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# **The Nature of Sustainability Challenge in Small and Medium Enterprises and its Management**

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## **Abstract**

The term sustainability in the context of the business world refers to the ability of a company to survive and succeed in a dynamic, competitive, and challenging business environment. Small and Medium Enterprises (SMEs) must adapt to the changing environment and take appropriate measures to mitigate the change. To strike a balance between the triple bottom line – people, planet, and profit - by SMEs, reducing pollution and resource degradation, in the long run, is necessary. It is, therefore, required to understand the nature of challenges posed by the changing environment to the sustainability of SMEs. According to the existing literature, the challenges to sustainability include the ability to deal with economic and social change, engage in responsible and ethical business practices, efficient use of natural resources and protecting the environment, provide high-quality products and services, and develop metrics to determine if the company is meeting stakeholder needs. With this background, a systematic literature review was carried out to explore the insights of the existing knowledge on the nature of environmental sustainability challenges to small and medium enterprises and its management, particularly in the Asian context. Relevant papers were selected, followed by rigorous and extensive web searching based on the standard filtering approaches, and the sustainability challenges and their dynamic interactions in the context of SMEs are broadly discussed.

**Keywords:** Sustainability challenges, Efficiency, Environmental protection, Socio-economic changes, Ethical business, Stakeholder needs

## **1. Introduction**

A discussion on competitive challenges enters the forefront of the business community due to the revolutionary change in the society, economy, and the environment. This change composes the current three competitive challenges, i.e., globalization, technology, and the environment (Noe, et al. 2013). According to the recent literature on SMEs, factors responsible for triggering the social, economic, and environmental change are globalization (Sener, Savrul and Aydin 2014), national political-economic changes of a country (Soon and Huat 1990), innovation (Santos, et al. 2014), and financial creativity (Schinckus 2015). As highlighted by Auwal et al. (Auwal, et al. 2018), in comparison to larger organizations, SMEs in the modern world is not only complicated but also faces a series of challenges because they are more vulnerable to external economic shocks. Therefore, remaining competitive in the complex and competitive business world while practicing a sustainable enterprise is challenging for SMEs.

Sustainability is the ability of a company to survive and succeed in a dynamic competitive environment. It depends on how well a company meets the needs of those who are interested in seeing the company succeeds. Evidently, the business model should be sustainable; otherwise, the company may be unsustainable even though the company's goal may be environmentally

sustainable [1]. The report of the World Commission on Environment and Development (WCED, 1987) highlighted that sustainable development requires firms to develop long-term economic, social, and environmental principles simultaneously. Therefore, for firms to express sustainable development, they should incorporate the said three principles (economic prosperity, societal wellbeing, and environmental protection) in their products, policies, and practices accordingly (Masocha 2018).

Management of sustainability of institutions involves the development of internal environmental and social measures and external contribution to sustainability in the society and the economy (Johnson and Schaltegger 2015). Accordingly, the institutions require to work out criteria for the sustainability of the self in the changing environmental conditions and contribute to the sustainability of the society and economy in the country. It is essential to understand the challenges posed by the changing environment and demands of the society and the economy for sustainable existence to realize this purpose.

Therefore, to make SMEs ready to face the present and global challenges, it is essential to understand the nature of challenges, issues, and remedial measures to face the challenges. Therefore, it is crucial to explore the insights of the said challenges through the available literature. With this background, this study mainly aims to analyze global research in general, and Asian in particular, on sustainability challenges applicable to SMEs. The aim here is to understand the nature of the challenge relating to its various types, identify less studied areas, issues arisen, and existing and proposed appropriate management measures. The challenges to sustainability include the ability to deal with economic and social change, engage in accountable and ethical business practices, use natural resources effectively and protect the environment, offer high-quality products and services, and develop metrics to determine if the company is meeting stakeholder needs (Noe, et al. 2013).

The general objective of this study is to analyze global literature on sustainability challenges applied to SMEs to understand the nature of the sustainability challenge relating to its various types, identify less studied areas, issues that have arisen, and existing and proposed strategies to successfully face the challenge.

## **2. Materials and Methods**

The following research questions were developed to realize the objective: what are the types of sustainability challenges? What are the less studied types? What are the issues already in place concerning SMEs? What kind of actions taken to manage the problems, and what are the emerging institutional and policy initiatives?

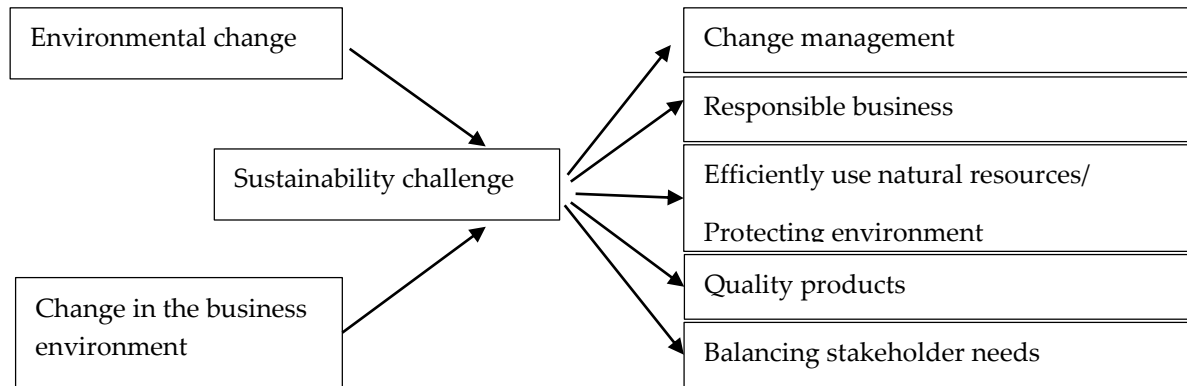
The five types of sustainability challenges found in the literature were primarily selected as the search framework. First, an extensive web search was performed on SME-related topics and found over 1 million hits. Subsequently, the reviewers selected ten terms related to the five key sustainability challenges identified in the literature, such as environmental change, economic change, social change, environmental sustainability, environmental conservation, efficiency, ethical business, quality products, environmental protection and stakeholder needs as inclusion criteria of the papers for this review.

