review and the model can be hypothesized as follows: the independent construct is COVID-19, whereas the dependent constructs are business norms and performance. Measuring business norms, mergers and acquisitions, remote work, and innovative business procedures have been considered, whereas measuring business performance, profitability, and stakeholder satisfaction and safety have been considered. The hypothesized model has been presented in Figure 2.

5. Methodology

The research methodology highlights approaches, philosophies, and designs to address the research aim and objectives. (Ørngreen & Levinsen, 2017) have highlighted that the methodology gives the pathway for answering the research questions. The researchers have several options that can be considered for dealing with the research philosophy. The following study has utilized the positivism philosophy imperative for the researcher to address the research problems. According to (Dźwigoł & Dźwigoł-Barosz, 2018), the use of positivism philosophy supports the researchers in addressing the requirements based on using quantitative data for investigation. The researcher has utilized the quantitative data to assess SMEs' current performance in China due to the current pandemic situation due to COVID-19.

(Ngozwana, 2018) has highlighted that the research approach highlights the structure and format of the research. It has been observed that the following research has been designed using a deductive approach; researchers have designed a research hypothesis that is needed to assed at the end of the research. The use of a deductive approach is imperative for the researcher to deal with the current research problems and address the aspects of business norms and business performance in China after COVID-19. The researcher has selected the specific business norms provided to be

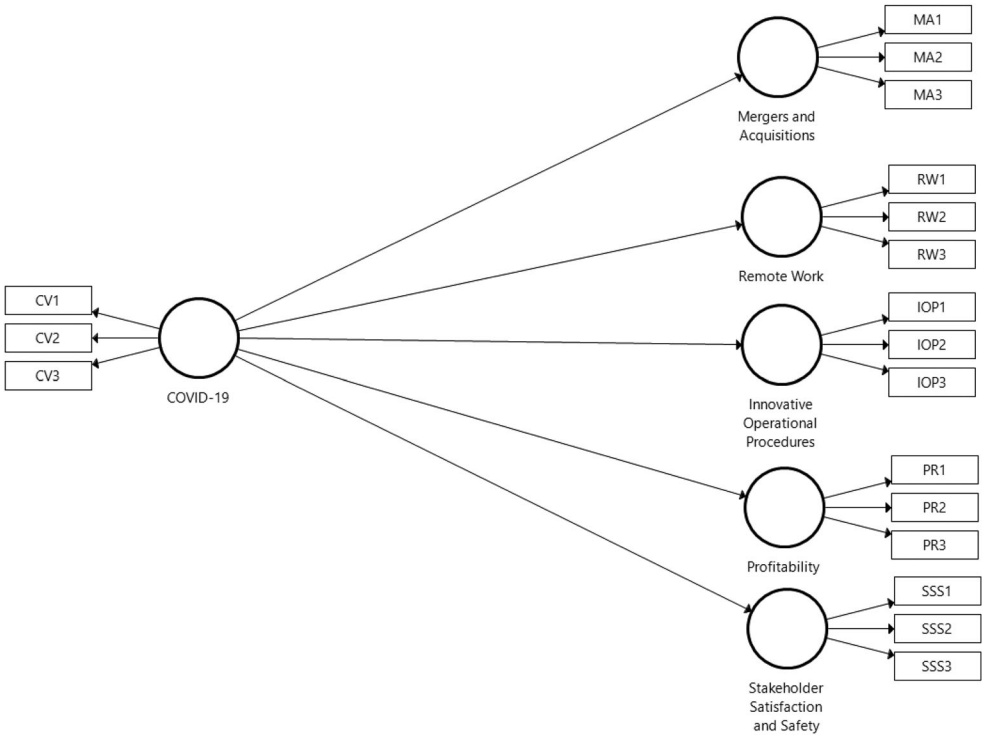

Figure 2. Conceptual model of the study.
Source: Authors Estimation.

remote working, Mergers and Acquisitions, and the Innovative Operational Procedures discussed by the researcher. Moreover, the aspects of business performance have also been discussed: Stakeholder Safety and Satisfaction and the businesses' profitability.

The researcher has utilized the primary data for an investigation collected through the questionnaire to assess the current impact of COVID-19 on the business norms and business performance in the current situation of COVID-19. The researcher has carried out the analysis using the SmartPLS technique for blindfolding for measuring the effect of COVID-19 on the current businesses and SMEs in China. The tests like CFA, path analysis, SEM model, blindfolding were also carried out for assessing the impact of COVID-19 on SMEs in China. The path analysis is utilized to assess the patterns of variables in the study. The researcher has adopted the data from the managers and employees belonging to the SMEs in China who are the research respondents. The data has been gathered from a sample size of 330. The number of distributed questionnaires was 340, whereas the responses gained were nearly 335, out of which 330 responses were selected. The rate of response was 97%. The researcher has adopted this primary data to gain accurate data for assessing the research questions. The researcher has designed the questionnaire using the scale from strongly agree to disagree from $0-5$ strongly. This method is appropriate for the researcher for assessing the impact of COVID-19 on SMEs' business norms and business performance in China. The researcher has ensured the accuracy and

authenticity of research and has also ensured that the research is unique and is not copied from someone else's work. The researcher has utilized the collected data for an investigation and has not been used for any other purpose. The data has been secured and has not been violated.

