

# AN EXAMINATION OF SME SUSTAINABLE ECONOMIC DEVELOPMENT THROUGH GREEN ENTREPRENEURIAL AND TECHNOLOGICAL ORIENTATION AT POST COVID-19: A PRELIMINARY STUDY

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**Abstract:** *It is known that COVID-19 is considered as a pandemic for its effect on humankind. The effect of the virus is not limited to the health sector but almost every sector of society. A lot of studies have already been done on this pandemic's effect on different sectors. From these studies, we come to know about various damages by this virus. The importance of sustainability is vital for the present condition as well as economic development. This study focuses on sustainable economic development along with information and communication technology for further action in the post-COVID 19 periods. This study went through current and previous studies on pandemic and post-pandemic situations and present a framework based on two major research questions. And a total of five hypotheses were developed from the questions. Questionnaires adapted from previous studies and select Dhaka and Chattogram of Bangladesh for sample collection. First of all a new framework was presented from two major questions supported by literature and Triple Bottom Line theory. Additionally, Reliability and validity tests were done for the questionnaire which produces a positive result. Focusing on the issue, this study recommends the SME sector for the betterment of sustainable economic development in post-COVID 19 situations for its various responsibilities and capabilities.*

**Keywords:** *COVID-19, Green Entrepreneurial Orientation, Small and Medium Enterprise (SME), Technological Orientation, Information and Communication Technology*

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## Introduction

This is not the first time that the world has experiencing challenging circumstances but from throughout history. Furthermore, every time these challenging situations reshaped the social-economic environment. Sometimes we face a natural disaster, war and several diseases. Most importantly, there were more than ten pandemics in history; those lead to the number of death of 1 million or above that (LePan, 2020). However, with the high need, innovations and advances in sciences (including medicine and public health), economic, and political systems have been developed and applied much faster than previous (Scheidel, 2017). Currently, we are facing COVID – 19, which is already affected almost every corner of the world. From the end of December 2019, COVID – 19 was first recognized in person in Wuhan, which is the capital city of Hubei in China (Abiad et al., 2020). It is already known that the disease infected human being very fast, so it spread among the community within a short time (Toda, 2020).

Moreover, the disease is difficult to identify for its late symptoms visibility which enhances the speed of silent infection from one another (He et al., 2020). As it has no treatment and immunization yet, the epidemiologists, public health specialists, policymakers and governments are going up against exceptional control measures, strategy challenges, rules, to handle the quick spread of the Covid-19 pandemic (Gopinath, 2020). To maintain a strategic distance from an enormous number of fatalities and positive cases; the authorities have reported strict measures, for example, isolates, travel limitations, shutting diners and superfluous organizations, requesting social separating, lockdown, and many more (Toda, 2020).

It has been observed that both the private and the public segments are wrecked because of this virus. The truth of the matter is unavoidable that the impact of novel coronavirus will significantly affect the nation, economy, and society. The expanding danger of COVID - 19 is a public health emergency and hampers the large-scale economy in general. It has additionally removed the flexibility of the regular business. Except for very few sectors, all the business and general activities hampered that leads to a massive challenge for every nation (Abiad et al., 2020). Ali et al. (2020) stated that besides life risk there are many other sectors as education, employment, business, childcare, transport and economy may face the unpredictable situation. Moreover, Gopinath (2020) and Polizzi et al. (2020) said the same thing. Studies found a strong relationship between the growth of infection diseases like COVID – 19 and global economic recession and poverty regardless of race, ethnicity, religion, developed or developing nations(Mamun & Ullah, 2020).

However, although the effects of the recession are severe, the evidence points to the fact that entrepreneurs have a quick recovery capacity (Morgan et al., 2020). In addition, the idea that periods of imbalance create opportunities for entrepreneurs is not new (Liguori & Winkler, 2020); however, for this to occur, it is necessary to seek a minimum of preparation, such as the domain of technology, to keep business, partnerships and cooperation activities. Focusing on this issue, this study going to suggest that entrepreneurs, small business owners, and public policy agents need to prepare to overcome the imminent crisis. It has been observed; there are many restrictions between countries, and in some cases, the border is closed between states/provinces/districts. So that almost everything effected by this restriction/lockdown. Side many other benefits; previous studies proved that SME and entrepreneurship contribute to the betterment of local economic development (Peris et al., 2020).

Moreover, sustainability is the top focus area in the business world now. And sustainability in the SME sector is more important for the SME's participation in all over the world. Additionally, Peris et al. (2020) highlighted the SMEs' environmental performance by green entrepreneurial orientation. Side of that, this study also includes the technological orientation in the proposed framework which was found as a major gap in previous studies.

## Literature Review

Related literature review presented at the following section of this chapter

### Economic Effect of COVID 19

Almost everything is interrelated in our society with one another, such as socially, economically, politically, and environmentally (Barrett et al., 2019). Additionally, not only in our local society but due to globalisation, every country is interdependent with one another (Ozov, 2017). In this pandemic time, interdependency becomes more visual that how COVID 19 started from China and spread all over the world which is considered as a great threat for every country not only for its health issue but other impacts to our daily life. The economic position of China and worldwide large-scale commerce play a vital role in spreading the Covid-19 pandemic (Wong et al., 2020). In fact, the Covid-19 pandemic is severely impacting public health and the environment, among other issues, which also consider as a pitfall of globalisation. Such public health problems emerge from a high degree of complexity such as prolonged quarantines, lockdown, transport bans, shutting eateries and non-essential companies, social distancing order, etc. about the duration, scope, and scale of the Covid-19 pandemic's economic impacts (Milne, 2020).

A recent study estimates that for the first time since 1990 causing global poverty to increase for this economic shutdown by COVID-19 and this may drive almost 420–580 million people into poverty (Sumner et al., 2020). Several governments and international organisations create a fund to recover the economic situation. Previous pandemics warn us that it will abandon a huge psychological effect undeniably exacerbated by an underlying socio-economic influence, inequalities, and future uncertainty (Taylor, 2019). Hundreds of thousands of people all over the world have no social coverage, no health benefits or sick pay, and also only little savings, the working conditions of which would be made much worse by pandemics (International Labour Organization, 2020b). Covid-19 raises the risk of widespread suffering, whether chronic or acute poverty and malnutrition and a social welfare system particularly for the weak and the neediest in the world (Husain et al., 2020). Additionally, global production and consumption are almost stopped for extreme measures such as partial or full social distancing, lockdown, and isolation depicting highly uncertain large-scale economic downsizing scenarios (Toda, 2020).

According to new estimates by IATA (The International Air Transportation Association), the estimated sales from passenger shortfall for 2020 for the aviation industry is \$113 billion (Androniceanu, 2020). In many countries, the welfare programs announced to support the several groups affected by this pandemic contributed to on average 5% of national budgets (Ceylan et al., 2020). Some predictions made by international organizations, too, are fatal. The ILO (International Labor Organization) reported a 14% job hours loss because of the present pandemic for the second half of 2020 worldwide, by the number it nearly 480 million full-time employees may be affected. For the first quarter, the estimate was 185 million, and by per cent, it is 5.4 (International Labour Organization, 2020a).