In the second stage, the study limited the selected papers using three criteria – 1) Journal publishing company, 2) impact factor of the journal, and 3) many google citations. Emerald, Elsevier, Taylor & Francis, and MDPI were chosen as the journal publishing companies in selecting the papers. During the second stage, 256 papers were chosen after considering these four criteria. Finally, 140 research articles were selected for this review, based on the relevance

of the papers with the central theme of this review, which was constructed based on the research problem. The published working papers and reports by the World Bank and other multilateral organizations were additionally considered for this review. The thematic content analysis method was applied in data analysis with the five types of sustainability challenges, as mentioned above. This methodology provided sufficient space for covering recent global literature related to SME sustainability.

### 3. Results and Discussion

The recent changes in the natural environment and the global business environment challenge the sustainability of institutions and organizations. The challenges to sustainability include the ability to deal with economic, environmental, and social changes, employ reliable and ethical business practices; protect the environment and use natural resources efficiently; provide high-quality products and services, and develop metrics to determine whether the company fulfills stakeholder needs (Noe, et al. 2013). Figure 1 demonstrates the relationship of challenges to sustainability.



**Figure 1: Five sustainability challenges for SMEs**

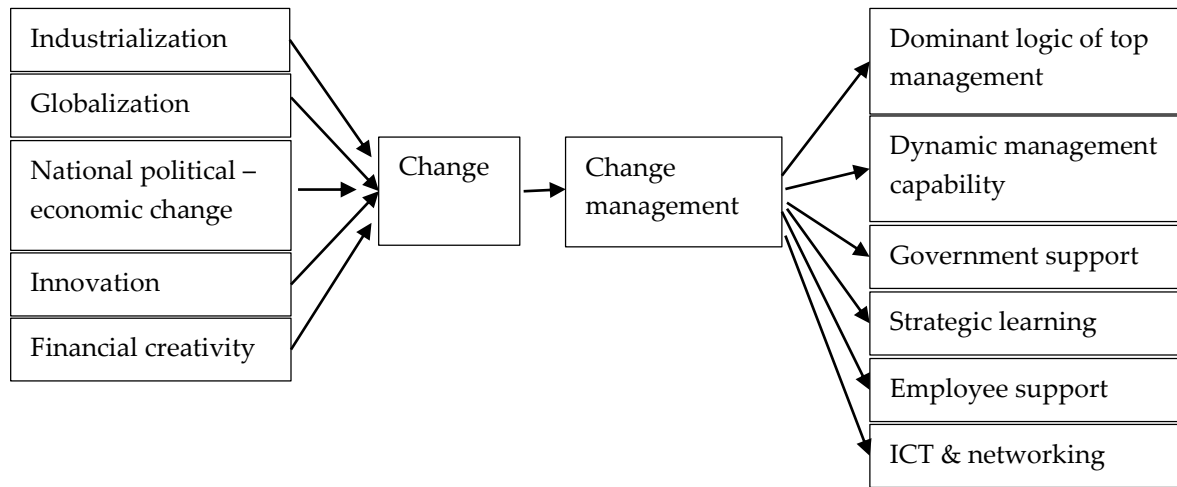
The following sections analyze the five interrelated aspects of the challenges identified for the sustainability of SMEs in detail by taking examples from literature, especially in the Asian context.

#### 3.1. Challenge: The ability to deal with economic, environmental and social changes

Any business today has to deal with complex, competitive, challenging, and unpredictable conditions. According to Charles Darwin's *Origin of Species*, "It is not the strongest of the species that survives, nor the most intelligent; it is the one most adaptable to change." It is essential to make strategies to cope with such challenges by applying this theoretical perspective to the business environment. Since now is a period of rapid change in a globalized society, the inherent flexibility and adaptability of the small business will put it at the forefront of economic transformation and make it a central focus of economic policy.

The change in the business environment resulted from rapid industrialization, globalization of all business affairs, changes in the national political-economic policies, and innovation and financial creativity. Change management as one aggregating strategy, has been suggested to face the challenge. This strategy addresses the issues of the dominant logic of top management,

dynamic management capability, government support, strategic learning, employee support and information, and communication technology and networking (Figure 2).



**Figure 2: SME change management**

Change of the business game rules has dictated new rules without adherence to the survival of companies and economic sectors and entire regions, which has become questionable and needs adaptation strategies (Ahmedova 2015). Higher unemployment will increase the number of people involved with SMEs (Jeppesen 2005), and the profit of SMEs will reduce with macroeconomic change (Kumar and Rao 2016). These new rules create new fields, new needs, and deep changes in the traditional sectors, and therefore, traditional rules will not work as usual (Okwiet and Grabara 2013). Hence, it is essential to design new strategies for companies, sectors of economies, and even national economies.

