Examining the role of sustainability performance in enhancing competitive capability: Insights from a sample of Indian manufacturing SMEs

Examining the role of sustainability performance in enhancing competitive capability: Insights from a sample of Indian manufacturing SMEs

Debashree De[1], Prasanta Kumar Dey[2], Chrisovalantis Malesios[3,*], Pavel Albores[2]

[1]Essex Business School, University of Essex, UK.

[2]Aston Business School, Aston University, Birmingham, UK.

[3]Department of Agricultural Economics and Rural Development, Agricultural University of Athens, Athens, Greece; malesios@aua.gr.

**Corresponding author*

Abstract

Small and medium-sized enterprises (SMEs) have a significant impact on the economy, but their negative effects on the environment and society pose challenges for sustainability. Achieving sustainability is difficult for SMEs, as environmental and social performances do not always lead to cost reduction, and they struggle to balance their performance. This study analyzed 227 Indian manufacturing SMEs using structural equation modeling to investigate the combined impact of sustainability opportunity, operational performance, and competitive capability. The findings suggest that sustainability opportunity has a weak negative effect on operational performance, but it slightly helps achieve social and environmental performance. Environmental performance negatively impacts competitive capability, while economic and social performance enhances it. Motivations to focus on environmental performance are necessary in the present Indian market scenario and regulations that SMEs face. Overall, the study aims to facilitate sustainability in manufacturing SMEs.

Keywords: *Sustainability, SMEs, Competitive capability, Operation Performance, India.*

1. Introduction

Small and medium sized enterprises (SMEs) positively contribute to economies and societies both in developing and developed economies. Based on data from the Ministry of Micro, Small, and Medium Enterprises (MSME) in India, there are 0.3 million small, and about 50,000 medium enterprises in the country. In manufacturing sector, SMEs contribute the 45% of India's manufacturing output and contribute 17% of India's GDP (Dubal et al., 2016). SMEs give employment to approximately 40% of India's workforce (Goyal et al., 2013). However, SMEs also generate negative impacts from conducting business. It has been estimated that SMEs contribute up to 70% of global pollution collectively (Hillary, 2000). Under this perspective, environmental and social concerns are also becoming central economic aspects for many SMEs (Halila, 2007).

In the last few years, a considerable attention has been focused on the topic of sustainability, integrating and finding a balance between environmental, economic and social aspects of a company (Epstein and Buhovac, 2014, Lozano, 2012; Porter and Van Der Linde, 1995). Sustainability could be achieved through most appropriate trade-off between economic, environment and social pillars (Tajbakhsh and Hassini, 2015). Business sustainability refers to meeting the needs of a firm's direct and indirect stakeholders (such as shareholders, employees, clients, pressure groups, communities etc.), without compromising its ability to meet the needs of future stakeholders (Dyllick and Hockerts, 2002).

SMEs aim to integrate sustainability so that they can adhere to the policy and regulations (Witjes et al., 2017). There is a contradiction as concerns the relationship between social and environment practices and how it leads to the business sustainability and economic performance of the SMEs. SMEs must be competitive to be in the market. In the supply side, adoption of new technology (Harland et al., 2007), retaining manpower, adhering to various regulations, promoting innovation and managing procurement are also very challenging. In

the SMEs demand side on one hand public procurement is very demanding, while on the other hand there are numerous competitors (Loader, 2013).

Competitive capability differentiates SMEs over the larger organisations. Expectation from the SMEs is that they provide products at lower costs, at higher value and with more innovation/variety (Aboelmaged, 2014). SMEs try to improve their competitive capability by using advanced manufacturing technologies, optimising the information and technologies, and innovation. To increase the competitive capability, the operational performance needs to be optimised (Lii and Kuo, 2016). However, increased production activities also mean complex operation issues faced by these SMEs, with consequences for the environment, resource sustainability, and social impacts.

Previous studies examine the relationship between the institutional pressure and the sustainability performance in SMEs (Aguado and Holl, 2018). Aguado and Holl (2018) have explained the relationship between the competitive capability and pressure on the companies (Cantele and Zardini, 2018). The relationship between different sustainable practices and the performance of SMEs is very common (Anggadwita and Mustafid, 2014). The studies investigate how SMEs' social (Akhtar, 2014) and environmental practices (Agan et al. 2013) impact their economic performance (Alshehhi et al. 2018; Golicic and Smith, 2013; and Goyal et al. 2013).

However, there is a gap in the relevant literature on the combined study of the impact of operation, social and environmental performance on the competitive capability of the SMEs. Operation practices have an environmental impact. There is a paradox: SMEs need maximum operational performance to achieve maximum economic performance, but simultaneously with minimum environmental impact (Govindan et al., 2013; Vanalle et al., 2017). Additionally, operational performance is the integral part of the performance of an organisation (Rahman et al., 2010). The impact of operational performance on the

sustainability performance is under investigated (Mafini and Loury-Okoumba, 2018). The institutional pressure on the competitive capability of the firms is also studied (Cantele and Zardini, 2018). However, the impact of sustainability opportunity on the operation performance, sustainability performance, and competitive capability of SMEs is under investigated.

Hence, in order to fill the previous research gap in the literature, the research questions of this paper are:

RQ1: Does sustainability opportunity in the market drives the operation performances of the Indian SMEs?

RQ2: What is the effect of operations performance on sustainability performance of SMEs?

RQ3: Does sustainability performance help to improve the competitive capability of the Indian SMEs?

The rest of the paper is structured as follows: Section 2 describes the literature review of the study. Section 3 presents the theorised framework of the paper followed by conceptualising hypotheses of the study, based upon the main research questions. Section 4 explains the methodology used to conduct the analysis of the study. Section 5 elaborates the results of the study based upon the analysis of Indian SMEs sample. Section 6 is the discussion followed by conclusion section 7 summarising the study findings and highlighting future directions.

2 Literature Review

2.1 Business Sustainability and Small and Medium Enterprises

The three basic dimensions of sustainability are ecology, economy and social affairs. Nowadays, business sustainability is most often perceived in an integrated way, combining these three aspects, due to their partial overlap.

Economic aspect along with the social and environmental aspects are the main constructs of the supply chain sustainability, but they tend to contradict each other (Tajbakhsh and Hassini, 2015). Recently, stakeholders and global institutions have started accounting for sustainability, providing SMEs a great opportunity to implement sustainability (Bocken et al., 2013; Boons and Ludeke-Freund, 2013). Studies investigating sustainability (Dyllick and Hockerts, 2002; Schaltegger and Wagner, 2017) found that there are contradictory results between Corporate Social Performance (CSP) and Corporate financial Performance (CFP) (Margolis et al., 2007; Lu et al., 2014). However, most of the studies are not based on SMEs.

With SMEs in need to implement sustainability, stakeholder pressure and company's orientation to implement sustainability is to be investigated. Due to intense competition and lack of support from customers, often SMEs prioritize economic aspects providing less emphasis on environmental and social initiatives. This may cause serious negative impact in overall sustainability performance. To combat this issue, recently several researches have been undertaken, modelling SMEs' sustainability practices and performance using variables in different layers.