In macroeconomics, the price of gold and oil are two indicators which represent the condition of economic activities worldwide. Already the global economy saw the peak point of gold and the lowest price of oil which indicates that the economic activities have been slow down due to the COVID 19; as a result, the oil demand has fallen almost at the bottom level (Corbet et al., 2020). On the other hand, the global foreign exchange medium USD lost its value at a high percentage which helps to reach the gold at the peak point. This condition also indicates that almost every kind of economic function is affected due to the present situation. Furthermore, most people in every corner of the world facing challenges to overcome the situation.

### **Sustainable Economic Development**

Development means the growth of something. However, all growth may not sustain in the long run, or the growth has a negative impact on other sectors. Currently, sustainable development is one of the key issues that most of the nations are considering it within their priority list. Even the United Nations also put an extra effort to make sustainable development in reality. Moreover, the organization set 17 goals to achieve by 2030 for its member countries (Moyer & Hedden, 2020). Discussion on the importance of economic success to human well-being is the focus of extensive study and debate (Dominko & Verbič, 2020). The reason for debate includes variations in measurement and definition, as well as varying explanations of the facts. Humanity faces declining ecological efficiency, and a growing risk of turning the natural environment into a condition where sustaining human society will be challenging or impossible (Steffen et al., 2015). The problem is compounded by continuing population growth (O'Sullivan, 2020). The shift to a sustainable society is definitely a complicated task which requires substantial coordinated partnership across different sectors and disciplines.

As only economic development cannot ensure total development of the living experience of human beings, so Barbier (1987) first introduce sustainable economic development for better development. In that study, scholar mentioned that only economic activity for development may not fulfil the total development of society but also cultural, social, political development needed for that (Barbier, 1987). Accordingly, sustainable economic development is closely associated with raising the standard of living of the poor at the level of the 'grassroots' which can be quantitatively gauged, in terms of real income, health care, food facility, water supply, sanitation and many others (Chandramana, 2019; Orji & Nduji, 2020). The positive effect (of decreased emissions) on environmental safety is widely identified, and people around the world have a strong desire for the action of Climate change (Harrabin, 2020). The European Union, and certain economies, observe this crisis as an opportunity for further motivation to move towards a low-carbon future (Davies & Green, 2020). Nevertheless, many renowned countries are less involved in this move (Harrabin, 2020). By taking necessary measures to tackle climate change may lead to the achieve other sustainable targets but for that, every nation needs to stay focused ultimately meeting common sustainable development goals (Solberg & Akufo-Addo, 2020).

Sustainable development has three subgroups/pilers, which are social, environmental and economical (Younis & Chaudhary, 2017). Theoretically these three also part of the "Triple Bottom Line (TBL)" theory (Schweikert et al., 2018). Both the concept stated that businesses should consider the social and environmental benefits besides the economic benefits. Otherwise, the business may not sustain in the long run by hampering the ecology and society (Ardito et al., 2018). There is enough number of studies that prove that uncontrolled economic growth negatively affected the environment and society (Shi et al., 2020).

After reviewing several past studies, this study identified two situations that may solve by the small and medium enterprises. First of all, economic development at the post-COVID time and second is the sustainable economic development by the SME sector. Moreover, information technology helps the entrepreneurs to gain better knowledge (Almeida & Cunha, 2018). The details discussion presented at below-

### **Economic Development At Post-COVID 19 Situations By SME**

Reiterating the idea that this study presents a perspective of articulating discussions to overcome the crisis, looking at post-COVID-19, another aspect addressed is support for research and development (R&D), especially in the sphere of countercyclical innovation policies, which can promote, in the post-crisis, a stabilizing effect on the economy, helping the survival and growth of small companies (Rowan & Galanakis, 2020). In small firms, the incorporation of innovation in the organizational strategy, including in periods of crisis, contributes to improving the competitive position and financial performance in the post-crisis (Evgenii, 2018). This reinforces the premise that such models must be simplified, with a low cost of implementation, to allow SMEs to anticipate problems. Other surveys, referring to the 2008-2009 crisis, concluded that the chance of survival is higher when small companies develop and manage to sustain competitive advantages. This is something easy to say and complex to do, but it is a start. In addition, marketing innovations contribute to this process, regardless of the generic strategy pursued, the differentiation or the cost advantage. The training for innovation in marketing has been improved since the small companies analyzed were oriented towards competition and cross-functional adjustments (Martinez-Conesa et al., 2017).

After every crisis, a huge change or shift has been observed in business and social life. Even this pandemic also a reason for the change in several issues (Parker, 2017). Such as people are doing jobs from home, which shut down the demand for office space, on the other hand, it increases the demand for IT facilities to do jobs from home. Even several studies showed that the growth of e-commerce is enough markable than traditional business within this pandemic situation (Bhatti et al., 2020). Although a good number of business sectors are suffering from the current pandemic, still some other sectors have the potential to make the business profitable from the Covid-19 pandemic. For example, personal healthcare, medical services, agriculture sector, and e-commerce (Hadi & Supardi, 2020).

This study emphasises on the SME sector to overcome the post COVID situation for its significant contribution to the world economy. According to the World Bank, SME plays a vital part in emerging economies by ensuring 40% participation in GDP whereas from the world view SMEs is the source of nearly 50% employment as the sector represent almost 90% of business globally (The World Bank, 2020). These data help us to understand the dependency of people on this sector; as well as the contribution to the global economy. However, indeed, most of the SME firms are not capable enough to face and sustain past and current crises due to fewer capabilities (Juergensen et al., 2020). This is because, in crisis, small companies lose the ability not only to grow but to keep going. Lu et al. (2020) suggest that government support for SMEs with access to financial resources can achieve their goals and achieve a significant growth factor of the national economy, as observed in countries that have incorporated these actions into their policies. In this sense, government support for angel investors is crucial, in the form of tax incentives, stimulating not only those who work but increasing the amount invested (Bilau et al., 2017).

### **Sustainable Development At Post COVID 19 Situations By SME**

Sustainability was a phrase and idea used to balance economic growth and development and create responsibility. The modern definition stemmed from the 2005 World Summit on Social Development, which identified three principles of sustainable development (United Nation, 2005). Since then, the three priorities – economic growth, social progress, and conservation of the environment – have acted as the basis for many environmental principles and certifications. All stakeholders accepted the definition in different private and public sector areas (Muñoz-Pascual et al., 2019). The basic and most commonly accepted concept of sustainability is "to satisfy the needs of the present without sacrificing future generations' capacity to fulfill their needs" (Ndubisi et al., 2019). This paper suggests that sustainability be rethought and redefined as the convergence of the economy, climate, culture and human health. Given the outcomes of the latest COVID-19 pandemic, the importance of incorporating public wellbeing as one of the sustainable growth goals can be seen. Le Quéré et al., (2020) mentioned that the carbon emission decreased at a significant level within this pandemic period and it is an opportunity to boost environmental betterment.