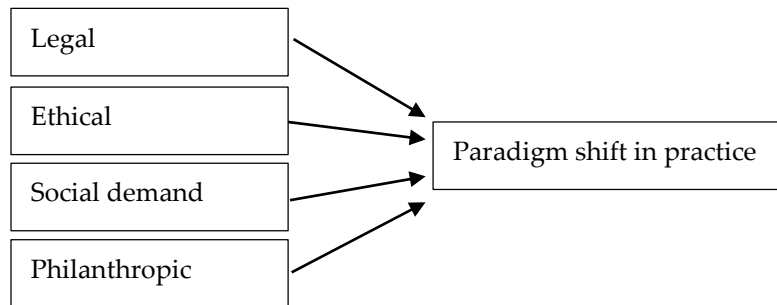
Actions towards facing challenges and changes in the strategies have started already. The present global economy is transforming into a complex business network based on Information Communication Technology (ICT) (Ahmedova 2015). There is also a diversity of strategies adapted by various economies, sectors, and regions. Also, it is stressed the need for adjusting the role of governments towards stability, prudence, investment, and adaptation (Johnston 1983). Khan and co-workers (Khan, et al. 2018) suggest that dynamic managerial capabilities (DMC) can help improving effectiveness, efficiency, and speed of response to environmental change that will ultimately improve performance. Therefore, SMEs require to invest in DMC and the dominant logic of top management (Khan, et al. 2018). Further, it is suggested to strengthen regional training and development in network strategic-learning capabilities, and the regional governments should provide targeted support (McAdam, et al. 2016). Another strategic change is gaining more employee support for eco-efficient practices to improve performance towards environmental sustainability (Aragon-Correa, et al. 2008).

An entrepreneur is not necessarily the source of a change, but rather the one who is more adequately responding to the change. The perception of entrepreneurship with the ability to respond to rapid changes seems to correspond better to the new global economy, in which changes stem the external environment primarily, and in which the access to the necessary information about products, markets, and technologies.

National economic policies also play an essential role in the success of SMEs. According to Johnston (Johnston 1983), if the national economic policy environment is favorable, consumers will spend, and small business will be healthy. If a small policy is supportive, the sector will make a significant contribution to new jobs, new technologies, new exports, and a competitive national economy. Analysis of literature about the change management of SMEs reveals that change management is an essential strategic move expected by any business for sustainable survival.

### 3.2. Challenge: Engage in responsible and ethical business practices

Responsible and ethical business practices include four interrelated aspects, such as legal, ethical, social demand, and philanthropic (Figure 3). However, there are two kinds of schools on the issue of responsible and ethical business practices: those who think that there is a need for paradigm shift for addressing environmental issues by the business world, and those who believe that the environment is a just strategic or subjective rather than normative or ethical issue (Aragon-Correa, et al. 2008). Conversely, sustainability can be assured only through the responsible use of natural resources (Aguliar et al., 2018).



**Figure 3: Responsible business practice**

Many owner-managers do not consider environmental concern as a severe issue (Musa and Chinniah 2016). This means, still the global business community has not unanimously agreed upon the need for environmental sustainability as an issue of the survival of the entire global community.

There are two approaches to assure engagement in responsible and ethical business practices, such as ethical and legal. It is found that different social customs relate to differentiated behavioral obligations vital in everyday interactions, including business relationships, networking, and transaction activities within the firm (Lin and Lin 2015). Both functioning measures, ethical and legal, are essential to reduce costs of transactions, legal disputes, and administrative procedures (Karaev, Koh and Szamosi 2007). Individual firms have gone for changes in their management strategies concerning environmental sustainability. Moreover, social demand has increased towards the social responsibility of firms (Gasse 1994).

Various management strategies have been suggested to improve responsible and ethical business practices. For example, Gasse (1994) proposes a socially responsible environment through business ethics and sustainable development as the concern of a business action plan. Another strategy suggested by other researchers is selecting appropriate employees for the purpose. Hosseininia and Ramezani (2016) pointed out the importance of recruiting a workforce that understands and respects the values and ethical behavior. However, there is a danger in assuming that SMEs make less impact on the environment due to their significance because, in such an assumption, SMEs may cause considerable damage to the environment (Masocha 2018).

Therefore, it is essential to reconsider the responsibility in terms of changing the business environment. The literature analysis predominantly supports the school of thinking that there is a need for a paradigm shift in the understanding and actions in respect of responsible business practices.

### *3.3. Challenge: Efficiently use natural resources and protect the environment*

Environmental sustainability is one of the three constituents of sustainable development, while economic growth and social equity are the other two. In the management perspective, these three pillars of development are called the triple bottom line – people, planet, profit. Environmental sustainability strategy consists of its deliberate actions to protect the environment, provide for the longevity of natural resources, maintain ecological support systems for future generations, and guard against ultimate and endangerment of the planet (Thompson, A.A., Peteraf, M.A., Gamble, J.E. and Strickland, A.J. 2016).

Further, environmental sustainability is both a moral and business case. Accordingly, no SMEs can escape from the responsibility of being green. However, despite the lack of business experience and financial resources, SMEs face similar challenges when trying to maintain the right balance between the elements of the triple bottom line (Auwal, et al. 2018). Global environmental problems such as climate change that require urgent solutions have increased societal awareness about the impact of business operations on the natural environment (Aragon-Correa, et al. 2008).