2.2 Sustainability Opportunity in Small and Medium Enterprises

Multinationals face pressure from their stakeholders to implement sustainability, however there is a delay in that to happen as the scale is not large enough to address today's challenges. The implementation of the sustainability practices is slow as implementation pace is slow in the SMEs sustainability. Sustainability is practiced by organization because of pressures from government/rules, top management, customer and internal organization (DiMaggio and Powell, 1983; Oliver, 1997; Rosenzweig and Singh, 1991).

Very few studies investigate the correlations between pressures from customers and policymakers with sustainability practices, correlation of drivers for environmental and social

practices with only environmental and social (but not economic) practices, and theory of planned behavior with only environmental practices. Considering the large majority studies with mixed results in sustainability and distinct characteristics of SMEs, there is a need on the studies on SMEs.

2.3 Operational Performance and Sustainability in Small and Medium Enterprises

The operation practices have an impact on the environment. As such, the companies are forced to reduce their impact on the environment, but, at the same time, companies need to have maximum operation performance and economic performance (Govindan et al., 2013; Vanalle et al., 2017). The examinations on the relationship between the environmental sustainability and firm's operational performance have been inconsistent (Alshebhni et al., 2018; Golicic and Smith, 2013; Goyal et al., 2013), therefore giving confusing decisions as to what leads to operation performance.

Considering the large majority of studies with mixed results in sustainability and distinct characteristics of SMEs, there is a need for studies to focus on SMEs. From the strategic management perspective, sustainability helps in the competitive advantage of the SMEs (Saeidi et al., 2015). Operational performance leads to economic performance, measured as firms' perspective on sales, margin, and return on investment, compared to competitors (Bagur-Femenias et al., 2013; Saeidi et al., 2015).

2.4 Competitive Capability of Small and Medium Enterprises

Competitive advantage refers to "implementing the value creation strategy not implemented by the current or potential competitors" (Barney, 1991, p. 102). Studies have shown that there is correlation between competitive advantage and financial performance. However, competitive advantage can be achieved by low cost or differentiation strategies (Porter and Van der Linde, 1995). Studies also suggest that competitive capability is achieved

by resource and capabilities developed through social performance (Porter and Kramer, 2006) and environmental performance (Chang and Kuo, 2008). Often, environmental projects help companies gain or maintain competitive advantage (Hollos et al., 2012, Vanalle et al., 2017). Sustainable competitive advantage has been referred as the competitive capability which remains with time (Reed and DeFillippi, 1990; Oliver, 1997). Competitive capability refers to power of providing the superior value for customers so that it can be better than competitors such as quality, cost, efficiency, delivery, flexibility, innovation, productivity, etc (Aboelmaged, 2018). Competitive capability is represented by various constructs like overhead cost is low, price of goods in low, high product quality, delivery time is low, broad range of products, new products, flexibility (Aboelmaged, 2014).

3. Conceptual model and hypothesis development

As described already in the Introduction section, previous research reveals the relationship between the institutional pressure and the sustainability performance in SMEs. In addition, studies investigated how SMEs' social and environmental practices impact their economic performance.

However, there is a gap on the combined study of the social, environmental on competitive capability of the SMEs. Additionally, the impact of operational performance on the sustainability performance is under investigated (Mafini and Loury-Okoumba, 2018). The institutional pressure on the competitive capability of the firms is studied (Cantele and Zardini, 2018). However, the impact of sustainability opportunity on the operations performance, sustainability performance and competitive capability of SMEs is under investigated.

3.1 Impact of Sustainability Opportunity to the operational and sustainable performance of SMEs

Sustainability impact on the performance is always unclear and is always contextual to the industry, sector and region (Aboelmaged, 2018). The environmental pressures from stakeholders, management support and the engagement of employees positively influences sustainability practices (Aboelmaged, 2018). Contrary the competence, and environmental regulations do not significantly affect Sustainability Practices. Institutional pressure has a positive impact on the environment performance of the SMEs (Zhu and Geng, 2013). The sustainability opportunity apply helps in improving operational performance (Bayraktar et al., 2009), economic (Rao and Holt, 2005) performance and environmental (Pochampally et al., 2009) performance. Operation parameters generally do not have a negative impact on the opportunity (Garetti and Taisch, 2012). Pressure from stakeholders helps in the social performances of the SMEs (Arena et al., 2018). Most of the studies are conducted on large organisations. However studies on SMEs are yet to be established.

Hence, hypotheses to be studied in the context of Indian SMEs are:

H1a Sustainability opportunity is positively related to the operational performances of the SMEs.

H1b Sustainability opportunity is positively related to the environmental performances of the SMEs.

H1c Sustainability opportunity is positively related to the social performances of the SMEs.

3.2 Impact of Operational performance on Sustainability Performance of SMEs

Environmental performance helps in improving the operational performance of the company (Hami et al., 2015). The green opportunities help the companies to improve their operation performance (Bayraktar et al., 2009). However, the impact on economic performance on implementing environmental friendly operational performance is to be studied (Zhu and Sarkis, 2004). Operations Practices have an adverse impact on the environment. It is also important for organisation to minimise their environmental impact

simultaneously increasing the operational and environmental impact of the SMEs (Vanalle et al., 2017). SMEs have limited resources and hence there are limits on risks of the investors. The impact of operations on the social performance has mixed results. The impact of pressure/Sustainability Opportunity in the market, operational performance and environmental performance needs to be studied in the developing countries (Vanalle et al., 2017). The relationship between the environmental sustainability and firm performance have been inconsistent (Alshebhni et al., 2018; Golicic and Smith, 2013; Goyal et al., 2013) giving confusing decisions to what leads to operation performance.

Hence, hypotheses to be studied under this perspective, in the context of Indian SMEs, are:

H2a Operational performance is positively related to the economic performance of the SMEs.

H2b Operational performance is a positively related to the environment performance of the SMEs.

H2c Operational performance is a positively related to the social performance of the SMEs.

3.3 Impact of sustainability performance on the Competitive Capability of SMEs

In the Egyptian SMEs context, the sustainability practices and the competitive capabilities is positively significant. Social performance has a negative impact on the competitive capability (Aboelmaged, 2018). Economic performance generally has a positive relationship with competitive capability (Aboelmaged, 2018). Sustainable practices might lead to competitive capability (Aboelmaged, 2018). However, there is no evidence on how sustainability leads to competitive capability of SMEs. Social performance has a negative relationship with Economic performance (Aboelmaged, 2018). Environmental performance and social performance are not considered as helpful in gaining competitive advantage in SMEs (Cantele et al., 2018). As is indicated from previous research, the results on this relation are mixed. Hence in this study concentrated on Indian SMEs, the hypotheses to test the theories are:

H3a Environmental performance is positively related to the economic performance of the SMEs.

H3b Environment performance is positively related to the competitive capability of the SMEs.

H4a Social performance is a positively related to the economic performance of the SMEs.

H4b Social performance is a positively related to the competitive capability of the SMEs.

H5 Economic performance is a positively related to the competitive capability of the SMEs.

3.4 Theorised Model

Summarising the above arguments and related hypotheses posed, Figure 1 below represents the theorised model of our study that is empirically tested utilizing the SME data.