Although the SME sector has a lot of contribution to the global economy, however, it was also reported that SMEs that are involved in the manufacturing industry accounts for significant use of the overall resource, power and fuel, as well as waste generation and water emissions (Ndubisi et al., 2019). Thus, small and medium-sized businesses “must make productive use of energy and sustainable development must be in accordance with the environment” to achieving sustainable development (de Sousa Jabbour et al., 2020). Moreover, SMEs can gain a competitive advantage by practicing environmental sustainability as SMEs tend to be entrepreneurial and entrepreneurial behavior (Roxas et al., 2017). Social and environmental results are involved with common activities and practices oriented by corporate social responsibility programs or the implementation of environmentally sustainable activities (Yusof et al., 2020). With regards to corporate social responsibilities, businesses not only have are economic and legal responsibilities but also ethical and moral responsibilities (Hassan et al., 2020). Environmental outcome draws on minimizing resource consumption and elimination of solid and water waste, all kinds of pollution and environmental accident (Dragomir, 2020). Multiple studies indicate that the business should approach sustainability by working in a more sustainable way to reduce ecological deterioration (Peris et al., 2020) and by improving the environmental performance of the company (Chuang & Huang, 2018) to improve the global and local community.

Many research stated that not just for environmental and social reasons, growth and movement to sustainability. In fact, it benefits the company as well as reduced risk and manufacturing costs, improved market recognition, enhanced competition, enhances alliances and improved talent attraction (Gallardo-Vázquez et al., 2019).

### **Green Entrepreneurial Orientation, Technological Orientation And Business Performance Of SME**

Entrepreneurial orientation (EO) found as a top research area in past studies. And currently, some researchers are extended the EO to green entrepreneurial orientation (GEO) (e.g. Guo et al., 2020; Jiang et al., 2018; Peris et al., 2020). They presented the GEO as a combination of EO and green practice. As this study focuses on a sustainable solution by SME and entrepreneur is the key person of a SME so this GEO is very much connected to the proposed framework.

On the other hand, the role of Information and Communication Technology gets a new height during this pandemic period. Specifically, due to lockdown and other restrictions, people are not allowed to go outside and continue their activities, job or business as the previous time. So most of the organizations develop several new strategies so that they can run their operation within this time. And “Work from Home” was adopted by many organizations during this pandemic period. And in doing so, the use, demand and development of technology have increased more than ever before. Technological Orientation is defined as a company's capacity and willingness to gain significant information technology (IT) knowledge and apply it to the development of new goods (Yohandy et al., 2018). So an organization which is technological oriented that will focus on information and communication technology to get competitive advantage. That means along with GEO, technological orientation in other word, information and communication technology can contribute to the economic development of business performance both financially and environmentally.

The total performance of a firm is known as business performance, and it is separated into two primary sectors: financial performance and non-financial performance (Kim & Pennington-Gray, 2017). Financial performance has even been utilized as a component of corporate performance in previous research (Núñez-Pomar et al., 2016). There are various forms of non-financial performance that differ per organization, but this non-financial performance is essential to businesses since it gives them a competitive edge and helps them achieve better long-term financial success (Omran et al., 2019). Apart from other non-financial performance, the environmental performance has been investigated in numerous research projects by taking non-financial performance into account in order to better understand the impact on the overall business success (Baboukardos, 2018). So to understand the total business performance this framework include perceived financial performance, and environmental performance.

### **Triple Bottom Line Theory**

The triple bottom line (TBL) has been referred to as the 3Ps by several people namely People, Planet, and Profit. This theory considers all the 3Ps important equally for a sustainable business performance where some other theories only focus on financial performance. As this paper offers a conceptual framework for the post-Covid-19 situation where people are facing a lot of challenges. When a company adopts the environmental policies, it will react to the needs of its many partners (e.g. clients, staff, and suppliers) and deal specifically with challenges within its field (Ayuso & Navarrete-Báez, 2018). However, some study together from the TBL point of view has dissecting sustainable development and innovation (Muñoz-Pascual et al., 2019). The innovation and development of organizations often concentrate on one goal of improving, whereas the approach used by TBL records for the development of finance, society and the environment leads to complete sustainable development and innovation, therefore benefiting society. The three main objectives of sustainable development (financial growth, social integration and environmental safety, which form the three foundations of the this approach) have been clearly planned in the World Summit on Social Development. (Ardito et al., 2018).

It is quite common for any company to maximize earnings. Even small and medium-sized enterprises are no different. In both developed and developing economies, the SME sector comprises the greatest number of organizations. Each firm directly or indirectly affects the environment (Ogega, 2017). Days are moving forward, therefore marketers and customers are more mindful of the environment than ever before. The only objective of modern business is thus not to make profits now (Wilson & Wilson, 2017), but the firms also has responsibility

for the environment (Chuang & Huang, 2018). Many small and medium-sized enterprises are able to resolve various obstacles and challenges, so SMEs may contribute and address environmental problems, as well as profit.

## Methods

In this section, we go through the study framework and elicitation questions, as well as the questionnaire construction, sample and data collection, variables, and reliability and validity testing.

### Research Structure, Questions and Hypothesis

Previous green entrepreneurial orientation research has mostly focused on building frameworks to identify the major elements that influence an entrepreneur's choice to invest in the green service industry (Nikolaou et al., 2018). While these high-quality academic solutions have offered many incentives, it is necessary and beneficial to fix certain prior methodological gaps to help academics detect the most significant incentives that motivate entrepreneurs to invest in green business.

Two study topics were explored in order to determine the motives and environmental activities of established profit-seeking businesses in the green service industry. The construction of the first one is as follows:

One approach to assess the impact of an organization's sustainability activity, such as GEO, is to measure its influence on performance, among many others. A company's non-financial performance is distinct from its financial performance (Kim & Pennington-Gray, 2017). Environmental performance are also included as components of total company performance in this study. This study also includes the triple bottom line theory for a basic understanding of the idea. The triple bottom line is a philosophy that focuses on three essential aspects of business: economic, and environmental (Gimenez et al., 2018). Schulz and Flanigan (2016) demonstrated how the triple bottom line theory may help a company gain a competitive edge (Schulz & Flanigan, 2016).

RQ1. Does Green Entrepreneurial Orientation (GEO) has influence on Business Performance (BP)?

This question leads to the following hypothesis-

H1. Green Entrepreneurial Orientation (GEO) has significant influence on Business Performance (BP)

Green entrepreneurial businesses are prepared to take green technical risks in the sake of innovation (Guo, Wang, & Xie, 2018). Additionally, green innovation more specifically, information and communication technology development for green business, have been shown in numerous studies to improve a company's financial, and environmental performance (Lopes de Sousa Jabbour et al., 2017; Thongrawd et al., 2019).