Environmental sustainability positively and significantly contributes to innovation and ecological and social performance. SMEs have a more significant impact on per unit of the environment than large firms (Masocha 2018). However, there is less expectation from the SMEs in a proactive move towards ‘planet’ due to several reasons such as lack of knowledge, financial and other capacities, and less attention of the stakeholders.

It revealed that advanced environmental strategies and export intensity have a positive correlation (Tapia, Correa and Manzanares 2010), which implies that more sustainable practices can be expected from export-oriented SMEs. Further, small firms provide flexibility in responding to changing environments, and they are curiously challenged in unfavorable and hostile environments (Aragon-Correa, et al. 2008).

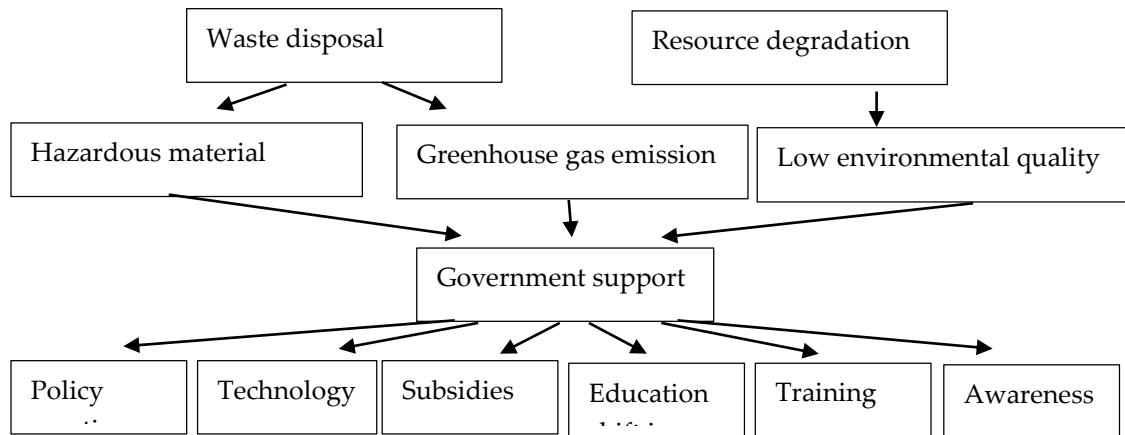
The need for consideration of sustainable development and the role of each country has been well articulated by the Sustainable Development Goals adopted by the United Nations General Assembly in 2015. Subsequently, all developed, developing, and least-developed countries are expected to enhance their climate change mitigation efforts accordingly (IPCC 2014). Further, both natural and societal environments are impacted by climate change, such as increased temperature that resulted in variable precipitation, increased droughts, floods, landslides, cyclones and tornados, and sea-level rise. Consequently, SMEs must be adapted to the changing environment and take appropriate measures to mitigate the change. Further, in order to stay on the triple bottom line – people, planet, and profit - by SMEs, it is required to reduce pollution and resource degradation in the long run. This condition is a pre-requirement for all individuals, organizations, and the states to strike a balance in the triple bottom line (Soon and Huat 1990; Chalhoub 2011).

It is evident that the environmental issues are increasingly impacting on the economy, society, and nature. Therefore, apparently, the firms are expected to become aware of the importance of seeking strategies and taking measures to mitigate and prevent environmental impacts. The growing concern about the need for the availability of natural resources for future generations and their survival has been the basis for decision-making in the industrial sector to preserve the

environment and improve the quality of life. Essential concepts such as sustainable development and eco-efficiency have been developed in this domain, which represent the trend to achieve balanced use of resources and a reduction of environmental pollution by preventing waste and establishing economic returns (Aguilar et al., 2018). According to Auwal et al. (2018), SMEs have contributed significantly to environmental degradation that creates detrimental impacts on both present and future generations. Figure 4 demonstrates the relationship of challenges to sustainability in terms of the efficient use of natural resources and environment protection.

Auzzir et. al (2018) reported that the total annual production of waste in Malaysia is 1.2 million tonnes. They further explained that waste generation in Malaysia is projected to increase from 0.122 kg/cap/day in 2009 to 0.210 kg/cap/day by 2025 because of the SMEs’ activities, particularly in the agro-based industry. It has been estimated that SMEs produce 70% of environmental pollution. Further, environmental pollution is now becoming a dominant issue in Malaysia due to increased activities of SMEs, which constitute 98.5% of the total business establishments in the country (Auwal, et al. 2018).

In Malaysia, 17% of the total environmental protection expenditure is incurred by SMEs. Inadequate waste disposal by SMEs contributes to increased pollution by hazardous materials and greenhouse gases (Auwal, et al. 2018). The entities should be sufficiently large to allow adequate environmental protection. With the assumption that the SMEs are not interested in going beyond regulatory compliance, low degree of public interest and the difficulty to obtain data from SMEs, environmental strategy research has not focused on SMEs (Aragon-Correa, et al. 2008). Furthermore, Government decisions could consider the formulation of policies to stimulate adaption and participation in environmental protection, and the government can involve via subsidies and support (Masocha 2018).



**Figure 4: Environmental protection**

A rapid increase has been reported in the occurrence of natural disasters (63.43%), resulted deaths (85.11%), and economic lost out of disasters (122.07%) to SMEs in the 21st century compared to the latter half of the 20th century (Guha-Sapiret al., 2016). An increase in both deaths and economic losses is higher than the increased occurrence of natural disaster events. Further, the rate of increased financial lost is almost twice as the occurrence of a disaster. This fact demonstrates the role of social and economic conditions aggravating the disaster.