--- FIGURE 1 AROUND HERE ---

4. Methodology

There are many different models and indicators used for supply chain sustainability performance measurement in the relevant literature. For example, in Singh et al. (2012) an overview of sustainability indicators for companies is provided. There are various approaches applied for the statistical/mathematical modelling of firm sustainability performance. Modelling approaches for instance have included least square linear multiple regression (e.g., Yu and Rhee, 2015; Yu and Zhao, 2015; Wolf, 2014; Lopez-Valeiras et al., 2015), artificial neural network analyses (e.g. Hassan, 2016; Jawahar et al., 2015), structural equation modelling analyses (e.g. Wan Mohamed Radzi et al., 2015; Chang and Kuo, 2008; Youn et al., 2013) and fuzzy logic analysis (e.g. Rajak and Vinodh, 2015; Govindan et al., 2013).

The methods in literature have adopted surveys (Agan et al., 2013), secondary surveys (Hosseininia and Ramezani, 2016), interviews (Lee et al., 2012), case studies and conceptual

models using data from different countries like Indonesia (Anggadwita and Mustafid, 2014), UK, Egypt (Aboelmaged, 2018), EU countries from different manufacturing sectors.

This study adopts primary method using quantitative inductive approach to understand the relationship between Sustainability Opportunity in the market, operation performance, sustainability performance and finally competitive capability, in the context of Indian SMEs. A structural equation modelling (SEM) approach to test empirically the proposed hypothesis represented in Figure 1 is followed in this paper.

4.1 Data collection and description

Data used for this study has been collected from Indian manufacturing SMEs. Strategic snowballing approach has been used to choose the SMEs for questionnaire survey as per Forza (2002). Approximately 15,000 questionnaires were sent, followed by repetitive reminders and phone calls. A total of 340 responses were received out of which 227 responses could be further processed for SEM analysis, after checking for potential errors, including non-response, responses that were inconsistent or contain clear errors (e.g., illogical answers, extreme outliers, or contradictory information). Table 1 demonstrates the employee size of the companies and their profit status. We must also note that the five responses from the companies with more than 250 employees have been considered in this study since the definition of SMEs in India does not restrict the number of employees in the organisation.

--- TABLE 1 AROUND HERE ---

The questionnaire for survey is presented in Appendix A3. The survey was conducted in different geographical locations of India so that the nature of practices could be evenly captured. It is known that nature of sustainability practices is majorly customer driven.

Private and international companies have more pressure for sustainability than local and government customers.

--- FIGURE 2 AROUND HERE ---

The survey questionnaire has been designed to capture the latent structures to identify the variables which can be used to measure (Sustainability Opportunity, sustainability performance, operational performance and competitive capability). To identify the factors of study, a literature review was conducted to identify the variables, followed by interview of 5 selected representative SMEs. Interviews with SMEs' managers/owners were utilized in order to get an actual idea and validate the variables which can be used for the study, based upon the experience of local SMEs. To identify which variables load on which constructs exploratory factor analysis (EFA) was used. The EFA model fit is followed by testing theoretical model in SEM analysis. Figure 2 represents the research method framework of the study.

The data was obtained from surveys and individual interactions with the top management. The data was received from the online survey and from personal interactions. For online data collection both Qualtrics link and Google forms link were used. The data was processed into an excel format for further evaluation. The basic format of excel sheet was created as data was exported from the online survey app of Qualtrics and Google Forms. The questionnaires filled by personal interactions were generally fully completed. There was an option of choosing not applicable in the response so in person handed response were generally complete. The online software tools helped in coding of the variables. It helped in automatic naming the responses of the questions in corresponding appropriate variables.

The questionnaire was designed such that the responses were mostly on the Likert scale of 1-5 (1=low, 5=high). The non-numeric data was separated automatically by online software tool. The responses related to profit were collected in numeric values.

4.2 Statistical Analysis

4.2.1 Exploratory Factor Analysis (EFA)

Factor analysis is conducted in order to identify the common underlying dimensions known as factors amongst the data collection (Hair et al., 2006). It can be done by EFA and confirmatory factor analysis (CFA). This study first performs the EFA with consecutive reliability analysis, followed by structural equation modelling (SEM) to confirm the factor structure obtained. The main aim of exploratory factor analysis is to identify the variables and how they load on the factors. It is primarily done to identify the various factors in the dataset. Examining the factor matrix and identifying the number of factors in the study, given the sample size is 230, factor loading of 0.40 and higher would be considered as significant. Reliability is an assessment of the degree of consistency between multiple measurements for a variable (Hair et al., 2006). In order to assess reliability in the factors, the Cronbach's alpha has been calculated. The Cronbach's alpha values are required to be above than 0.6 for reliable factors. Validity is the extent to which a scale or set of measures accurately represent the concept of interest. The convergent validity, discriminant validity needs to be ensured for same.

4.2.2 Structural Equation Modelling (SEM)

SEM is the confirmatory statistical analysis of our measurement theory. The measurement model is supposed to help measure by use of theory logically and systematically represent construct involved in theoretical model (Hair et al., 2006). SEM is used to develop the overall measurement model. SEM model often involves measurement theory and structural theory. A measurement theory specifies how measured variable logically and systematically represent constructs involved in a theoretical model. Measurement theories specify a series of relationship that suggests how measured variables

represent latent construct that is not measured directly. Measurement theory requires construct to be defined. To consider the response biasness, response bias correctness test was done.

Fitting a SEM model with maximum likelihood assumption requires data to be multivariate normally distributed data. However non normal and bias data has been corrected before performing the SEM analysis.

The model's fit has been considered in each step of the analysis. The goodness-of-fit of the model has been tested by indexes for model fit such as GFI, CFI, AGFI, RMSEA and SRMR. For good model fit GFI, CFI and AGFI should approach one, whereas RMSEA and SRMR should be small less than 0.06-0.08. The study used SPSS statistical program (IBM, 2021) for the initial statistical analysis. The SEM analysis is performed with AMOS 20 software (Albright and Park, 2009).

5. Results

5.1 Reliability and Validity Results

Reliability and validity of the constructs and latent variables utilised for the SEM analysis is described in Tables 2 and 3. We utilize EFA to test for reliability and validity of each construct, in order to subsequently utilize in SEM modeling. Table 1, shows the correlations among the five latent constructs along with the square root of the Average Variance Extracted (AVE) by the constructs.

--- TABLE 2 AROUND HERE ---

Reliability and validity measures for the factors based upon the observed items of the questionnaire utilized for SEM analysis are presented in the following Table (Table 3).

Specifically, Table 3 shows Cronbach's α values and the percentage of variance of items explained by each variable.

The results indicate that the utilized factor constructs are suitable for further SEM analysis, since Cronbach's values are above 0.8 and explained variance is above 50% in all cases.

--- TABLE 3 AROUND HERE ---

Last, the common bias test results are presented in Appendix A2.

In overall, the above reliability and validity results suggest the data is suitable for further statistical analysis, hence SEM could be performed on the data.