RQ 2. Does Technological Orientation has mediating and moderating influence on the relation of Green Entrepreneurial Orientation (GEO) and Business Performance (BP)?

This question leads to the following hypotheses-

- H2a. : Green Entrepreneurial Orientation (GEO) has significant influence on Technological Orientation (TO)
- H2b. : Technological Orientation has significant influence on Business Performance (BP)
- H2c. : Technological Orientation significantly moderates the relation between Green Entrepreneurial Orientation (GEO) and Business Performance (BP)
- H2d. : Technological Orientation significantly mediates the relation between Green Entrepreneurial Orientation (GEO) and Business Performance (BP)

### Questionnaire Development

The instruments used to gauge every one item of Green Entrepreneurial Orientation (GEO), Technological Orientation (TO) and Business Performance (BP). The instruments are applied to measure the GEO, TO and BP used in the previous studies and it also presents with some changes to have a perfect combination according to the research on GEO, TO and BP. The seven-point Likert Scale is applied for this study, where 1 represent totally disagree and 7 represent totally agree.

**Table 1: Constructs And Items Of Green Entrepreneurial Orientation**

Constructs	Item Developed	Source of measurement
Green Proactiveness	PR1. Identify an opportunity that is eco-friendly	(Ahmad et al., 2019; Kropp et al., 2006; Lindsay & Kropp, 2015)
	PR2. Put together a team of the “right” people who are aware about environment issues	
	PR3. Identify market trends for green products and service	
	PR4. Try to manage your own business more eco-friendly way	
Green Risk-taking	RT1. Obtain financing for a new green business	(Ahmad et al., 2019; Kropp et al., 2006; Lindsay & Kropp, 2015)
	RT2. Start a business without adequate green resources	
	RT3. Achieve high growth in your business through green products and service	
	RT4. Live in uncertainty for green innovation and business	
	RT5. Evaluate downside risk for green practice	
	RT6. Make a large profit when you sell through green products and service	
	RT7. Walk away from a potential green business failure	
Green Innovativeness	IN1. Be an innovative for environmental problem solver	(Ahmad et al., 2019; Kropp et al., 2006; Lindsay & Kropp, 2015)
	IN2. Be creative in using and controlling resources for less environmental damage	
	IN3. Develop creative solutions to current pollution and environmental problems	
	IN4. Develop new eco-friendly products and services	

**Table 2: Constructs And Items Of Technological Orientation**

Constructs	Item Developed	Source of measurement
Technological Orientation	TO1. The policy of this firm has always been to consider the most up to-date production technology available	(Lee et al., 2015; Rungtornsupattana & Jermittiparsert, 2019; Yousaf et al., 2020)
	TO2. We have a long tradition and a reputation in our industry of attempting to be first in trying new methods and equipment	
	TO3. We spend more than most firms in our industry on new product development	
	TO4. We devote additional resources to technological forecasting	

**Table 3: Constructs And Items Of Business Performance**

Constructs	Item Developed	Source of Measurement
Perceived Financial Performance	FP1. Average return on investment over the past three years.	(S. M. Farrington, 2017; S. M. V. E. Farrington, 2009; Silwana, 2015; Supian & Rashid, 2018)
	FP2. Average profit over the past three years.	
	FP3. Profit growth over the past three years.	
	FP4. Average sales (in TK) growth over the past three years.	
Environmental Performance	EP1. Our firm reduced wastes and emissions from operations	(Jiang et al., 2018; Paillé et al., 2014; Zhu et al., 2008)
	EP2. Our firm reduced the environmental impacts of its products/service.	
	EP3. Our firm reduced environmental impact by establishing partnerships.	
	EP4. Our firm reduced the risk of environmental accidents, spills, and releases.	
	EP5. Our firm reduced purchases of non-renewable materials, chemicals, and components.	

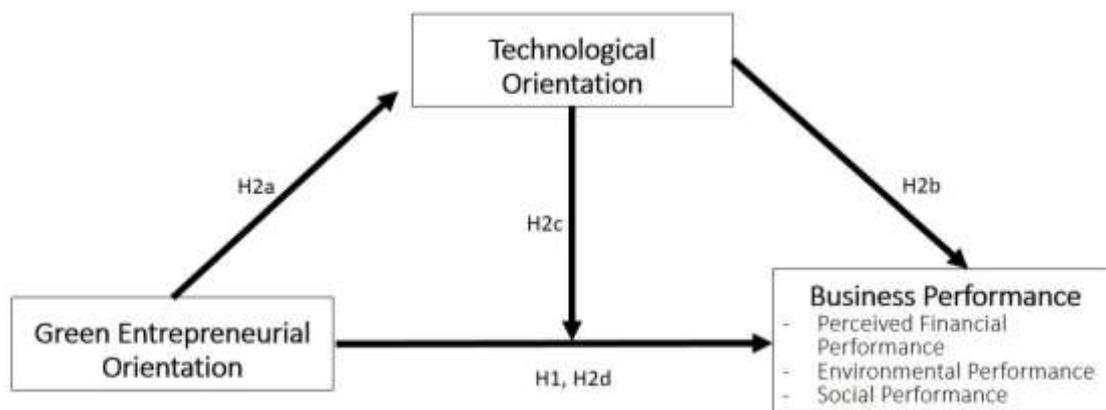
### Sample and Data Collection

Bangladesh has more than 6 million SMEs, and the number is steadily increasing (Rahman & Majumder, 2020). The population is large enough for a single study because SME accounts for more than 90% of all businesses (Rahman & Habib, 2019). Previous studies on Bangladesh have stated that they chose Dhaka and Chattogram to collect the sample to represent the country since these are the most important commercial areas in Bangladesh and represent a big number of SMEs (Hoque et al., 2019)). Dhaka and Chattogram are two of Bangladesh's largest cities, with Dhaka serving as the capital and Chattogram serving as the commercial capital due to its port and business operations. From the 3rd to the 5th of February, 2021, 60 people from Dhaka and Chattogram, Bangladesh, took part in this pilot study. The number of participants for the pilot study relies upon the scholar's perception (Zikmund et al., 2017). This method ensured that the survey was tailored to the needs of Bangladeshi SMEs operating in distribution,

wholesale, and retail. This research motivated us to focus on the distribution channel since prior research has shown that market orientation is a powerful tool for growing a distribution network and improving overall business performance (e.g. (Kamboj & Rahman, 2017; Moore & Fairhurst, 2003)). As a result, green market orientation practices may have a major impact on the distribution channel and overall business. This study uses the cluster sampling approach, which has been used in numerous prior SME studies in Bangladesh for superior results (e.g. (Hoque et al., 2019; Rahman & Mendy, 2019)). Senior managers are regarded the organization's agent, the participants are the owners or managers of these firms (Aktar, 2018; Lin et al., 2019).

## Results

Depending on the literatures in section two and inter-relations with the support of triple bottom line theory the following framework suggested by this study to have sustainable performance by SME at post Covid-19 situation.