Natural disasters in Asia consisted 46% of the global disasters in 2014, is the most vulnerable region in terms of number of deaths, number of people affected, and economic loss accounting for 50 to 70 % of global natural disaster statistics (Guha-Sapiret al., 2016).

### 3.3.1. The impact of natural disasters in SMEs in various forms and levels

The effect of flood (34%), haze (25%), heatwaves (22%), drought (11%), storms (3%), landslides (0%) and other (5%) are considered contributing to reducing performance of SMEs in Malaysia (Auzzir, Haigh and Amaratunga 2018). A similar situation is reported in other emerging economies such as Thailand and the Philippines. In Thailand, 90% of SME businesses were affected by flood in 2011, resulting in losing jobs of about 2.3 million workers, and reduced GDP by 37%. Besides, the geographic location of SMEs, such as coastal areas and deltas, encounter more impact.

All the above natural disasters are aggravated by climate change (IPCC 2014) since climate change as a single factor has a devastating effect on SMEs. A global survey in 2016 shows the dominant effect of climate change impacting on SME is heavy rain (22.4%), followed by drought and heat (20.3%) (ZURICH 2016). Material damage is the dominant impact of the effect of climate change consisting of 35% of all losses followed by business interruption involving 26.1%. In contrast, in the Asia Pacific region, drought and heat consist of 34% of effects domination over heavy rain (21.5%). Business interruption comprised of 39.8% of all business impact, followed by the material damage of 27.3% (ZURICH 2016). This fact demonstrated the need to consider the different types of natural disasters accordingly and stressed the need for assessment and management of the impacts in both adaptation to and mitigation of climate change.

Natural disasters differently influence various supply chain components. For example, loss in sales and production consists of over 65%, followed by non-attendance of employees, damage to property, and premises and damage to stocks and equipment due to floods in Malaysia (Auzzir, Haigh and Amaratunga 2018).

Various business environments of SMEs' force adapting two significant categories of strategies to climate change, such as sustainable and non-sustainable adaptations. The SMEs uses sustainable adaptations if the conditions of SMEs provide opportunities for business preservation in disaster situations, and if not, the SMEs adapt non-sustainable strategies. Increased frequency and severity of natural disaster reduces the potential for sustainable adaptation (Crick, et al. 2018). In other words, SMEs adopt unsustainable strategies with increased occurrence and severity of natural disasters resulting in narrowing of the role of SMEs in the economy.

Various tools are proposed to address internal and external conditions to streamline social measures for sustainability for spatial, temporal, and economic entities (Johnson and Schaltegger 2015). Environmental Management Systems (EMS) can be considered as the most common and comprehensive tool for organizing measures for environmental sustainability within an organization. The International Standards Organization (ISO) has standardized EMS as its ISO number 14001 has a continuous development process that made amendments in 2015. Further, EMS possesses global acceptance by applying in multinational, large enterprises as well as by SMEs. Therefore, EMS can be considered as one of the best tools for organizing and implementing environmental sustainability measures within an organization.

Though EMS has a simple and formal structure, experience of using the same by SMEs show that EMS, as it has been formalized, is reluctant to apply by SMEs. EMS is flexible in terms of standards as quality standards are set in the planning process rather than following external standards. Moreover, EMS can be applied without having external certification. However, as per studies (Cooper 2011), several difficulties arise in the implementation of EMS by SMEs, such as rapidly changing the operations and the dislike of paperwork. Therefore, it is required to adjust the EMS procedure to fit with the management practice of individual SMEs.

Schaper emphasized that the term Corporate Social Responsibility (CSR) is coined to integrate all measures directed to address external issues related to the triple-bottom-line. CSR is treated in the management literature as an issue of corporate governance, strategic management, entrepreneurship, and small business management, and regional perspectives in management such as Asian perspective. CSR is discussed in various standpoints such as societal, strategy-driven, stakeholder, ethical, political, and philanthropic aspects (Tricker, B. 2015). The author shows that expectations of governance have changed in the direction of compliance becoming mandatory; risk management becomes an integral part of management, and adding CSR and sustainability. Carroll in 1979 finds four levels in CSR such as economic, legal, ethical, and discretionary, as cited in Tricker (2015). Accordingly, environmental sustainability is added to the governance of ethical and discretionary levels following the Brundtland Commission of 1987.