6. Results and interpretation

To test the hypothesized model, CFA, path assessment, and blindfolding have been conducted.

6.1. Confirmatory Factor analysis (CFA)

For the determination of the factor structure, the researcher conducted CFA. In this regard, the validity of the factors has been examined with the help of factor loadings. According to the study of (Brown, 2015), the threshold for factor loadings' validity is 0.6. The results presented in Table 1 indicate that none of the factors is invalid since all the factor loadings are surpassing the threshold. Besides, to determine the latent constructs' reliability, the researcher has used composite reliability and Cronbach Alpha. The study carried out by (Usman, 2020) indicated that it is preferable to have reliability values above 0.7; however, if the value is above 0.6, then it is also acceptable. Therefore, the measurement model results indicate that the least value of Cronbach Alpha is computed to be 0.692 of remote work while 0.828 for the same variable in terms of composite reliability. That shows that all the constructs are statistically reliable (Afshan et al., 2018; Afshan & Sharif, 2016; Sharif et al., 2019).

Table 1. Convergent validity and reliability of the constructs and indicators.

Latent Variables	Indicators	Factor Loadings	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
COVID-19	CV1	0.817***	0.839	0.904	0.758
	CV2	0.892***			
	CV3	0.901***			
Innovative Operational Procedures	IOP1	0.649***	0.787	0.867	0.690
	IOP2	0.891***			
	IOP3	0.924***			
Mergers and Acquisitions	MA1	0.874***	0.875	0.912	0.775
	MA2	0.835***			
	MA3	0.930***			
Profitability	PR1	0.855***	0.919	0.950	0.863
	PR2	0.965***			
	PR3	0.963***			
Remote Work	RW1	0.796***	0.692	0.828	0.619
	RW2	0.874***			
	RW3	0.678***			
Stakeholder Satisfaction and Safety	SSS1	0.814***	0.726	0.847	0.653
	SSS2	0.929***			
	SSS3	0.657***			

***: indicating significance at 1%.
Source: Authors Estimation.

Table 2. HTMT ratio for discriminant validity.

	COVID-19	Innovative Operational Procedures	Mergers and Acquisitions	Profitability	Remote Work
Innovative Operational Procedures	0.536				
Mergers and Acquisitions	0.087	0.045			
Profitability	0.691	0.319	0.104		
Remote Work	0.707	0.860	0.016	0.431	
Stakeholder Satisfaction and Safety	0.506	0.769	0.111	0.320	0.658

Source: Authors Estimation.

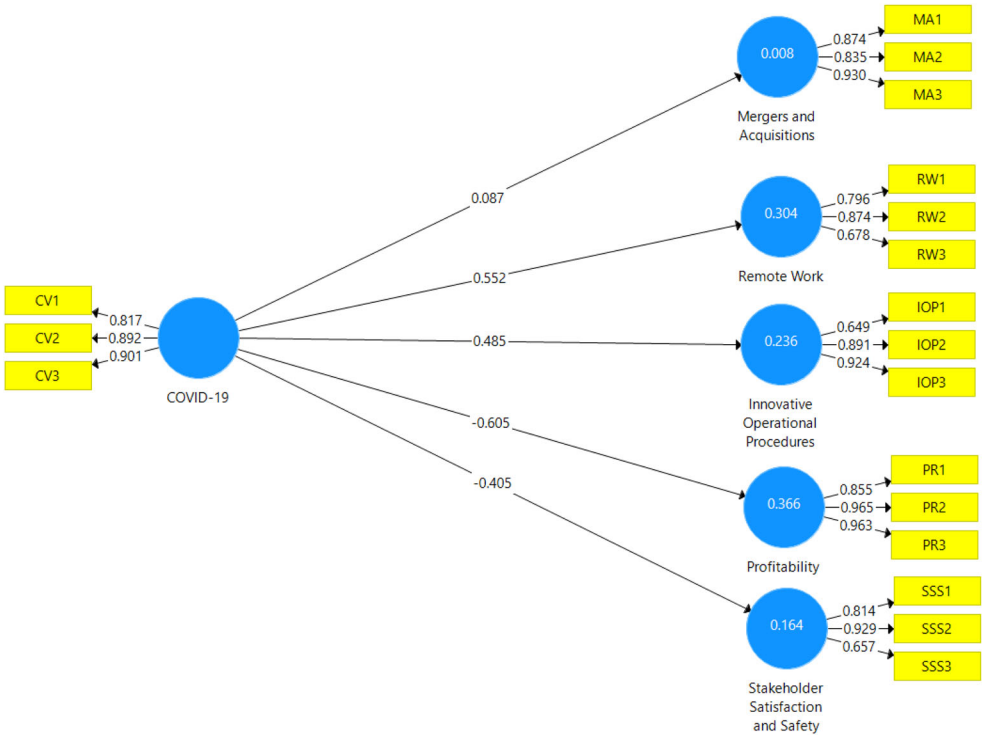

Figure 3. Measurement model of the study.
Source: Authors Estimation.