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5.2 Model fit of SEM

Before presenting the results, the goodness-of-fit of the SEM model is presented in Table 4. Fit statistics for the examined SEM model show that the path analysis structure tested provided a good fit, since that most of the values of fit indices are higher or near the borderlines of the acceptable limits, especially when considering the goodness-of-fit measures of GFI and AGFI. Most of the values of the fit indices are within the acceptable range for a good fit. Table 4 also mentions the cut off limit for the model's goodness-of-fit.

--- TABLE 4 AROUND HERE ---

5.3 SEM model results

SEM modelling enables us to obtain the estimates of beta coefficients of the regression equations that relate the various latent constructs as hypothesized in Figure 1. In the remaining section the results of the SEM utilized to empirically test the conceptual

framework of the study (see Figure 1) are presented below. The results summarise the standardised regression coefficients along with the p-value (significance value). Specifically, SEM results are summarized in the form of the standardized regression coefficients depicted in the path diagram of Figure 3. The results are also presented in Table 5. Table 5 in addition to the standardized regression coefficients between the latent factors, it also includes regression coefficients for the relations between the latent factors and the observed items that used to construct the factor.

--- FIGURE 3 AROUND HERE ---

--- TABLE 5 AROUND HERE ---

Results of SEM analysis show that sustainability opportunity negatively affects operations performance (beta = -0.177; p-value<0.05). Sustainability opportunity also negatively affects environmental performance (beta = -0.204; p-value<0.01).

Operations performance positively affects environmental performance (beta = 0.24; p-value<0.01). Operations performance also positively affects social performance (beta = 0.265; p-value<0.01). As regards the effects of environmental performance, we observe that the former does not impact the economic performance (beta = -0.007; n.s.). Operational performance positively affects economic performance (beta = 0.465; p-value<0.01). Social performance positively affects economic performance (beta = 0.218; p-value<0.01).

Concerning the relations of competitive capability, it is seen that social performance positively affects competitive capability (beta = 0.375; p-value<0.01). Environment performance negatively affects competitive capability (beta = -0.632; p-value<0.01). Finally, economic performance positively affects competitive capability (beta = 0.211; p-value<0.01).

6. Discussion and implications

In the present scenario, large companies face pressure when it comes to implementing sustainability. Customers and stakeholders pressurise larger organisations to achieve sustainability. The pressure large organisations face to be sustainable decreases by the time it reaches the SMEs. Further, SMEs have issues when it comes to achieving sustainability, such as struggling with their operation performance, along with balancing the social and environmental performance (Sajan et al., 2017). SMEs also face issues in implementing sustainable business practices (Lee et al., 2012).

SMEs have different characteristics than larger organisations. For example, they differ in the context of business administration and additional services like human resources, finance, and health and safety. Furthermore, they have additional financial constraints, which limits the new concepts, products, and services for new customers (Garetti and Taisch, 2012). Hence, they show distinct characteristics that distinguish them from large organisations.

SMEs' sustainability is not an essential criterion for public procurement from the customers' perspectives in developing countries (Peprah and Ayayi, 2016). Thus, a concern arises: to understand if the institutional pressure is strong enough to drive sustainability in SMEs (Aguado and Holl, 2018). There is a positive relationship between the institutional pressure and the Competitive Capability in large organisations (Aguado and Holl, 2018; Cantele and Zardini, 2018). SMEs practising social (Akhtar et al. 2014) and environmental practices (Agan et al. 2013) contribute to economic performance (Alshehhi et al., 2018; Golicic and Smith, 2013; Goyal et al., 2013). However, there is a gap on the combined study of the impact of operation, social, and environmental performance on the competitive capability of the SMEs.

All operation practices lead to an environmental impact. SMEs need maximum operational performance to achieve maximum economic performance, yet, at the same time,

minimum environmental impact (Govindan et al., 2013; Vanalle et al., 2017). Additionally, operational performance is the integral part of the performance of an organisation (Rahman et al., 2010). The impact of operational performance on the sustainability performance is under-investigated (Mafini and Loury-Okoumba, 2018). Also, the institutional pressure on the competitive capability of the firms is studied (Cantele and Zardini, 2018). However, the impact of sustainability opportunity on the operation performance, sustainability performance, and Competitive Capability of SMEs is under-investigated.

Customers drive the policy of the SMEs, but their role in driving the SMEs in India is under-investigated. The expectation of the customer and the SMEs therefore needs to be considered. Further, the customers' voices need to be considered while deciding strategies for implementing SMEs' sustainability. Developing nations – like India, for example – have more focus on helping SMEs to improve their quality by zero effect zero defect, while developed nations have stricter requirements to promote sustainability.

In the current section, we attempt to respond to the research questions posed in the Introduction section and related hypotheses based upon our analysis findings. Hence, regarding RQ1, this study investigates the role of sustainability opportunity, and operations performance, on sustainability performance and competitive capability in Indian manufacturing SMEs. The sustainability opportunity has been identified from our survey, EFA and CFA analysis (Table 2). It shows that SMEs sustainability opportunity is mainly measured by stakeholders' pressure, top management commitment, organisation commitment, and by the customers' requirement for sustainability.

The analysis results suggest that the sustainability opportunity has a slightly negative effect when associated to the operational performance of the Indian Manufacturing SMEs. Hence, according to our findings the sustainability opportunity is not a significant and positive factor when it comes to improving operational performance. The results of the

findings differentiate from those obtained by Zhu et al. (2015), who suggests that pressures and opportunities help to improve the operational performance of the SMEs.

Hence, based on our findings, it seems that in Indian SMEs the sustainability opportunity helps in gaining social performance and environmental performance but slightly negatively impacts the operational performance (Figure 3)..

The comparison of the case study SMEs shows that the Indian SMEs sustainability is driven by internal factors such as the top management, stakeholder's commitment to sustainability.

Next, regarding RQ2, we find that the operational performance has a positive contribution to the economic performance of the SMEs (H2a). This result is in line with the findings of Bagur-Femenias et al. (2013) and Saeidi et al. (2015). The managers try to opt for operational practices which would lead to economic gains.

On the question "Does operation performance improves the environmental sustainability of the Indian SMEs?", the findings of the study show that the operation performance slightly contributes to the environmental performance (H2b). The dilemma for managers to implement environmental practices is that it may not have economical returns in the short term. There is scope of energy savings with efficient operations performance. However, many of the environmental practices' economic return might be in future. The operation performance many times lead to improved environmental sustainability. The operations process optimisation leads to the resource optimisation, improved capacity utilisation and can lead to lower environmental impact (higher environmental performance) for example by decreased carbon footprint and lower energy consumption.

Regarding whether operation performance improves the social sustainability of the Indian SMEs, the study finds that the operation performance is significant to the social sustainability of the Indian SMEs (H2c). Previous studies e.g. Malesios et al. (2018), Bagur-

Femenias et al. (2013) and Saeidi et al. (2015) found similarly that the SMEs' operation performance had a positive contribution to social performance.

To further investigate this finding, the case study analysis has been conducted to understand the procurement strategies of customers' of SMEs. The case study analysis of the data, however, showed non-significant correlation between operational performance and social performance of the SMEs.