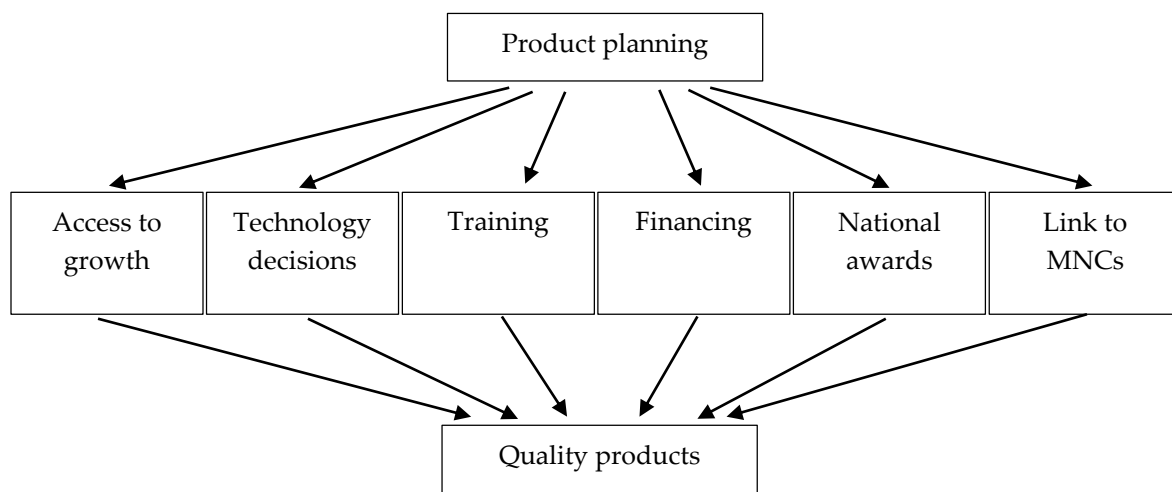
CSR is also employed as an essential business strategy where environmental sustainability is a significant component. The concept is defined in strategic management literature as 'specific combination of socially beneficial activities the company opts to support with its contribution of time, money, and other resources' (Thompson, A.A., Peteraf, M.A., Gamble, J.E. and Strickland, A.J. 2016). There are five components with actions to support the CSR strategy, such as, operate honourably and ethically; philanthropy, participate in community service and better the quality of life worldwide; sustain environment; enhance employee well-being and make the company a great place to work; and promote workforce diversity (Thompson, A.A., Peteraf, M.A., Gamble, J.E. and Strickland, A.J. 2016). Accordingly, CSR is directed to improve the company's triple bottom line; social, environmental, and economic; in other words, people, planet, and profit.

Simple ways for a small business to be socially responsible, as suggested in the management literature (Scarborough and Cornwall 2016), provides a direction for SMEs to address CSR. There are seven ways, such as to encourage recycling; support local fundraisers; join in community service; reduce energy usage; create a grant program; local causes; and partner with local schools. All these ways can act as external activities directed to environmental sustainability. Their indirect benefits, such as improving the customer image of the company, will ultimately increase sells and profits as environmental friendliness and safety have been considered by customers as buying criteria.

Social responsibility is discussed as a marketing strategy in the Asian perspective of management (Kotler, et al. 2012). Some companies are involved in all aspects of ecosystem protection activities as by Banyan Tree Resorts in Singapore and other Asian countries (Kotler, et al. 2012). However, some environmental-friendly initiatives may result in adverse effects when the outcomes to the environment are vague. For example, the promotion of palm oil as fuel for food companies by Nestle resulted in the degradation of rainforests in Indonesia and the extinction of the Orang-utan and the Sun bear (Kotler, et al. 2012). Another aspect of Asian marketing connected with social responsibility relates to Confucian values such as family faith. This may act positively as well as negatively to environmental sustainability through a Japanese example of the competition with 'Kmart' shows the winning of the local companies (Kotler, et al. 2012).

### 3.4. Challenge: Provide high-quality products and services

One of the critical production planning problems is the need to ensure the best quality products or services (Ortega, et al. 2016). Inferior quality products of SMEs are considered as a problem for larger companies to cooperate with SMEs (Singh, Garg and Deshmukh, *The Competitiveness of SMEs in Globalized Economy, Observations from China and India 2009*). Figure 5 demonstrates the relationship of challenges to sustainability in terms of providing high-quality products and services. In the process of production planning, it is possible to guarantee a quality product by a combination of six conditions, i.e., access to growth, technology decisions, training, financing, national awards, and link to MNCs.



**Figure 5: Provide high-quality products and services**

Following aspects were focused on studies related to quality products:

Asare et al. (2015) have recommended offering training to improve the quality of products, while Baldacchino (2005) states small island economies do not have sufficient domestic firm rivalry that pushes firms into higher quality products and services. Government vision to improve the quality of goods and services of SMEs through linking the SMEs with transnational corporations helped improvements (Chew and Yeung 2001), and offering national awards for quality products to small-scale units can be a motivation factor to encourage quality (Singh, Garg and Deshmukh, *Strategy Development by SMEs for Competitiveness: A Review 2008*). High-quality products at low cost and timely delivery are enabled by the right technological decisions (Singh, Garg and Deshmukh, *The Competitiveness of SMEs in Globalized Economy, Observations from China and India 2009*), and SME growth and access to business development services and financing may enable a firm to produce quality products (St-Pierre, et al. 2015). In the context of Korean SME, the policy focus shifted from ‘financial institutions and systems’ to ‘time and quality product through technology’ (Sung and Kim, 2016).

### 3.5. Challenge: Meeting stakeholder needs

According to contemporary management understanding, the stakeholders are:

*The various interest groups who have relationships with and, consequently, whose interests are tied to the organization (e.g., employees, suppliers, customers, shareholders, community (Noe, et al. 2013).*

Further,

*It recognizes the interest of all those affected by companies' decisions, including customers, employees and managers, partners in the supply chain, bankers, shareholders, the local community, broader societal interest for the environment, and the state (Tricker 2015).*

Stakeholders represent values and beliefs related to individuals institutions and the state in balancing responsibility, accountability, and power through society (Scarborough and Cornwall 2016). This discourse of stakeholder can be considered as a philosophy rather than a theory.

The above definitions of stakeholders imply that any group can be a stakeholder if there is any interest in the organization with or without any obligation such as NGOs with interest in pollution made by the organization, media, and environmentalists. It is also possible to group customers as internal and external. Figure 6 presents the relationship of challenges to sustainability in terms of meeting stakeholder needs.