On the other hand, convergent validity is used to determine the relatedness between the variables, according to (Wong, 2019). The same study explained the Average Variance Extracted (AVE) threshold as 0.5, which determines the convergent validity. The results indicate that all the latent constructs possess appropriate convergent validity since the lowest validity is computed to be 0.619, above 0.5.

Besides the affirmation of convergent validity, the discriminant validity is also assessed using the HTMT ratio, determining how distinct one latent construct is from the other latent construct. The study conducted by (Latan et al., 2017) asserted that the maximum value acceptable in this regard is 0.9. Therefore, the results presented in Table 2 indicate that none of the associations has a higher than 0.9 value, indicating that the assumption of discriminant validity is not violated. The measurement model can also be seen in Figure 3.

Table 3. Path assessment.

Path	Path Coefficient (B)	T Statistics	P Values
COVID-19 -> Innovative Operational Procedures	0.485***	12.198	0.000
COVID-19 -> Mergers and Acquisitions	0.087	1.437	0.151
COVID-19 -> Profitability	−0.605***	15.019	0.000
COVID-19 -> Remote Work	0.552***	13.548	0.000
COVID-19 -> Stakeholder Satisfaction and Safety	−0.405***	7.026	0.000

***: indicating significance at 1%.
Source: Authors Estimation.

6.2. Path assessment

The study's researcher conducted bootstrapping, which is regarded as a resampling technique to determine all the constructs' significance in explaining others. The results have been presented in Table 3: Path Assessment. By the results, it can be inferred that the effect of COVID-19 on the innovative operational procedures is statistically [B = 0.485; p-value< 0.01]. The effect is positive, which means that the innovative aspects in the operational procedures improved in the case of SMEs of China in terms of business norms. Besides, the effect of COVID-19 on the remote work was also statistically significant and positive [B = 0.552; p-value< 0.01]. That can be interpreted in the same manner. However, the effect of COVID-19 on profitability [B= −0.605; p-value< 0.01] and stakeholder satisfaction and safety [B= −0.405; p-value< 0.01]. The negative effect indicates that with the influx of the COVID-19 cases, the SMEs' profitability declined along with the stakeholders' satisfaction and safety level associated with the business. In fine, it can be stated that COVID-19 has affected the business norms positively to some extent. However, the business performance in the case of SMEs of China declined. The results of the path model can also be seen in Table 3: Path Assessment (Figure 4).

6.3. Predictive relevance and quality of the model

Following Hair et al. (2016), blindfolding is used to determine the model's predictive relevance where the value of Q-square should be above 0 to declare predictive relevance. In this regard, the results have been presented in Table 4: R-squared and Q-square. The results show that, except for mergers and acquisitions, all the models possess sufficient predictive relevance. Besides determining the model's quality, the variance in COVID-19 is explaining 23.57%, 0.76%, 36.64%, 30.43%, and 16.43% variance in innovative operational procedures, mergers, and acquisitions, profitability, remote work, and stakeholder satisfaction and safety, respectively. The results from blindfolding can also be seen in Figure 5.

6.4. Summary of hypotheses

S.No	Hypothesis	Status
1	H1: There is a significant impact of Covid-19 on innovative operational procedures	Accepted
2	H2: There is a significant impact of Covid-19 on mergers and acquisition	Rejected
3	H3: There is a significant impact of Covid-19 on profitability	Accepted
4	H4: There is a significant impact of Covid-19 on remote work	Accepted
5	H5: There is a significant impact of Covid-19 on stakeholder satisfaction and safety	Accepted