Finally, we discuss findings concerning RQ3 "Does sustainability performance help to improve the competitive capability of the Indian SMEs?". According to the results of our analysis, competitive capability is positively associated with economic performance (Figure 3). Additionally, competitive capability is negatively associated with environmental performance. These results are supported by Cantelle et al. (2018), who suggested that the SMEs do not gain much benefit from practising sustainability, and hence the SMEs feel burdened to implement sustainability.

The economic performance ensures a competitive capability. A better price of product, a higher value can ensure competitive capability. The environmental performance may lead to negative economic performance (Konar and Cohen, 2001). The environmental performance can lead to extra cost, which may be negatively contributing to the competitive capability of the SMEs. The Indian public procurement analysis shows that the customer prioritises aspects such as good quality, low cost and credibility of the SMEs. The environmental performance of the SME is not yet a consideration for winning the tender. Hence as of now for SMEs who are suppliers in public procurement may not be essentially getting a competitive edge with environmental performance.

Thus, by looking at the standardised regression weights (Table 5 & Figure 3), competitive capability is positively associated with social performance, yet environmental performance does not support the economic performance of the Indian SMEs. Social

performance, however, slightly supports the economic performance of the SMEs. The environmental performance is negatively related to competitive capability. However the positive relationship between social performance and competitive capability ensures that the companies which would provide better social sustainability can increase their competitive capability. As an example of the latter, the SMEs who are able to retain their trained employees can help in improving the competitive capability.

In addition to the above discussion, Table 6 includes past research support for comparisons.

--- TABLE 6 AROUND HERE ---

Further to the previous examination of associations between the latent constructs (RQ1-3 and related hypotheses), the SEM analysis from the Indian manufacturing SMEs have derived the constructs and sub-constructs, which can be helpful and relevant in measuring Indian manufacturing SMEs' sustainability and competitive capability (see Table 5).

Findings from the statistical modelling analysis suggest that SMEs represented their competitive capability by low price, plus product credibility. They believed in having an innovative, broad range of products that were high value, but tried to reduce their overhead costs. The findings are in line with prior studies by Abushaiba & Zainuddin (2012).

The analysis further suggests that the social performance of the SMEs was mainly reflected in their managers' actions, particularly by their focus on occupational health practices and air emission controls. Moreover, the survey reveals that SMEs explore their environmental performance by energy consumption effectiveness, savings from eco design, waste management practices, and avoiding fines and penalties by focusing on cleaner production. The economic performance of the SMEs was perceived and reflected by the top managers, who focused on their turnover and profit in the last year. The fixed asset and the

Return on Investment (ROI) reflected the economic performance of the SMEs. The results of the SEM analysis suggests that SMEs are driven by the stakeholders' pressure to implement sustainability, and top management commitment to implement sustainability. Further, the results suggest that the customer and the organisation have a low commitment when it comes to implementing sustainability.

Focusing on the specific challenges that SMEs face, their operational performance was perceived to be measured by the inventory utilisation, demand uncertainty, throughput achievement, customisation of the product, and processes. The capacity utilisation, forecasting technique, and the lead time slightly reflect the operational performance of the SMEs.

The findings of the study, based upon the investigation and analysis of a sample from Indian SMEs, integrate the institutional pressure, as well as the resource-based view. The results suggest that sustainability opportunity is not strong enough to drive the sustainable practices in the SMEs. The results failed to establish a positive relation between competitive capability and the sustainability opportunity. This suggests that there is a requirement to increase the sustainability opportunity, in order to motivate the SMEs to implement sustainability. The findings are supported by earlier research that suggests that SMEs' businesses – due to competition in the market – generally prioritise economic factors over environmental and social ones for strategic planning and operational decision-making (Dey et al. 2020). Studies show that the government, customers, and stakeholders need to provide extra benefits to promote sustainability adoption in the product and process stages (Fliedner and Majeske, 2010; Govindan et al. 2013).

Evidence from the current analysis also suggests that the stakeholders and policy makers need to improve the sustainability opportunities, so that the SMEs can perceive sustainability as a profitable strategy. The study has been able to empirically establish the

correlation between sustainability opportunity, operations performance, and competitive capability.

Finally, findings in our study suggest that the firms with more sustainability orientation can lead to more economic performance as more sustainable operational performance occurred. The companies with lower sustainability orientation can lead to lower economic performance as sustainable operations performance is practiced. We have also found evidence that the firms with more top management commitment to sustainability can lead to more economic performance. However, the firm with lower top management commitment to sustainability had a lesser economic performance on implementation of sustainable operations management.

7. Conclusions

The study bridges the literature review gap by the combined study of impact of sustainability opportunity, operation performance, sustainability performance on competitive capability of the SMEs. Operational performance is measured differently by authors, in many cases as an integral part of economic performance. In our study operational performance was separately investigated to capture the characteristic issues and challenges of manufacturing SMEs. We investigate if sustainability performance promotes competitive capability of Indian Manufacturing SMEs. Previous studies have studied the role of institutional pressure on competitive capability, however the role of sustainability performance on contributing to competitive capability in the Indian manufacturing SMEs was under investigated up to now. The findings suggest that economic sustainability ensures competitive capability of Indian SMEs. The environmental performance may not lead to competitive capability, but social performance does lead to competitive capability.

The results suggest that the sustainability opportunity has a slightly negative contribution on the operational performance of the Indian Manufacturing SMEs. So, the sustainability opportunity is not a significant factor when it comes to improving operational performance. It is, however, not helpful in achieving environmental performance. Sustainability opportunity on the other hand is a slightly assisting factor for achieving social performance. The present Indian market scenario and regulations promotes SMEs face slight motivation to focus on environment and social performance. Operation performance significantly improves the economic performance of the SMEs. The operation performance slightly contributes to the environmental performance and the social performance of the SMEs. The findings of the analysis show that the top managers perceive that sustainability opportunity slightly helps in environment and social performance but does not motivate the operational performance.

Competitive capability is positively associated with economic performance. Additionally, competitive capability is negatively associated with environmental performance. Competitive capability is positively associated with social performance, yet environmental performance does not support the economic performance of the SMEs. Social performance, however, slightly supports the economic performance of the SMEs. The findings also show that economic performance mediates the social performance and competitive capability of SMEs. This essentially means that if a social performance ensures economic performance (economic feasibility) then competitive capability will be ensured.

From the managerial perspective this study has clear implications. The evaluation in the study helps the SMEs managers and policy makers to make decisions with integrated considerations of strategic, tactical, and operational level of decision making simultaneously leading to improvement in sustainability and contributing to the competitive capability. Hence these findings can motivate the managers to develop, implement and prioritise

sustainability in their strategy. Additionally, this study will help the managers of Indian SMEs, customers, policy makers, regulators to reflect on the present state of art in context of sustainability implementation in Indian manufacturing SMEs.

Finally, the study investigates the role of sustainability opportunity, operation performance and sustainability performance on the competitive capability in the context of Indian manufacturing SMEs. As a scope for further research, a future study could similarly examine how the risk taking capability and the operation performance can lead to the competitive capability of SMEs both in developing and developed countries.

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On behalf of all authors, the corresponding author states that there is no conflict of interest.