**Figure 1: Conceptual Framework**

Despite the importance of SMEs to the Bangladesh economy, they face challenges that stifle their growth possibilities, particularly during and after the COVID-19 pandemic. Every enterprise hopes to maintain sustained growth over time, whether during smooth or turbulent times, but how some business owners or managers pursue these growth prospects will reveal whether the enterprise will collapse or grow during times such as a natural disaster. Furthermore, because the COVID-19 pandemic was unexpected, most business owners and managers were unable and continue to be unable to devise strategies that would ensure the long-term viability of their organizations during and after these trying times.

The above sections highlighted the information on the Covid-19 pandemic and its different consequences with the current situation and economic effect. And this paper presents a conceptual framework to explore sustainable development by the SME sector. Existing literature has been limited in examining the interactive substances that influence the relationship between GEO, TO and BP; thus, in order to bridge the gap in the literature and contribute to academic knowledge on the relationship between GEO and BP, this paper also conceptualized the technological orientation as mediating and moderating variable between green entrepreneurial orientation and business performance as illustrated in Fig. 1.

The beneficial effects of GEO on BP have received a lot of attention, and indications of it have been recommended by many previous researchers (insert citation). There is still a lack of methodical and obvious interpretation about the moderating effects in this relationship, such as which variables can mediate or moderate GEO and BP. Covin and Slevin (1991) proposed a conceptual model concerning GEO and BP, incorporating mediating or moderating effects, which has been widely applied, not only to constitute the theoretical foundation of GEO and performance but also hypotheses formulation as explained in the previous section (Covin & Slevin, 1991).

### Reliability and validity tests

The dependability of a measure or instrument is defined as its consistency, which ensures that the items' reactions are consistent across constructs (Caldas, 2003). Validity, on the other hand, refers to how well a test anticipates what it should measure, as well as how well a test achieves its intended result (Henseler, 2017). The Cronbach's alpha indicates consistency. All in all, the base accepted level is 0.7 (Sekaran & Bougie, 1993). The result present in bellow table 4

**Table 4: Result Of Cronbach's Alpha**

Variables	Constructs	Source of measurement
Green Entrepreneurial Orientation	i) Proactiveness	0.90
	ii) Risk taking	0.85
	iii) Innovativeness	0.89
Technological Orientattion		0.73
Business Performance	i) Perceived Financial Performance	0.78
	ii) Environmental Performance	0.71

### Discussion

This study presents the situation of the overall impact of COVID 19 and its impact. And as a researcher, we need to work to find a solution to overcome the impact of this pandemic. However, this is not the first pandemic of human history but from past history, we come to know and analyze those situations. Additionally, this study also focuses on a sustainable solution to overcome the post-COVID 19 situation. And for that, Literature Review and theoretical conceptualization is presented in section two. Economic development at post-COVID 19 situations by SME, sustainable economic development at post-COVID 19 situations by SME, the relation between green entrepreneurial orientation, technological orientation (Information and communication technology), and Business performance of SME discussed in details for the better understanding of the solution by this paper. Moreover, the literature and discussion are also supported by the triple bottom line theory theoretically. And at the method section Research structure, questions and hypothesis development, questionnaire development, sample and data collection explained with details. This section will help the future researchers to understand the structure and development of the questionnaires which are some essential parts of empirical study.

At the end, the conceptual framework of this study is presented in the Result section along with the reliability and validity test information. So these information and literature showed that the solution and framework suggested by this study can be used for further research. On the other hand, different control variables may include having a better understanding of this area. As still there are few studies on COVID 19 and sustainable business for post-COVID 19 situations so this study will help the decision-makers, researchers, and interested people to have a better knowledge of this sector. The study emphasizes that enhancing SMEs' entrepreneurial mindsets will enable them to achieve business progress while also protecting the grassroots sector of society. The findings assist entrepreneurs and managers in launching new ventures in emerging economies by identifying the dimensions that are most likely to benefit firm performance and those that may be detrimental.

### Conclusion

Small and medium enterprises (SME) already proved their importance in the global economy. Not only its financial issue but also the sector contributes through several ways to society as the sector combined the most business entity all almost every country. Hence, the responsibility of the sector is higher than others. A good number of populations depend on this sector so financially, and environmentally SMEs can play a vital role in the overall betterment. The current pandemic did huge damage to most of the sectors of our society. However, economic overcome is necessary for everyone, but we should not forget the ecological issues related to economic growth. World leaders should focus more on overall sustainability as this pandemic period open an opportunity for all to operate the economic activities in a better sustainable way. So this paper offers a framework that may bring a solution for many issues that created the pandemic situation.

### References

- Abiad, A., Arao, R. M., & Dagli, S. (2020). *The economic impact of the COVID-19 outbreak on developing Asia*.
- Ahmad, A., Supian, K., Farina, I., Yunus, M., Tanius, E., Ishak, B., & Yunus, M. (2019). Entrepreneurial Orientation and Hospitality Performance : the Mediating Effect of Market Orientation. *J. Acad. Corp. Stud.*, 7(1), 61–71.
- Aktar, A. (2018). *Soft HRM practices, organizational commitment, work-related support and employee engagement in Bangladesh banking sector*. Universiti Utara Malaysia.
- Ali, M. J., Bhuiyan, D. A. B., Zulkifli, N., & Hassan, M. K. (2020). *The Covid-19 Pandemic: Conceptual Model for the Global Economic Impacts and Recovery*. <https://doi.org/https://dx.doi.org/10.2139/ssrn.3656243>
- Almeida, F., & Cunha, E. (2018). Open Source Web Platform for the Analysis of Academic Spin-offs. *Journal of Information Systems Engineering and Business Intelligence*, 4(2), 73–83.
- Androniceanu, A. (2020). Major structural changes in the EU policies due to the problems and risks caused by COVID-19. *Administratie Si Management Public*, 34, 137–149.
- Ardito, L., Carrillo-Hermosilla, J., del Río, P., & Pontrandolfo, P. (2018). Corporate social responsibility and environmental management invites contributions for a special issue on 'sustainable innovation: Processes, strategies, and outcomes.' *Corporate Social Responsibility and Environmental Management*, 25(1), 106–109. <https://doi.org/10.1002/csr.1487>
- Ayuso, S., & Navarrete-Báez, F. E. (2018). How Does Entrepreneurial and International Orientation Influence SMEs' Commitment to Sustainable Development? Empirical