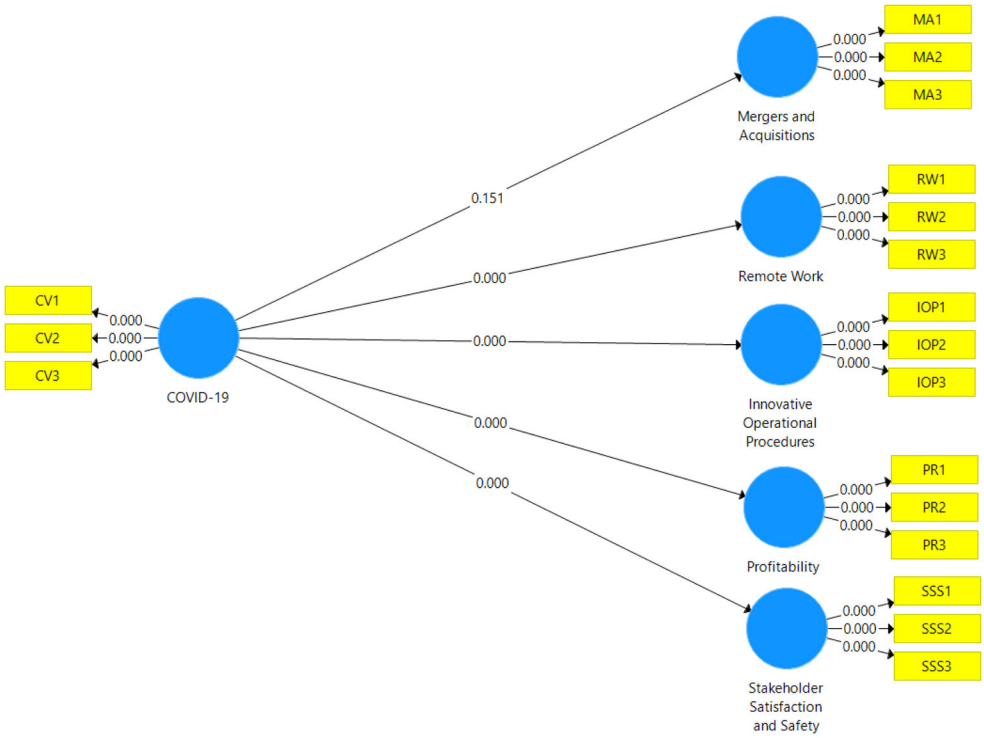

Figure 4. Path model with p-values.
Source: Authors Estimation.

Table 4. R-squared and Q-square.

	R Square	R Square Adjusted	Q-squared
Innovative Operational Procedures	23.57%	23.33%	0.144
Mergers and Acquisitions	0.76%	0.46%	0.001
Profitability	36.64%	36.44%	0.311
Remote Work	30.43%	30.22%	0.183
Stakeholder Satisfaction and Safety	16.43%	16.17%	0.101

Source: Authors Estimation.

7. Discussion

In this study, the impact of COVID-19 on business norms and performance has been comprehensively discussed. The results presented in the previous section signify the huge impact of COVID-19 on SMEs' performance and business norms that are operating in China. As per the path assessment results, the significant impact of COVID-19 has been found on SMEs' innovative operational procedures. That is also validated from most previous research, in which significant impact of COVID-19 on innovative operational procedures has been observed. According to Akpan et al. (2020), the imposition of different businesses' restrictions due to the COVID-19 has forced organizations to identify innovative operational procedures to ensure the effective flow of business operations in uncertain situations of COVID-19. Similarly, as per the study of McCausland (2020), due to the situation of COVID-19, companies have had to quickly adapt to the new market situation by reshaping the way they operate or by

Figure 5. Blindfolding.
Source: Authors Estimation.

inventing themselves. In this manner, the innovative operational procedures of SMEs are greatly influenced by COVID-19.

This research's primary findings also confirm the significant but negative impact of Covid-19 on SMEs' performance. Also validated from various studies, the negative impact of Covid-19 on business profitability has been widely acknowledged in the previous literature. According to (Xiong et al., 2020), the COVID-19 pandemic and resulting lockdowns have negatively impacted SMEs, as these businesses have faced several issues related to logistics blocks, shortages of labor, and a significant decline in consumer demand. All these issues related to the COVID-19 pandemic have caused a significant decline in the company's profitability. On the other hand, no significant association has been found between COVID-19 and mergers and acquisitions as per the study's primary findings. That is found to be contradicting with the study of (Shen et al., 2020), in which it has been argued that most of the business deals are closing due to the COVID-19 pandemic, most companies are waiting for more stability in the market to practice different business activities merger and acquisition. However, this study's primary outcomes confirm the significant impact of COVID-19 on remote work and stakeholder satisfaction and safety. Conclusively, based on this study's overall results, the significant impact of COVID-19 has been found on innovative operational procedures, profitability, stakeholder satisfaction and safety, and SMEs' remote work.

According to (Rizvi et al., 2020), there are several ways the pandemic has affected the economy and the SMEs of China on both the supply and demand sides. On the

supply side, China's companies have experienced reduced labor as the workers are unwell, affecting the country's productivity. Furthermore, it caused the demand for various products to increase. However, due to low productivity and the increase in lockdown restrictions, the supply has been affected and has led to certain developed policies. (Mirza et al., 2020) state that over 5800 businesses closed in the country due to the pandemic, and the businesses reduced their employees by 40%. This caused the unemployment rates to increase that affected the country's overall economy, and 80% of the SMEs have not resumed their operations since the pandemic. According to (Yarovaya et al., 2021), there was a lack of demand for products, which caused the businesses to remain closed, which further affected the supply-side factors. It is deemed pertinent to mention that the forecasted losses that the small to medium enterprises are expected to witness a further decrease of 20% that will mount to $167 billion losses, respectively.