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APPENDIX A1

Abbreviations

CMIN	chi-square value
CFI	Comparative Fit. Index
PClose	p of Close Fit
DF	Degree of Freedom
ROI	Return on Investment
SEM	Structure Equation Modelling
EFA	Exploratory Factor Analysis
CFA	Confirmatory Factor Analysis
MSV	Maximum Shared Variance
CR	Critical Ratio
CSP	Corporate Social Performance
CFP	Corporate financial Performance
SMEs	Small And Medium Sized Enterprises
CSR	Corporate Social Responsibility
SEM	Structural Equation Modelling
R&D	Research And Development
EMS	Environmental Management System
ISO 14000	International Organization For Standardization 14000
GDP	Gross Domestic Product
WLS	Weighted Least Squares
GFI	Goodness-Of-Fit Index
AGFI	Adjusted Goodness-Of-Fit Index
PGFI	Parsimonious Goodness-Of-Fit Index
RMSEA	Root Mean Square Error Of Approximation
SRMR	Standardized Root-Mean-Square Residual
AVE	Average Variance Extracted

APPENDIX A2

Common bias test

There is a problem of common method bias hence the common bias correction has been performed.

	Chi-square	df	p-value	Invariant?	**Step 1. provide chi-square and df for unconstrained and constrained models, and provide the number of groups.**
Overall Model					
Unconstrained	686.5	387			
Fully constrained	1093.8	418			
Number of groups		2			
			0.000	NO	Groups are different at the model level. Check path differences.
Chi-square Thresholds					
90% Confidence	689.21				Any chi-square more than the threshold (Green Cells) will be variant for a path by path analysis. This is only applicable to models where you are changing one path at a time (i.e., have a difference of one degree of freedom)
			0.100		
95% Confidence	690.34				
			0.050		
99% Confidence	693.13				
			0.010		

Table A1. Common Method Bias for constructs and latent variables

APPENDIX A3
Sustainability practices of Small and Medium Enterprises in India

Tell us about your business

1) Name of the organisation

2) Industry: Manufacturing sector [ ] Automobile [ ] Engineering [ ] Electronics [ ] Food[ ] Chemical [ ] Furniture[ ] Electrical[ ] Textile [ ] Services[ ] Others [ ]

3) Annual Turnover for 2016-2017 in Rs. of crores:
A) less than 2 [ ] B) 2 to 10 [ ] C) 10 to 25 [ ]
D) 25 to 100 [ ] E) 100 to 500 F)more than 500 [ ]

3) Fixed Assets in Rs. of crores:
A) less than 1,000,000 [ ] B) 1,000,000 to 2,500,000 [ ] C) 2,500,000 to 20,000,000 [ ]
D) 20,000,000 to 50,000,000 [ ] E) 50,000,000 to 100,000,000 [ ] F) more than 100,000,000 [ ]

4) Please indicate the approximate trend of profits before tax during three years:
A) increased by less than 10% per year [ ] B) increased by more than10% per year [ ]
C) almost constant [ ] D) decreased by less than 10% per year [ ]
E) decreased by more than 10% per year [ ] F) Can't say [ ]

6) Please indicate the number of employees at your organization:
A) less than 10 [ ] B) 10 to 25 [ ] c) 25 to 50 [ ] D) 50 to 100 [ ]
E) 100 to 250 [ ] F) more than 250

Products / services:

Types of major customers: Manufacturing sector [ ] Automobile [ ] Engineering [ ] Electronics [ ] Food[ ] Chemical [ ] Furniture[ ] Electrical[ ] Textile [ ] Services[ ] Others [ ]

Major products (Types):
Certificates (Please tick) : ISO 9001[ ] ISO 14001[ ] ISO 18001[ ] OHSAS 18001[ ] SA 8000 [ ]
Q1.10 Which year did you start your business?

11) Please indicate the approximate trend of profits before tax during three years:
A) increased by less than 10% per year [ ] B) increased by more than10% per year [ ]
C) almost constant [ ] D) decreased by less than 10% per year [ ]
E) decreased by more than 10% per year [ ] F) Can't say [ ]

Phone Number: Email id:

General Questions

5=Strongly agree, 4=Agree,3=Neither agree nor disagree, 2=Disagree and 1=Strongly disagree 0=not relevant to my business

1.	I face issues in throughput achievement of production	5 4 3 2 1	
2.	I make an effort for reducing energy consumption	5 4 3 2 1	
3.	I face issues with supplier's product quality	5 4 3 2 1	
4.	I face issues in inspection for quality improvement	5 4 3 2 1	
5.	I face supply uncertainty	5 4 3 2 1	
6.	I face demand uncertainty	5 4 3 2 1	
7.	I face issues in lead time of production	5 4 3 2 1	
8.	I have been able to reduce noise	5 4 3 2 1	
9.	My customers ask me to change the design for each order	5 4 3 2 1	
10.	I have been able ti reduce recycle industrial water	5 4 3 2 1	
11.	I have been able to reduce air pollutants	5 4 3 2 1	
12.	I have been able to reduce wastes	5 4 3 2 1	

Strategic Decision making

5=Strongly agree, 4=Agree,3=Neither agree nor disagree, 2=Disagree and 1=Strongly disagree

1.	Top management is committed to implement sustainability	5 4 3 2 1	
2.	Firms in our industry that do not meet the legislation standards for pollution control face a significant threat for legal prosecution	5 4 3 2 1	
3.	Firms in our industry are aware of fines and penalties associated with environment and social legislation	5 4 3 2 1	
4.	If industries commit any environmental/person related infraction, the consequence would include negative reports in the market	5 4 3 2 1	
	Operational Performance		
	I have effective *0-20% (1) 20-40% (2) 40-60% (3) 60-80% (4) 60-100% (5)*		
5.	Inventory	5 4 3 2 1	
6.	Formal risk management method in my production and operations management	5 4 3 2 1	
7.	I have been able to reduce the rejection of my product	5 4 3 2 1	
8.	I have effective Preventive Maintenance Policy	5 4 3 2 1	
9.	I have effective formal waste management policy	5 4 3 2 1	
10.	I have effective Reverse logistics policy	5 4 3 2 1	
11.	I have been able to reduce air emissions	5 4 3 2 1	
12.	I have been able to reduce energy consumption	5 4 3 2 1	
13.	I have effective social health and occupational hazard practice	5 4 3 2 1	
14.	I have effective resource utilisation	5 4 3 2 1	
15.	I have effective Capacity utilisation	5 4 3 2 1	
16.	I have effective Forecasting technique	5 4 3 2 1	
17.	I have effective Environmental Management System	5 4 3 2 1	

Q5	**Please answer the following about your sustainability practices in your business** *5=Strongly agree, 4=Agree,3=Neither agree nor disagree, 2=Disagree and 1=Strongly disagree*		
1.	There were major accidents in last three years	5 4 3 2 1	
2.	I prefer to produce designs with help in reduction in consumption of materials and energy	5 4 3 2 1	
3.	I prefer to reduce,reuse,recycle,recovery of materials and components	5 4 3 2 1	
4.	I prefer to avoid and reduce use of harmful products and their manufacturing process	5 4 3 2 1	
5.	I have been able to provide design specification to suppliers with environmental requirement	5 4 3 2 1	