- Evidence from Spain and Mexico. *Corporate Social Responsibility and Environmental Management*, 25(1), 80–94. <https://doi.org/10.1002/csr.1441>
- Baboukardos, D. (2018). The valuation relevance of environmental performance revisited: The moderating role of environmental provisions. *British Accounting Review*, 50(1), 32–47. <https://doi.org/10.1016/j.bar.2017.09.002>
- Barbier, E. B. (1987). The concept of sustainable economic development. *Environmental Conservation*, 14(2), 101–110.
- Barrett, P., Kurian, P., Simmonds, N., & Cretney, R. (2019). Community participation in the development of the Ōngātoto/Maketū Estuary project: The socio-ecological dimensions of restoring an interconnected ecosystem. *Aquatic Conservation: Marine and Freshwater Ecosystems*, 29(9), 1547–1560.
- Bhatti, A., Akram, H., Basit, H. M., Khan, A. U., Raza, S. M., & Naqvi, M. B. (2020). E-commerce trends during COVID-19 Pandemic. *International Journal of Future Generation Communication and Networking*, 13(2), 1449–1452.
- Bilau, J., Mason, C., Botelho, T., & Sarkar, S. (2017). Angel investing in an austerity economy—the take-up of government policies in Portugal. *European Planning Studies*, 25(9), 1516–1537.
- Caldas, M. P. (2003). Research design: qualitative, quantitative, and mixed methods approaches. In *Revista de Administração Contemporânea* (Vol. 7, Issue 1). Sage publications. <https://doi.org/10.1590/s1415-65552003000100015>
- Ceylan, R. F., Ozkan, B., & Mulazimogullari, E. (2020). Historical evidence for economic effects of COVID-19. *The European Journal of Health Economics*, 1.
- Chandramana, S. B. (2019). Sustainable Rural Development through empowerment at the Base of Pyramid. *Journal of the Gujarat Research Society*, 21(8), 193–201.
- Chuang, S. P., & Huang, S. J. (2018). The Effect of Environmental Corporate Social Responsibility on Environmental Performance and Business Competitiveness: The Mediation of Green Information Technology Capital. *Journal of Business Ethics*, 150(4), 991–1009. <https://doi.org/10.1007/s10551-016-3167-x>
- Corbet, S., Larkin, C., & Lucey, B. (2020). The contagion effects of the covid-19 pandemic: Evidence from gold and cryptocurrencies. *Finance Research Letters*, 101554.
- Covin, J. G., & Slevin, D. P. (1991). A conceptual model of entrepreneurship as firm behavior. *Entrepreneurship Theory and Practice*, 16(1), 7–26.
- Davies, P., & Green, M. (2020). *The EU Recovery Fund: “Building Back Better” in a Post-COVID-19 World | Environment, Land & Resources*. Globalelr.Com. <https://www.globalelr.com/2020/05/the-eu-recovery-fund-building-back-better-in-a-post-covid-19-world/>
- de Sousa Jabbour, A. B. L., Ndubisi, N. O., & Seles, B. M. R. P. (2020). Sustainable development in Asian manufacturing SMEs: Progress and directions. *International Journal of Production Economics*, 225, 107567.
- Dominko, M., & Verbič, M. (2020). The Effect of Income and Wealth on Subjective Well-Being in the Context of Different Welfare State Regimes. *Journal of Happiness Studies*, 1–26.
- Dragomir, V. D. (2020). Practical Aspects of Environmental Strategy. In *Corporate Environmental Strategy* (pp. 33–73). Springer.
- Evgenii, K. (2018). *Strategic Behavior of Russian SMEs During Economic Crisis*.
- Farrington, S. M. (2017). Psychological well-being and perceived financial performance: An SME perspective. *South African Journal of Business Management*, 48(4), 47–56.
- Farrington, S. M. V. E. (2009). *Sibling partnerships in South African small and medium-sized*

*family businesses.*

- Gallardo-Vázquez, D., Valdez-Juárez, L. E., & Castuera-Díaz, Á. M. (2019). Corporate social responsibility as an antecedent of innovation, reputation, performance, and competitive success: A multiple mediation analysis. *Sustainability*, *11*(20), 5614.
- Gimenez, C., Sierra, V., Sancha, C., Rodón, J., & Markovic, S. (2018). The impact of environmental and social practices on the triple bottom line: A mediated model. In *Measuring and Controlling Sustainability* (pp. 141–165). Routledge.
- Gopinath, G. (2020). The great lockdown: Worst economic downturn since the Great Depression. *IMFBlog–Insights & Analysis on Economics & Finance*.
- Guo, Y., Wang, L. F., & Chen, Y. (2020). Green Entrepreneurial Orientation and Green Innovation: The Mediating Effect of Supply Chain Learning. *SAGE Open*, *10*(1), 2158244019898798. <https://doi.org/10.1177/2158244019898798>
- Hadi, S., & Supardi, S. (2020). *Revitalization Strategy for Small and Medium Enterprises after Corona Virus Disease Pandemic (Covid-19) in Yogyakarta*.
- Harrabin, R. (2020). *Climate Change: Could the coronavirus crisis spur a green recovery*.
- Hassan, N. S., Lee, K. E., Mokhtar, M., & Goh, C. T. (2020). Correlating Corporate Social Responsibilities of Chemical Industries in Malaysia Toward Sustainable Development. In *Concepts and Approaches for Sustainability Management* (pp. 41–54). Springer.
- He, G., Sun, W., Fang, P., Huang, J., Gamber, M., Cai, J., & Wu, J. (2020). The clinical feature of silent infections of novel coronavirus infection (COVID-19) in Wenzhou. *Journal of Medical Virology*.
- Henseler, J. (2017). Partial least squares path modeling. In *Advanced methods for modeling markets* (pp. 361–381). Springer.
- Hoque, A. S. M. M. (2018). Does Government Support Policy Moderate the Relationship Between Entrepreneurial Orientation and Bangladeshi SME Performance? A SEM Approach. *International Journal of Business Economics and Management Studies*, *6*(3), 37–59.
- Hoque, A. S. M. M., Awang, Z., & Gwadabe, U. M. (2019). The Effect of Entrepreneurial Marketing on Bangladeshi SME performance and the Role of Organizational Culture: A Structural Equation Modelling. *Journal of Management and Operation Research*, *1*, 1–21. <https://pdfs.semanticscholar.org/764b/333de4cf3a0ff75e999ec3f38f5d79f8bb19.pdf>
- Husain, A., Sandström, S., Greb, F., Groder, J., & Pallanch, C. (2020). COVID-19: Potential impact on the world’s poorest people. *Rome, Italy: A WFP Analysis of the Economic and Food Security Implications of the Pandemic*.
- International Labour Organization. (2020a). *ILO Monitor: COVID-19 and the world of work. Fifth edition Updated estimates and analysis*. [https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/documents/briefingnote/wcms\\_749399.pdf](https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/documents/briefingnote/wcms_749399.pdf)
- International Labour Organization. (2020b). *Most of World Lacks Unemployment Insurance*. [https://www.ilo.org/global/about-the-ilo/newsroom/news/WCMS\\_007901/lang--en/index.htm](https://www.ilo.org/global/about-the-ilo/newsroom/news/WCMS_007901/lang--en/index.htm)
- Islam, M. R., & Hossain, S. Z. (2018). SME Customers’ Perception on Banking on Shared Value in Bangladesh. *International Journal of Economics, Management and Accounting*, *26*(1), 109–133.
- Jiang, W., Chai, H., Shao, J., & Feng, T. (2018). Green entrepreneurial orientation for enhancing firm performance: A dynamic capability perspective. *Journal of Cleaner Production*, *198*, 1311–1323. <https://doi.org/10.1016/j.jclepro.2018.07.104>
- Juergensen, J., Guimón, J., & Narula, R. (2020). European SMEs amidst the COVID-19 crisis:

- assessing impact and policy responses. *Journal of Industrial and Business Economics*, 1–12.
- Kamboj, S., & Rahman, Z. (2017). Market orientation, marketing capabilities and sustainable innovation: The mediating role of sustainable consumption and competitive advantage. *Management Research Review*, 40(6), 698–724. <https://doi.org/10.1108/MRR-09-2014-0225>
- Kim, M. S., & Pennington-Gray, L. (2017). Does franchisor ethical value really lead to improvements in financial and non-financial performance? *International Journal of Contemporary Hospitality Management*, 29(10), 2573–2591. <https://doi.org/10.1108/IJCHM-04-2016-0188>
- Kropp, F., Lindsay, N. J., & Shoham, A. (2006). Entrepreneurial, market, and learning orientations and international entrepreneurial business venture performance in South African firms. *International Marketing Review*, 23(5), 504–523.
- Lee, D. H., Dedahanov, A. T., & Rhee, J. (2015). Moderating role of external networks and mediating effect of innovation performance on the relationship between technology orientation and firm performance. *Asian Journal of Technology Innovation*, 23(3), 321–334.
- LePan, N. (2020). Visualizing the history of pandemics. *Visualizing the History of Pandemics*.
- Liguori, E., & Winkler, C. (2020). *From Offline to Online: Challenges and Opportunities for Entrepreneurship Education Following the COVID-19 Pandemic*. SAGE Publications Sage CA: Los Angeles, CA.
- Lin, Y., Shi, W., Prescott, J. E., & Yang, H. (2019). In the Eye of the Beholder: Top Managers' Long-Term Orientation, Industry Context, and Decision-Making Processes. *Journal of Management*, 45(8), 3114–3145.
- Lindsay, N. J., & Kropp, F. (2015). Values and Entrepreneurial Orientation of Early Stage Entrepreneurs. In *Marketing in Transition: Scarcity, Globalism, & Sustainability* (pp. 101–105). Springer.
- Lopes de Sousa Jabbour, A. B., Vazquez-Brust, D., Jose Chiappetta Jabbour, C., & Latan, H. (2017). Green supply chain practices and environmental performance in Brazil: Survey, case studies, and implications for B2B. *Industrial Marketing Management*, 66, 13–28. <https://doi.org/10.1016/j.indmarman.2017.05.003>
- 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*, 1–18.
- Mamun, M. A., & Ullah, I. (2020). COVID-19 suicides in Pakistan, dying off not COVID-19 fear but poverty?—The forthcoming economic challenges for a developing country. *Brain, Behavior, and Immunity*.
- Martinez-Conesa, I., Soto-Acosta, P., & Palacios-Manzano, M. (2017). Corporate social responsibility and its effect on innovation and firm performance: An empirical research in SMEs. *Journal of Cleaner Production*, 142, 2374–2383.
- Milne, A. (2020). A Critical COVID-19 Economic Policy Tool: Retrospective Insurance. Available at SSRN 3558667.
- Moore, M., & Fairhurst, A. (2003). Marketing capabilities and firm performance in fashion retailing. *Journal of Fashion Marketing and Management*, 7(4), 386–397. <https://doi.org/10.1108/13612020310496976>
- Morgan, T., Anokhin, S., Ofstein, L., & Friske, W. (2020). SME response to major exogenous shocks: The bright and dark sides of business model pivoting. *International Small Business Journal: Researching Entrepreneurship*.

- Moyer, J. D., & Hedden, S. (2020). Are we on the right path to achieve the sustainable development goals? *World Development*, 127, 104749.
- Muñoz-Pascual, L., Curado, C., & Galende, J. (2019). The triple bottom line on sustainable product innovation performance in SMEs: A mixed methods approach. *Sustainability (Switzerland)*, 11(6), 1689. <https://doi.org/10.3390/su11061689>
- Ndubisi, N. O., Zhai, X., & Lai, K. H. (2019). Small and medium manufacturing enterprises and Asia's sustainable economic development. *Int. J. Prod. Econ.*
- Nikolaou, I. E., Tsagarakis, K. P., & Tasopoulou, K. (2018). An examination of ecopreneurs' incentives through a combination between institutional and resource-based approach: a preliminary study. *Management of Environmental Quality: An International Journal*.
- Núñez-Pomar, J., Prado-Gascó, V., Sanz, V. A., Hervás, J. C., & Moreno, F. C. (2016). Does size matter? Entrepreneurial orientation and performance in Spanish sports firms. *Journal of Business Research*, 69(11), 5336–5341.
- O'Sullivan, J. N. (2020). The social and environmental influences of population growth rate and demographic pressure deserve greater attention in ecological economics. *Ecological Economics*, 172, 106648.
- Ogega, O. M. (2017). Globalization and Global Warming: A Case of Laikipia County, Kenya. *Journal of Energy and Natural Resource Management*.
- Omran, M., Khallaf, A., Gleason, K., & Tahat, Y. (2019). Non-financial performance measures disclosure, quality strategy, and organizational financial performance: a mediating model. *Total Quality Management and Business Excellence*, 1–24. <https://doi.org/10.1080/14783363.2019.1625708>
- Orji, M. G., & Nduji, R. (2020). Business Sustainability and Challenges of Climate Change in Nigerian Indigenous Automobile Companies. A case study of Innoson Motors Ltd, Nnewi, Nigeria. *Konfrontasi: Jurnal Kultural, Ekonomi Dan Perubahan Sosial*, 7(1), 77–90.
- Ozov, A. A. (2017). *INTERDEPENDENCE AND MUTUAL INFLUENCE OF POLICY AND ECONOMY IN THE ERA OF GLOBALIZATION*.
- Paillé, P., Chen, Y., Boiral, O., & Jin, J. (2014). The Impact of Human Resource Management on Environmental Performance: An Employee-Level Study. *Journal of Business Ethics*, 121(3), 451–466. <https://doi.org/10.1007/s10551-013-1732-0>
- Parker, G. (2017). *Global Crisis: War, Climate Change and Catastrophe in the Seventeenth Century-Abridged Ed.* Yale University Press.
- Peris, S. F., Supian, K., Hasanat, M. W., & Hossain, M. N. (2020). A Mediating Effect of Green Market Orientation on the Environmental Performance: From a Literature Review to a Conceptual Framework. *Journal of Management Info*, 7(2), 92–118.
- Polizzi, C., Lynn, S. J., & Perry, A. (2020). STRESS AND COPING IN THE TIME OF COVID-19: PATHWAYS TO RESILIENCE AND RECOVERY. *Clinical Neuropsychiatry*, 17(2).
- Quére, C. Le, Jackson, R. B., Jones, M. W., Smith, A. J. P., Abernethy, S., Andrew, R. M., De-Gol, A. J., Willis, D. R., Shan, Y., & Canadell, J. G. (2020). Temporary reduction in daily global CO<sub>2</sub> emissions during the COVID-19 forced confinement. *Nature Climate Change*, 1–7.
- Rahman, S., & Habib, A. (2019, July 8). Problems SMEs face in Bangladesh. *The Daily Star*. <https://www.thedailystar.net/business/news/problems-smes-face-bangladesh-1768354>
- Rahman, M., & Mendy, J. (2019). Evaluating people-related resilience and non-resilience barriers of SMEs' internationalisation. *International Journal of Organizational Analysis*.
- Rahman, M. H., & Majumder, S. C. (2020). Feasibility of NGO initiatives in SME, rural benefits and challenges: A case study in Cumilla, Bangladesh. *Journal of Economic Info*,