8. Conclusion, policy recommendations, and limitations

For accomplishing the key objective of this study, the primary quantitative data have been collected through a survey questionnaire. Moreover, the SEM model technique has been used for analyzing the collected data, in which the tests of confirmatory factor analysis and path assessment have been conducted. This study's findings have revealed the significant impact of COVID-19 on innovative operational procedures, profitability, remote work, and stakeholder satisfaction and safety. However, no significant impact of COVID-19 has been found on mergers and acquisitions of SMEs. Since the commencing of the pandemic and its induced lockdown measures in China, it can be stated that the small to medium enterprises operating in the tertiary sector have suffered a significant fall of over 56% in their normal capacity in the first quarter of the preceding year. This research's primary findings also confirm the significant but negative impact of Covid-19 on SMEs' performance. The researcher has addressed the following aspects and analyzed SMEs' current performance and profitability in China that are currently affected due to COVID-19. The researcher filled the gap by addressing the current problems and issues in China's current SMEs due to COVID-19.The study results indicate that there is no positive relationship between Covid-19 and Mergers and Acquisitions. Therefore, companies should focus on merging to improve the operations. The country should develop the policy of crisis plan to deal with uncertain situations, and the companies HR and the management would need to implement policies in all departments and levels that would ensure that the threats are being countered effectively. The companies should introduce policies in which variable and fixed expenses should be assessed, and different revenue schemes should be adjusted if there are any errors in the calculations.

8.1. Policy suggestions

Based on key findings of this study, the following recommendations are proposed to the SMEs that are operating in China:

- SMEs should need to develop a proper crisis plan to deal with an uncertain situation like COVID-19 effectively. For that purpose, the company's HR needs to make a proper crisis plan by including several organizational levels and ensuring its timely dissemination.
- The companies are also advised to assess their variable and fixed expense and actual revenues properly. This investigation can give a clear picture of its financial standings, helping the entrepreneurs make plans. That can help to minimize the negative impact of COVID-19 on the company's profitability.
- It has also been recommended to the SMEs to check the feasibility of their existing business model. Companies need to consider the business model and reconsider the current business standings according to the assumptions related to the cost and revenue by considering the rapid changes in the market situation.

8.2. Limitations and future research directions

This study's limited scope has been one of the key limitations of this study, as this study only discusses the SMEs businesses. Therefore, this study's scope can be expanded by adding MNCs to future research investigations. Apart from that, the absence of qualitative data was another major limitation of this study. Hence, future researchers can consider conducting the same study through a mixed research design to provide more conclusive results.

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References

Addison, T., Sen, K., & Tarp, F. (2020). *COVID-19: Macroeconomic dimensions in the developing world*. United Nations University World Institute for Development Economics Research.

Afshan, S., & Sharif, A. (2016). Acceptance of mobile banking framework in Pakistan. *Telematics and Informatics*, *33*(2), 370–387. https://doi.org/10.1016/j.tele.2015.09.005

Afshan, S., Sharif, A., Waseem, N., & Frooghi, R. (2018). Internet banking in Pakistan: An extended technology acceptance perspective. *International Journal of Business Information Systems*, *27*(3), 383–410. https://doi.org/10.1504/IJBIS.2018.089863

Akpan, I. J., Udoh, E. A. P., & Adebisi, B. (2020). Small business awareness and adoption of state-of-the-art technologies in emerging and developing markets, and lessons from the

COVID-19 pandemic. *Journal of Small Business & Entrepreneurship*, 1–18. https://doi.org/10.1080/08276331.2020.1820185

Amankwah-Amoah, J., Khan, Z., & Wood, G. (2021). COVID-19 and business failures: The paradoxes of experience, scale, and scope for theory and practice. *European Management Journal*, *39*(2), 179–184. https://doi.org/10.1016/j.emj.2020.09.002

Bobdey, S., & Ray, S. (2020). Going viral–Covid-19 impact assessment: A perspective beyond clinical practice. *Journal of Marine Medical Society*, *22*(1), 9. https://doi.org/10.4103/jmms.jmms_12_20

Brown, T. A. (2015). *Confirmatory factor analysis for applied research*. Guilford publications.

Brown, R., Rocha, A., & Cowling, M. (2020). <? Covid19?> Financing entrepreneurship in times of crisis: Exploring the impact of COVID-19 on the market for entrepreneurial finance in the United Kingdom. *International Small Business Journal*, *38*(5), 380–390.

Dai, R., Feng, H., Hu, J., Jin, Q., Li, H., Ranran, W., Wang, R., Xu, L., & Zhang, X. Z. (2020). *The impact of covid-19 on small and medium-sized enterprises: Evidence from two-wave phone surveys in China*. *Working paper*. Center for Global Development.

Dev, S. M., & Sengupta, R. (2020, April). *Covid-19: Impact on the Indian economy*. Indira Gandhi Institute of Development Research.