6.	I have cooperation from customers for Eco design	5 4 3 2 1	
7.	I have cooperation from customer for cleaner production	5 4 3 2 1	
8.	I have cooperation from customer for green packaging	5 4 3 2 1	
9.	I have cooperation from customers for least energy consumption in manufacturing	5 4 3 2 1	
10.	I prefer to do process innovation	5 4 3 2 1	
11.	I have filed patients in last few years	5 4 3 2 1	
12.	I prefer selection of supplier with green initiatives	5 4 3 2 1	
13.	I prefer selection of innovative process planning	5 4 3 2 1	
	Indicate the Pressures and reasons for your organisation adopting sustainability *5=Strongly agree, 4=Agree,3=Neither agree nor disagree, 2=Disagree and 1=Strongly disagree*		
1.	Requirement from customer	5 4 3 2 1	
2.	Requirement from stakeholders	5 4 3 2 1	
3.	Profitable business opportunities	5 4 3 2 1	
4.	Competitive pressure	5 4 3 2 1	
5.	Regulations from legislative body	5 4 3 2 1	
6.	There are fines for not following environmental legislation standards	5 4 3 2 1	
7.	Non compliance to the regulations lead to the bad reputation	5 4 3 2 1	
8.	My competitors in the industry have sustainability	5 4 3 2 1	
9.	Financial support from governmental if implementing sustainability	5 4 3 2 1	
	The competitive capability *5=Strongly agree, 4=Agree,3=Neither agree nor disagree, 2=Disagree and 1=Strongly disagree*		
1.	I am able to introduce new goods/services quickly	5 4 3 2 1	
2.	I offer a a broad range of goods/services	5 4 3 2 1	
3.	I customize goods/services to customer needs quickly	5 4 3 2 1	
4.	Overhead cost of my product is low	5 4 3 2 1	
5.	Price of my products are low	5 4 3 2 1	
6.	My goods are of high value	5 4 3 2 1	
7.	My firm has better credibility than others	5 4 3 2 1	
8.	Customers have loyalty to me	5 4 3 2 1	

TABLES

Table 1. Profile of the number of employees in the company, and the company's profits

Number of employees	**Frequency**	**Percent**	**Profit**	**Frequency**	**Percent**
<10	19	8	Increases by less than 10%	52	23
10-25	43	19	Increases by more than 10%	24	11
25-50	94	41	Constant	90	40
50-100	48	21	Decreases by less than 10%	59	26
100-250	18	8	Decreases by more than 10%	2	1
>250	5	2			
	Total=227				

Table 2. Correlation coefficients for the constructs and latent variables (Average variance explained in bold)

	CR	AVE	MSV	MaxR(H)	COMP	OP	ENV	ECO	OPPO	SOC
COMPP	0.907	0.589	0.358	0.943	**0.768**					
OP	0.898	0.563	0.270	0.919	-0.083	**0.750**				
ENVV	0.818	0.486	0.358	0.882	-0.598*	0.299*	**0.697**			
ECOO	0.849	0.586	0.270	0.858	0.262*	0.520*	0.116	**0.765**		
OPPOO	0.873	0.638	0.063	0.925	0.067	-0.180*	-0.250*	-0.142*	**0.799**	
SOCC	0.831	0.554	0.129	0.854	0.359*	0.325*	0.058	0.336*	-0.109	**0.744**

* coefficient is significant at the 1% significance level

Table 3. Reliability and validity measures for constructs and latent variables.

Constructs	Sub-Constructs		Cronbach's α	% of explained variance
Sustainability Opportunity (OPPOO)	Oppo1	Top management commitment	0.863	71.58
	Oppo2	Customer commitment		
	Oppo3	Stakeholders pressure		
	Oppo4	Organisation commitment		
Operation performance (OP)	Op1	Lead time	0.895	61.89
	Op2	Capacity utilisation		
	Op3	Customise		
	Op4	Inventory		
	Op5	Demand uncertainty		
	Op6	Throughput achievement		
	Op7	Forecasting technique		
Economic performance (ECO)	Eco1	Turnover	0.847	68.68
	Eco2	Fixed asset		
	Eco3	profit		
	Eco4	ROI		
Social performance (SOC)	Soc2	Health occupations	0.894	79.99
	Soc3	Air emissions		
Environment performance (ENV)	Env1	Eco design	0.836	60.56
	Env2	Fines and penalties		
	Env3	Energy consumption		
	Env4	Cleaner production		
	Env7	Waste management		
Competitive capability (COMP)	Comp1	Customer loyalty	0.907	64.96
	Comp2	Credibility		
	Comp3	Overhead cost		
	Comp4	Low price		
	Comp5	High value		
	Comp6	New goods		
	Comp7	Broad range of products		

Table 4. Goodness of Fit Measures for assessing SEM model fit

Measure	Estimate	Threshold	Interpretation
GFI	0.921	>0.90	Acceptable
AGFI	0.903	>0.90	Acceptable
CFI	0.882	>0.90	Borderline Acceptable
SRMR	0.078	<0.08	Acceptable
RMSEA	0.076	<0.06	Borderline Acceptable

Table 5. Standardized Regression Weights of SEM Model along with statistical significance

Associations			Std. coefficients	p-value	Hypotheses support
Sustainability Opportunity	--->	Operations performance	-0.177	*	H1a: not supported
Operations performance	--->	Environment performance	0.24	**	H1b: supported
Sustainability Opportunity	--->	Environment performance	-0.204	**	H2b: not supported
Operations performance	--->	Social performance	0.265	**	H2c: Supported
Environment performance	--->	Economic performance	-0.007	ns	H3a: not supported
Operations performance	--->	Economic performance	0.465	**	H2a: supported
Social performance	--->	Economic performance	0.218	**	H4a: supported
Social performance	--->	Competitive Capability	0.375	**	H4b: supported
Environment performance	--->	Competitive Capability	-0.632	**	H3b: not supported
Economic performance	--->	Competitive Capability	0.211	**	H5: supported
Competitive Capability	--->	New goods	0.68	**	
Competitive Capability	--->	Overhead cost	0.728	**	
Competitive Capability	--->	High value	0.581	**	
Competitive Capability	--->	Customer loyalty	0.559	**	
Competitive Capability	--->	Credibility	0.913	**	
Competitive Capability	--->	Low price	0.923	**	
Competitive Capability	--->	Broad range of products	0.836	**	
Operations performance	--->	Throughput achievement	0.799	**	
Operations performance	--->	Inventory	0.876	**	
Operations performance	--->	Customise	0.785	**	
Operations performance	--->	Demand uncertainty	0.866	**	
Operations performance	--->	Lead time	0.563	**	
Operations	--->	Capacity	0.652	**	

performance		utilisation		
Operations performance	--->	Forecasting technique	0.602	**
Environment performance	--->	Fines and penalties	0.533	**
Environment performance	--->	Cleaner production	0.497	**
Environment performance	--->	Eco design	0.831	**
Environment performance	--->	Waste management	0.643	**
Environment performance	--->	Energy consumption	0.889	**
Economic performance	--->	profit	0.763	**
Economic performance	--->	Turnover	0.841	**
Economic performance	--->	Fixed asset	0.741	**
Economic performance	--->	ROI	0.713	**
Sustainability Opportunity	--->	Stakeholders pressure	0.942	**
Sustainability Opportunity	--->	Top management commitment	0.829	**
Sustainability Opportunity	--->	Organisation commitment	0.787	**
Sustainability Opportunity	--->	Customer commitment	0.599	**
Social performance	--->	Health occupations	0.886	**
Social performance	--->	Air emissions in the factory	0.678	**