The above noted societal discourse of stakeholder faded in the free-market 'growth and greed.' Again in the 21st-century, Corporate Social Responsibility (CSR) and sustainability reporting emerged into the forefront. Accordingly, the present challenge is to balance the potentially conflicting interests of a diverse set of stakeholders (Tricker 2015)[36] as opinions are varied by culture, political context, and social system. This discussion stresses the need for careful consideration of the needs of all possible stakeholders and balancing them, which will eventually assure environmental sustainability.

Stakeholder analysis is a critical component in the surveys (Baldacchino 2005). For example, variable costs and demands differ by the circumstances and interests of customers, and customers are willing to pay more for environmentally-friendly products (Auwal, et al. 2018). This fact indicates the price benefit of environmental practices. Therefore, it is essential to learn customers' culture, interest, education, and other parameters, and manage the stakeholders. Meanwhile, ISO14001 improve stakeholder relation and performance (Musa and Chinniah 2016).

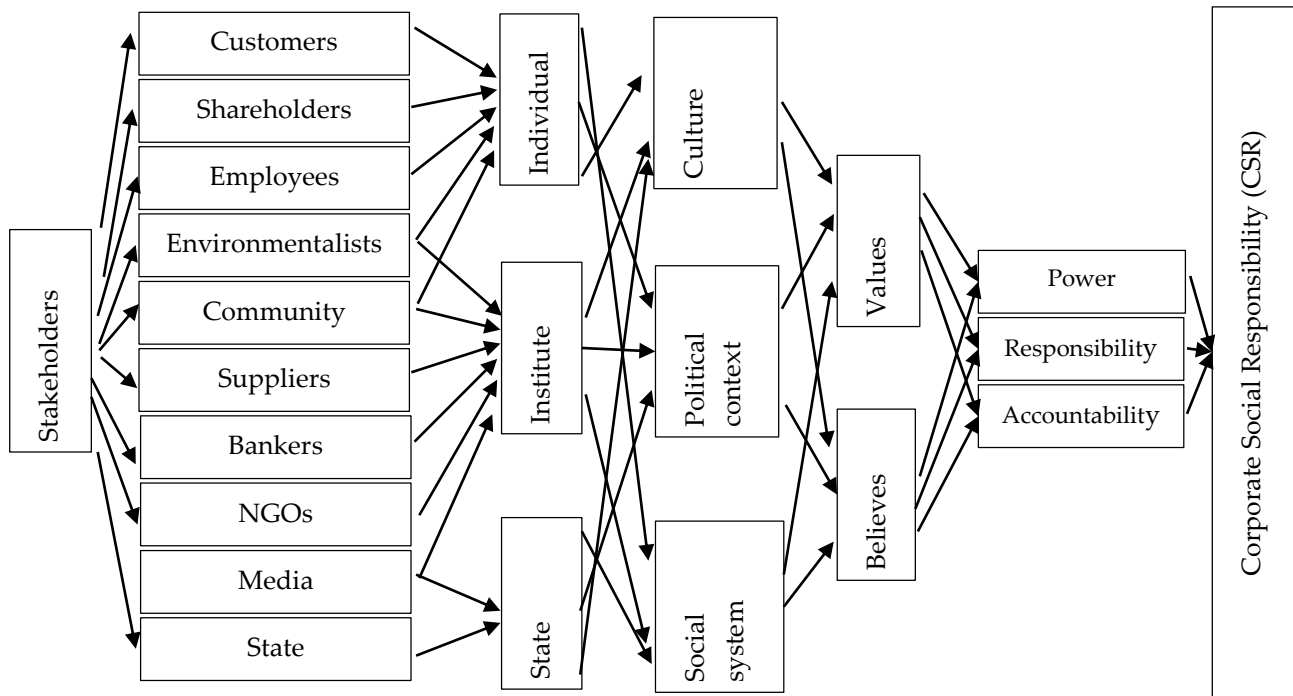
Countries with more education are more likely to adopt International Financial Reporting Standards for SMEs (Bonito and Pais 2018). Proper management of reporting to regulatory stakeholders may prevent exposure to costly lawsuits, which would improve organizations' public image and relationship with customers. Further, stricter regulations can increase voluntary action (Auwal, et al. 2018). SMEs' concern on compliance with environmental regulations should carefully study the influence on the environmental sustainability of the company.

The government must promote compliance with environmental preservation and social justice in the entrepreneurship business through regulatory agencies. This will provide a chance to promote sustainable business models from the onset of their business based on value creation. Also, the founding vision may inspire stakeholders (Auwal, et al. 2018).

Notably, in developing countries, no action is taken by the government or any other stakeholder before disasters hit, and as a result, the SMEs cannot survive disasters (Auwal, et al. 2018). The SMEs practice both reactive compliance to proactive environmental leadership approaches. Sustainability and stakeholder management are included in new corporate performance evaluation and reporting systems (Caputo, Carrubbo and Sarno 2018). In general, proactive environmental practices are resulted by stakeholder pressure and exist in a combination of unique capabilities of SMEs such as shared vision related with owner founder's vision closely communicated to organizational members, strategic proactivity related with innovativeness and

entrepreneurial culture, and stakeholder management related with flexibility in managing relationships (Aragon-Correa, et al. 2008). Accordingly, the nature of SMEs creates a favorable environment for moving toward proactive environment practices leading to environmental sustainability.