Donthu, N., & Gustafsson, A. (2020). Effects of COVID-19 on business and research. *Journal of Business Research*, *117*, 284–289. https://doi.org/10.1016/j.jbusres.2020.06.008

Dźwigoł, H., & Dźwigoł-Barosz, M. (2018). Scientific research methodology in management sciences. *Financial and Credit Activity: Problems of Theory and Practice*, *2*(25), 424–437.

Gao, X., Ren, Y., & Umar, M. (2021). To what extent does COVID-19 drive stock market volatility? A comparison between the U.S. and China. *Economic Research-Ekonomska Istraživanja*, 1–21. https://doi.org/10.1080/1331677X.2021.1906730

Gerald, E., Obianuju, A., & Chukwunonso, N. (2020). Strategic agility and performance of small and medium enterprises in the phase of Covid-19 pandemic. *International Journal of Financial, Accounting, and Management*, *2*(1), 41–50. https://doi.org/10.35912/ijfam.v2i1.163

Gong, H., Hassink, R., Tan, J., & Huang, D. (2020). Regional Resilience in Times of a Pandemic Crisis: The Case of COVID-19 in China. *Tijdschrift Voor Economische en Sociale Geografie*, *111*(3), 497–512. https://doi.org/10.1111/tesg.12447

Gössling, S., Scott, D., & Hall, C. M. (2021). Pandemics, tourism and global change: A rapid assessment of COVID-19. *Journal of Sustainable Tourism*, *29*(1), 1–20. https://doi.org/10.1080/09669582.2020.1758708

Guo, H., Yang, Z., Huang, R., & Guo, A. (2020). The digitalization and public crisis responses of small and medium enterprises: Implications from a COVID-19 survey. *Frontiers of Business Research in China*, *14*(1), 1–25. https://doi.org/10.1186/s11782-020-00087-1

Hair, Jr., J. F., Sarstedt, M., Matthews, L. M., & Ringle, C. M. (2016). Identifying and treating unobserved heterogeneity with FIMIX-PLS: Part I – method. *European Business Review*, *28*(1), 63–76. https://doi.org/10.1108/EBR-09-2015-0094

Hao, F., Xiao, Q., & Chon, K. (2020). COVID-19 and China's hotel industry: Impacts, a disaster management framework, and post-pandemic agenda. *International Journal of Hospitality Management*, *90*, 102636. https://doi.org/10.1016/j.ijhm.2020.102636

He, P., Niu, H., Sun, Z., & Li, T. (2020). Accounting index of COVID-19 impact on Chinese industries: A case study using big data portrait analysis. *Emerging Markets Finance and Trade*, *56*(10), 2332–2349. https://doi.org/10.1080/1540496X.2020.1785866

Hepburn, C., O'Callaghan, B., Stern, N., Stiglitz, J., & Zenghelis, D. (2020). Will COVID-19 fiscal recovery packages accelerate or retard progress on climate change? *Oxford Review of Economic Policy*, *36*(Supplement_1), S359–S381. https://doi.org/10.1093/oxrep/graa015

Kaberia, S. K., & Muathe, S. M. (2020). Effect of Covid-19 pandemic on performance of women owned micro, small and medium enterprises in Kenya. *International Journal of Social Science Studies*, *9*(1), 7–21. https://doi.org/10.11114/ijsss.v9i1.5089

Kamal, M. M. (2020). The triple-edged sword of COVID-19: Understanding the use of digital technologies and the impact of productive, disruptive, and destructive nature of the

pandemic. *Information Systems Management*, *37*(4), 310–317. https://doi.org/10.1080/10580530.2020.1820634

Khan, K., Zhao, H., Zhang, H., Yang, H., Shah, M. H., & Jahanger, A. (2020). The impact of COVID-19 pandemic on stock markets: An empirical analysis of world major stock indices. *The Journal of Asian Finance, Economics and Business*, *7*(7), 463–474. https://doi.org/10.13106/jafeb.2020.vol7.no7.463

Khemani, S. (2020). *An opportunity to build legitimacy and trust in public institutions in the time of COVID-19*. World Bank Research and Policy Briefs 148256.

Kumar, A. (2020). Improvement of public distribution system efficiency applying blockchain technology during pandemic outbreak (COVID-19). *Journal of Humanitarian Logistics and Supply Chain Management*, *11*(1), 1–28. https://doi.org/10.1108/JHLSCM-06-2020-0050

Kumar, A., & Ayedee, D. (2021). Technology Adoption: A Solution for SMEs to Overcome Problems during COVID-19. *Academy of Marketing Studies Journal*, *25*(1).