** p-value<0.01; * p-value<0.05; n.s.: non-significant

Table 6. Comparison of the findings with the existing literature

Relationships			**Study findings**	**References**	
				Supports the results of the study	Does Not Support the results of the study
Operation Performance	←	Sustainability Opportunity	H1a: not supported		Zhu et al. (2013)
Environment Performance	←	Operation Performance	H1b: supported	Youn et al. (2013)	
Environment Performance	←	Sustainability Opportunity	H2b: not supported		Zhu et al. (2013)
Social Performance	←	Operation Performance	supported		Saeidi et al. (2015)
Economic Performance	←	Environment Performance	H3a: not supported	Vachon and Klassen (2008)	
Economic Performance	←	Operation Performance	H2a: supported	Bagur-Femenias et al. (2013) Saeidi et al. (2015).	
Social Performance	←	Operation Performance	H2c: supported	Malesios et al. (2018); Bagur-Femenias et al. (2013); Saeidi et al. (2015)	
Economic Performance	←	Social Performance	supported		Saeidi et al. (2015)
Competitive Capability	←	Social Performance	H4b: supported		Saeidi et al. (2015)
Competitive Capability	←	Environment Performance	H3b: not supported	Hollos et al. (2012); Cantele et al. (2018)	Chang (2011); Chen et al. (2006)
Competitive Capability	←	Economic Performance	H5: supported	Cantele et al. (2018)	

FIGURES

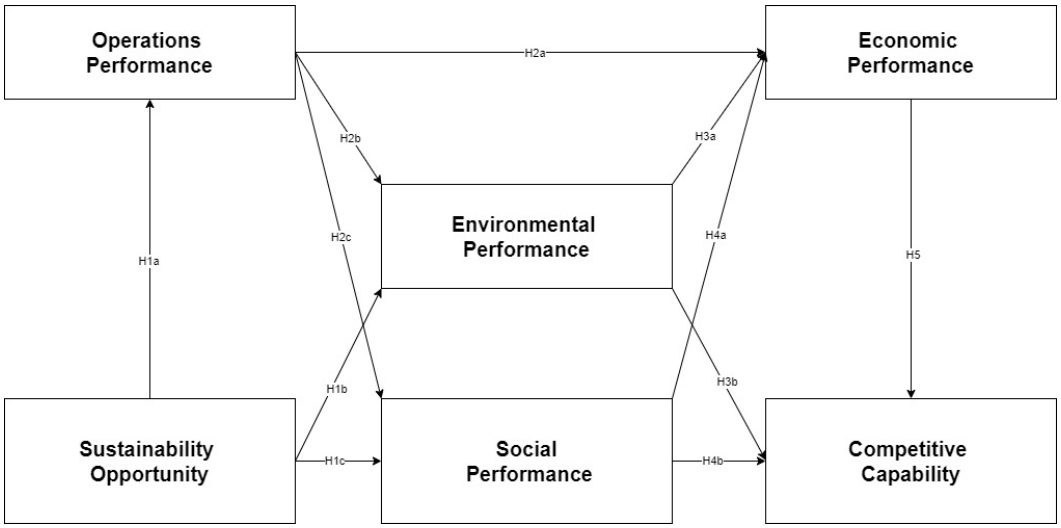

Figure 1. Theoretical Framework of the study

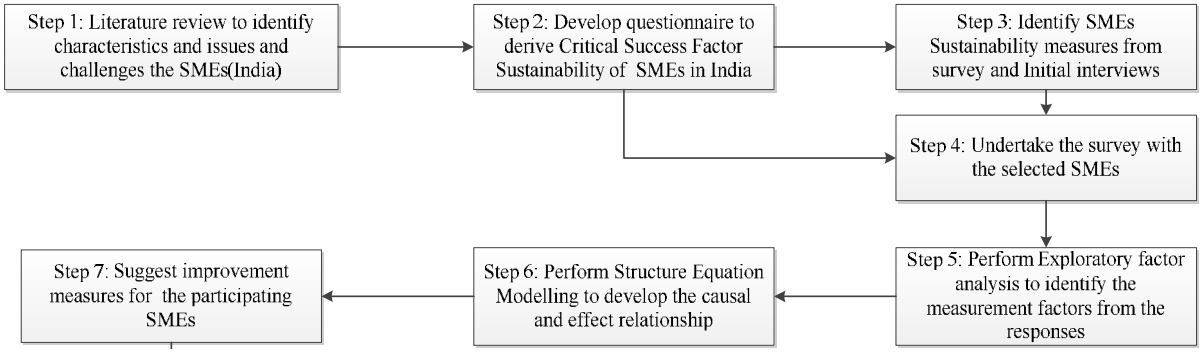

Figure 2. Research method framework

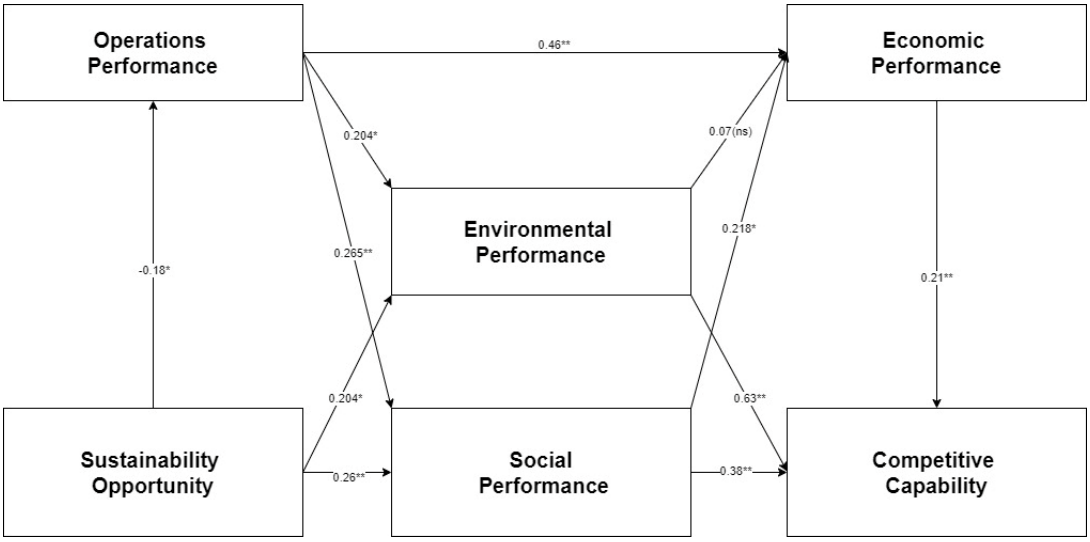

Figure 3. Path diagram of SEM model along with standardized regression weights (see also Table 5).