There are also negative lessons of SMEs about its proactivity to environmental sustainability. Compared to larger firms, SMEs tend to be influenced by influential stakeholders. The influence is stronger when larger firms subcontract smaller once (Tapia, Correa and Manzanares 2010).



**Figure 6: Balancing stakeholder needs**

The analysis reveals three aspects of strategies to meet stakeholder needs. They are the shared vision, stakeholder management, and strategic proactivity.

### 3.5.1. Shared vision

The shared vision in SMEs means that the vision of the owner is shared with all types of stakeholders. SMEs’ issues are the owners’ satisfaction in receiving the agreement of all stakeholders (Fiseha and Oyelana 2015). The mission statement is important to be shared with the common message with relevant key stakeholders. A well-articulated mission statement offers critical insights to stakeholders regarding the aim of the organization, and can eventually lead to favorable sustainable outcomes (Duygulu, et al. 2016). Prediction – the capability of shared vision would have a positive influence on the development of proactive environmental strategies by influencing the innovative-preventive and eco-efficient practices.

### 3.5.2. Stakeholder management

Management of external and internal stakeholders is vital to SME and also in the large firm context (Mitchell, et al. 2015). Stakeholder involvement can be improved by information sharing

and communication (Caputo, Carrubbo and Sarno 2018). Market information is of the utmost importance to stakeholders to anticipate and exceed customer expectations (Tapia, Correa and Manzanares 2010). A trust-based collaborative relationship with stakeholders, especially with non-economic goals, is valued. However, the specific stakeholder may have specific sustainability practices. Nevertheless, NGOs target generally large firms, since large firms are most likely to respond (Aragon-Correa, et al. 2008).

External stakeholders positively influence the managers' decisions and intentions, and SMEs can engage their suppliers for pollution prevention. Digital transformation is required to gain the stakeholder commitment (Goerzig and Bauenrhansl 2018), while lightweight planning tools with a strong business focus must be used to understand stakeholders. Opting to act proactively on the concerns of one group while ignoring the interests of others could make it challenging to obtain synergies emerging from stakeholder management. Consequently, the potential influence of the environmental strategy may not materialize into the development and deployment of stakeholder capabilities for micro-enterprises (Tapia, Correa and Manzanares 2010).

### 3.5.3. Strategic proactivity

Adopting sustainable practices for small businesses has advantages such as a benefit for a society that increases stakeholder patronage, a competitive edge in the market, increased market share, and boosts in shareholders' value (Masocha 2018). Social performances reveal that accomplishment in environmental management and stakeholder management improves the quality of life of the society (Masocha 2018). Individualism supports product development at the invention stage, and collectivism is beneficial during the commercialization stage (Rosenbusch, Brinckmann and Bausch 2011). Proactive environmental management aids a better understanding of stakeholders' interests (Tapia, Correa and Manzanares 2010).

SMEs have less civil pressures because relevant stakeholders are not much interested in their social practices, and create minimal pressure to improve such systems (Wood and Williamson 2014). Lack of stakeholder concern can have the effect of reducing the environment as a priority for smaller businesses (Revell and Blackburn, 2007) and possibly explains why environmental reputation is less important for SMEs than larger firms (Graafland and Smid, 2007). The unresponsiveness of SMEs helps explain why regulation is often considered an important driver (Bradford and Frater, 2008).

## 5. Conclusions

Analysis of literature reveals that the sustainability challenge for SME arises from both the rapid environmental change and the rapid change in the business environment. Simultaneously, the studies have concluded five strategic approaches for confronting the challenge successfully. The approaches are change management, responsible business, and efficient use of natural resources protecting the environment, producing quality products, and balancing stakeholder needs. Further, each of these approaches focused on various studies at various levels.

Causes of changes in the business environment are categorized into five groups, i.e., industrialization, globalization, national political-economic change, innovation, and financial creativity. The study concludes that six actions are necessary to take a management change. The actions are the dominant logic of top management, dynamic management capability, government support, strategic learning, employee support, and information communication technology and networking. The responsible business practice approach has shown four aspects, such as legal,

ethical, social demand, and philanthropic. The approach argues that a paradigm shift is essential in all these aspects to face the challenge.

According to the literature, SME activities create problems of waste disposal and resource degradation leading to producing hazardous material, greenhouse gas emission, and reducing environmental quality. In this issue, government support is a suggested strategy to protect the environment. The areas where government support required, as per the literature, are influencing by policy, technology, subsidies, education training, and awareness. The enhancement of the quality of products is achieved through proper product planning, which includes access to growth, technology decisions, training, financing, national awards, and linking to MNCs.

The literature has broadened the definition of stakeholders of SME by including ten categories such as customers, shareholders, employees, environmentalists, community, suppliers, bankers, NGOs, media, and state. These stakeholders are grouped into three levels; state, institutional, and individual. The stakeholder concerns in a given unit get influenced by three superstructures such as social system, political context, and culture. Concerns filtered through above superstructure immerge as believes and values, those ultimately to be balanced by addressing customs, shareholders, and employees. Three strategies are proposed for the purpose, as shared vision, stakeholder management, and strategic proactivity.

The least studied area of SME environmental sustainability is resource degradation by SME activities, on which a further research focus is necessary. Further, the application of EMS by SME has not been studied sufficiently. Importantly, it is suggested to use the framework constructed in this paper in order to test the readiness of SMEs to face the sustainability challenge.

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