Latan, H., Noonan, R., & Matthews, L. (2017). Partial least squares path modeling. In *Partial least squares path modeling: Basic concepts, methodological issues and applications*. https://doi.org/10.1007/978-3-319-64069-3

Leung, Y. K., Mukerjee, J., & Thurik, R. (2020). The role of family support in work-family balance and subjective well-being of SME owners. *Journal of Small Business Management*, *58*(1), 130–163. https://doi.org/10.1080/00472778.2019.1659675

Liu, L., Hou, Y., Zhan, X., & Wang, Z. (2020). Innovation efficiency of high-tech SMEs listed in China: Its measurement and antecedents. *Discrete Dynamics in Nature and Society*, *2020*, 1–9. https://doi.org/10.1155/2020/8821950

Lu, Y., Wu, J., Peng, J., & Lu, L. (2020). The perceived impact of the Covid-19 epidemic: Evidence from a sample of 4807 SMEs in Sichuan Province, China. *Environmental Hazards*, *19*(4), 323–340. https://doi.org/10.1080/17477891.2020.1763902

McCausland, T. (2020). COVID-19's impact on globalization and innovation. *Research-Technology Management*, *63*(6), 54–59. https://doi.org/10.1080/08956308.2020.1813506

Mirza, N., Naqvi, B., Rahat, B., & Rizvi, S. K. A. (2020). Price reaction, volatility timing and funds' performance during Covid-19. *Finance Research Letters*, *36*, 101657. https://doi.org/10.1016/j.frl.2020.101657

Naradda Gamage, S. K., Ekanayake, E. M. S., Abeyrathne, G., Prasanna, R., Jayasundara, J., & Rajapakshe, P. S. K. (2020). A review of global challenges and survival strategies of small and medium enterprises (SMEs). *Economies*, *8*(4), 79. https://doi.org/10.3390/economies8040079

Ngozwana, N. (2018). Ethical dilemmas in qualitative research methodology: Researcher's reflections. *International Journal of Educational Methodology*, *4*(1), 19–28. https://doi.org/10.12973/ijem.4.1.19

Nicola, M., Alsafi, Z., Sohrabi, C., Kerwan, A., Al-Jabir, A., Iosifidis, C., Agha, M., & Agha, R. (2020). The socio-economic implications of the coronavirus and COVID-19 pandemic: A review. *International Journal of Surgery (London, England)*, *78*, 185–193. https://doi.org/10.1016/j.ijsu.2020.04.018

Omar, A. R. C., Ishak, S., & Jusoh, M. A. (2020). The impact of Covid-19 movement control order on SMEs' businesses and survival strategies. *Malaysian Journal of Society and Space*, *16*(2)https://doi.org/10.17576/geo-2020-1602-11

Ørngreen, R., & Levinsen, K. (2017). Workshops as a research methodology. *Electronic Journal of E-Learning*, *15*(1), 70–81.

Ozili, P. K., & Arun, T. (2020). Spillover of COVID-19: Impact on the Global Economy (SSRN Scholarly Paper ID 3562570). Social Science Research Network. https://doi.org/10.2139/ssrn.3562570. Available at SSRN 3562570.

Pan, D., Yang, J., Zhou, G., & Kong, F. (2020). The influence of COVID-19 on agricultural economy and emergency mitigation measures in China: A text mining analysis. *PloS One*, *15*(10), e0241167. https://doi.org/10.1371/journal.pone.0241167

Paul, S. K., & Chowdhury, P. (2021). A production recovery plan in manufacturing supply chains for a high-demand item during COVID-19. *International Journal of Physical Distribution & Logistics Management*, *51*(2), 104–125. https://doi.org/10.1108/IJPDLM-04-2020-0127

Ratnasingam, J., Khoo, A., Jegathesan, N., Wei, L. C., Abd Latib, H., Thanasegaran, G., Liat, L. C., Yi, L. Y., Othman, K., & Amir, M. A. (2020). How are small and medium enterprises in Malaysia's furniture industry coping with COVID-19 pandemic? Early evidences from a survey and recommendations for policymakers. *BioResources*, *15*(3), 5951–5964.

Rizvi, S. K. A., Mirza, N., Naqvi, B., & Rahat, B. (2020). Covid-19 and asset management in EU: A preliminary assessment of performance and investment styles. *Journal of Asset Management*, *21*(4), 281–291. https://doi.org/10.1057/s41260-020-00172-3

Robinson, J., & Kengatharan, N. (2020). Exploring the effect of Covid-19 on small and medium enterprises: Early evidence from Sri Lanka. *Journal of Applied Economics & Business Research*, *10*(2)

Sharif, A., Afshan, S., & Qureshi, M. A. (2019). Acceptance of learning management system in university students: An integrating framework of modified UTAUT2 and TTF theories. *International Journal of Technology Enhanced Learning*, *11*(2), 201–229. https://doi.org/10.1504/IJTEL.2019.098810

Sharma, R., Shishodia, A., Kamble, S., Gunasekaran, A., & Belhadi, A. (2020). Agriculture supply chain risks and COVID-19: Mitigation strategies and implications for the practitioners. *International Journal of Logistics Research and Applications*, 1–27. https://doi.org/10.1080/13675567.2020.1830049

She, Q., Yu, Y., & Wu, K. (2020). Is "Born Global" a Viable Market Entry Mode for the Internationalization of SMEs? Evidence from China before COVID-19. *Emerging Markets Finance and Trade*, *56*(15), 3599–3612. https://doi.org/10.1080/1540496X.2020.1854720

Shen, H., Fu, M., Pan, H., Yu, Z., & Chen, Y. (2020). The impact of the COVID-19 pandemic on firm performance. *Emerging Markets Finance and Trade*, *56*(10), 2213–2230. https://doi.org/10.1080/1540496X.2020.1785863

Singh, M. (2020, April 15). *Jordan after COVID-19: From crisis adjustment to crisis management*. The Washington Institute.