7(1), 26–39

- Rowan, N. J., & Galanakis, C. M. (2020). Unlocking challenges and opportunities presented by COVID-19 pandemic for cross-cutting disruption in agri-food and green deal innovations: Quo Vadis? *Science of The Total Environment*, 141362.
- Roxas, B., Ashill, N., & Chadee, D. (2017). Effects of entrepreneurial and environmental sustainability orientations on firm performance: A study of small businesses in the Philippines. *Journal of Small Business Management*, 55(sup1), 163–178.
- Rungsrisawat, S., & Jermstiparsert, K. (2019). Does human capital improve health care agility through health care supply chain performance? Moderating role of technical orientation. *International Journal of Supply Chain Management*, 8(5), 792–803.
- Scheidel, W. (2017). *The great leveler. Violence and the global history of inequality from the stone age to the present*. Princeton University Press Princeton.
- Schulz, S. A., & Flanigan, R. L. (2016). Developing competitive advantage using the triple bottom line: a conceptual framework. *Journal of Business and Industrial Marketing*, 31(4), 449–458. <https://doi.org/10.1108/JBIM-08-2014-0150>
- Schweikert, A., Espinet, X., & Chinowsky, P. (2018). The triple bottom line: bringing a sustainability framework to prioritize climate change investments for infrastructure planning. *Sustainability Science*, 13(2), 377–391.
- Sekaran, U., & Bougie, R. (1993). Research methods for business: A skill building approach. In *Long Range Planning* (Vol. 26, Issue 2). John Wiley & Sons. [https://doi.org/10.1016/0024-6301\(93\)90168-f](https://doi.org/10.1016/0024-6301(93)90168-f)
- Shi, T., Hu, Y., Liu, M., Li, C., Zhang, C., & Liu, C. (2020). How Do Economic Growth, Urbanization, and Industrialization Affect Fine Particulate Matter Concentrations? An Assessment in Liaoning Province, China. *International Journal of Environmental Research and Public Health*, 17(15), 5441.
- Silwana, H. Z. (2015). *The influence of people-centred leadership styles on owners' job satisfaction and perceived financial performance: an SME perspective*.
- Solberg, E., & Akufo-Addo, nana A. D. (2020). *How is COVID-19 affecting Sustainable Development Goals around the world? | World Economic Forum*. Weforum.Com. <https://www.weforum.org/agenda/2020/04/coronavirus-pandemic-effect-sdg-un-progress/>
- Steffen, W., Richardson, K., Rockström, J., Cornell, S. E., Fetzer, I., Bennett, E. M., Biggs, R., Carpenter, S. R., De Vries, W., & De Wit, C. A. (2015). Planetary boundaries: Guiding human development on a changing planet. *Science*, 347(6223).
- Sumner, A., Hoy, C., & Ortiz-Juarez, E. (2020). Estimates of the Impact of COVID-19 on Global Poverty. *UNU-WIDER, April*, 800–809.
- Supian, K., & Rashid, N. A. (2018). The Role of Supplier, Top Management and Government in Halal Practices Integrity of Malaysian Food Business. *International Journal of Asian Social Science*, 8(8), 549–559. <https://doi.org/10.18488/journal.1.2018.88.549.559>
- Taylor, S. (2019). *The psychology of pandemics: Preparing for the next global outbreak of infectious disease*. Cambridge Scholars Publishing.
- The World Bank. (2020). *World Bank SME Finance*. World Bank. <https://www.worldbank.org/en/topic/smefinance%0Ahttps://www.worldbank.org/en/topic/smefinance%0Ahttps://www.worldbank.org/en/topic/smefinance%0Ahttp://files/26/smefinance.html>
- Thongrawd, C., Pichetsiraprapa, P., Somthong, N., & Sudprasert, K. (2019). The mediating role of operational and environmental performance in the relationship between green supply chain management and financial performance. *International Journal of Supply*

- Chain Management*, 8(4), 258–268.
- Toda, A. A. (2020). Susceptible-infected-recovered (sir) dynamics of covid-19 and economic impact. *ArXiv Preprint ArXiv:2003.11221*.
- United Nation. (2005). *General Assembly : Resolution adopted by the General Assembly on 16 September 2005*.  
[https://www.un.org/en/development/desa/population/migration/generalassembly/docs/globalcompact/A\\_RES\\_60\\_1.pdf](https://www.un.org/en/development/desa/population/migration/generalassembly/docs/globalcompact/A_RES_60_1.pdf)
- Wilson, C., & Wilson, P. (2017). *Make poverty business: increase profits and reduce risks by engaging with the poor*. Routledge.
- Wong, J. E. L., Leo, Y. S., & Tan, C. C. (2020). COVID-19 in Singapore—current experience: critical global issues that require attention and action. *Jama*, 323(13), 1243–1244.
- Yohandy, D. H., Parjanto, P., & Rahayu, F. S. (2018). Redesigning Mobile Human-Resource Management in Small and Medium Enterprises. *Journal of Information Systems Engineering and Business Intelligence*, 4(2), 116–124.
- Younis, F., & Chaudhary, M. A. (2017). *Sustainable Development: Economic, Social, and Environmental Sustainability in Asian Economies*.
- Yousaf, S., Anser, M. K., Tariq, M., Jawad, S. U. R. S., Naushad, S., & Yousaf, Z. (2020). Does technology orientation predict firm performance through firm innovativeness? *World Journal of Entrepreneurship, Management and Sustainable Development*.
- Yusof, N., Tabassi, A. A., & Kamal, E. M. (2020). Do environmental, economic and reputational advantages strengthen green practices' impact on environmental performance? *Corporate Social Responsibility and Environmental Management*.
- Zhu, Q., Sarkis, J., & Lai, K. (2008). Confirmation of a measurement model for green supply chain management practices implementation. *International Journal of Production Economics*, 111(2), 261–273.
- Zikmund, W. G., D'Alessandro, S., Winzar, H., Lowe, B., & Babin, B. (2017). *Marketing Research: Asia-Pacific Edition*. Cengage AU