Su, C.-W., Dai, K., Ullah, S., & Andlib, Z. (2021). COVID-19 pandemic and unemployment dynamics in European economies. *Economic Research-Ekonomska Istraživanja*, 1–13. https://doi.org/10.1080/1331677X.2021.1912627

Su, C.-W., Huang, S.-W., Qin, M., & Umar, M. (2021). Does crude oil price stimulate economic policy uncertainty in BRICS? *Pacific-Basin Finance Journal*, *66*, 101519. https://doi.org/10.1016/j.pacfin.2021.101519

Su, C.-W., Khan, K., Tao, R., & Umar, M. (2020). A review of resource curse burden on inflation in Venezuela. *Energy*, *204*, 117925. https://doi.org/10.1016/j.energy.2020.117925

Su, C.-W., Qin, M., Tao, R., & Umar, M. (2020). Financial implications of fourth industrial revolution: Can bitcoin improve prospects of energy investment? *Technological Forecasting and Social Change*, *158*, 120178. https://doi.org/10.1016/j.techfore.2020.120178

Su, C.-W., Sun, T., Ahmad, S., & Mirza, N. (2021). Does institutional quality and remittances inflow crowd-in private investment to avoid Dutch Disease? A case for emerging seven (E7) economies. *Resources Policy*, *72*, 102111. https://doi.org/10.1016/j.resourpol.2021.102111

Umar, M., Ji, X., Kirikkaleli, D., & Xu, Q. (2020). COP21 Roadmap: Do innovation, financial development, and transportation infrastructure matter for environmental sustainability in China? *J Environ Manage*, *271*, 111026. https://doi.org/10.1016/j.jenvman.2020.111026

Umar, M., Rizvi, S. K. A., & Naqvi, B. (2021). Dance with the devil? The nexus of fourth industrial revolution, technological financial products and volatility spillovers in global financial system. *Technological Forecasting and Social Change*, *163*, 120450. https://doi.org/10.1016/j.techfore.2020.120450

Umar, M., Su, C.-W., Rizvi, S. K. A., & Shao, X.-F. (2021). Bitcoin: A safe haven asset and a winner amid political and economic uncertainties in the US? *Technological Forecasting and Social Change*, *167*, 120680. https://doi.org/10.1016/j.techfore.2021.120680

Usman, O. (2020). *STRUCTURAL EQUATION MODELING: Partial least square*. UNJ PRESS.

Waiho, K., Fazhan, H., Ishak, S. D., Kasan, N. A., Liew, H. J., Norainy, M. H., & Ikhwanuddin, M. (2020). Potential impacts of COVID-19 on the aquaculture sector of

Malaysia and its coping strategies. *Aquaculture Reports*, *18*, 100450. https://doi.org/10.1016/j.aqrep.2020.100450

Wang, Y., Hong, A., Li, X., & Gao, J. (2020). Marketing innovations during a global crisis: A study of China firms' response to COVID-19. *Journal of Business Research*, *116*, 214–220. https://doi.org/10.1016/j.jbusres.2020.05.029

Wong, K. K.-K. (2019). *Mastering partial least squares structural equation modeling (PLS-Sem) with Smartpls in 38 Hours*. IUniverse.

Xiong, H., Wu, Z., Hou, F., & Zhang, J. (2020). Which firm-specific characteristics affect the market reaction of Chinese listed companies to the COVID-19 pandemic? *Emerging Markets Finance and Trade*, *56*(10), 2231–2242. https://doi.org/10.1080/1540496X.2020.1787151

Yarovaya, L., Mirza, N., Abaidi, J., & Hasnaoui, A. (2021). Human capital efficiency and equity funds' performance during the COVID-19 pandemic. *International Review of Economics & Finance*, *71*, 584–591. https://doi.org/10.1016/j.iref.2020.09.017

Zhang, Y., Diao, X., Chen, K. Z., Robinson, S., & Fan, S. (2020). Impact of COVID-19 on China's macroeconomy and agri-food system–an economy-wide multiplier model analysis. *China Agricultural Economic Review*, *12*(3), 387–407. https://doi.org/10.1108/CAER-04-2020-0063

Zhao, B. (2020). COVID-19 pandemic, health risks, and economic consequences: Evidence from China. *China Economic Review*, *64*, 101561. https://doi.org/10.1016/j.chieco.2020.101561