Comparison of Sustainability Factors Influencing Environmental, Economic and Social Sustainability- An Empirical Study in an Emerging Economy

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Sustainability symbolizes an equitable world with responsible governments, businesses and people striving to protect the natural environment and social equity, at the same time not compromising in their quest for economic growth (Adams & Zutshi 2004). Though SMEs form the backbone of an economy, research on sustainability has focused only on large firms. This study, carried out among SMEs provides a fresh perspective on sustainability. The objective of the study is to examine the factors driving the three pillars of economic, environmental and social sustainability in the context of SMEs in India. Murphy (2012) defined environmental sustainability as “the practice of responding to environmental issues in a socially responsible manner”. According to Beheiry et al. (2006), the economic pillar of sustainability is “the implementation of business practices with the assurance of future economic growth”. Social sustainability signifies the responsibility of a business towards the social well-being of the stakeholders. The sustainability factors considered for this study was perceived benefits, firm competency and market forces. It is highly essential to understand the factors which strongly drive sustainability practices so that firms would be able to identify potential strategies that could be adopted to achieve their sustainability agenda. This study was undertaken among 220 SMEs operating in an industrial city in South India. An instrument was developed based on extensive review of literature and tested for reliability and validity. Appropriate statistical tools were applied and the data was analysed. The study found the strong driving forces with regard to the factors - perceived benefits, firm competency and market forces. The results of this study also provide the basic framework for policy makers to identify the ways and means through which the sustainability quotient of the SMEs could be enhanced.

Keywords: Sustainability, Small and Medium Enterprises, Emerging Economy, Drivers of Sustainability

1. Introduction

Sustainability symbolizes an equitable world with responsible governments, businesses and people striving to protect the natural environment and social equity, at the same time not compromising in their quest for economic growth (Adams &

Zutshi 2004). World Commission on Environment and Development (WCED 1987) states that, “Sustainable Development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs”. Sustainability emphasises that mere economic returns are not sufficient for a business to thrive. Such economic returns could be the focus from a short term perspective, but in the long run all three dimensions of sustainability- Environmental, Economic and Social should be given equal prominence.

This empirical study based on the grounded theory approach is undertaken on small and medium enterprises in the Coimbatore district of Tamil Nadu, South India. A self-made economy, this city houses more than 25,000 small, medium and large industries and is a beehive of entrepreneurial activity. This pioneering research study focuses on the impact of various factors that drive the environmental, economic and social sustainability factors in small and medium enterprises among the members of CODISSIA, Coimbatore District Small Scale Industries Association which is one of the largest associations for SMEs in the country. The literature review brought forth certain factors which drive sustainability which includes perceived benefits, firm competence and the market forces which drive sustainability. This kind of empirical study is essential because of the dearth of research in the domain of sustainability, especially in the context of a developing economy like India

2. Literature Review and Hypothesis Development

Studies in the domain of sustainability have identified various factors which drive a firm towards sustainability. These factors have been classified as Driving – Dependence, Push-Pull, Internal-External factors. The commonly identified factors are improved relationship with the government (Patten 1999), identifying new opportunities in business (Chen 2008), financial benefits (Williams & Schaefer 2013), organizational change (Revell et al., 2010), pressure from stakeholders (Bai & Sarkis, 2010), financial institutions (Collins et al, 2010), top management commitment (Williams & Schaefer 2013). The review also showed that these drivers have not been comprehensively explored from the small business perspective. The small and medium enterprises are the second largest employment generator in India after agriculture and it forms the backbone of the Indian economy and studies based on the factors driving the three pillars of sustainability have been very rare in a developing economy like India. It is highly essential to understand the factors which strongly drive environmental, economic and social sustainability practices so that firms would be able to identify the potential strategies that they can adopt to satisfy their sustainability agenda.

Literature states that the factors driving sustainability in firms is based on certain theories of the firm including the shareholder theory, stakeholder theory and the resource based view theory. The shareholder theory of the firm, states that the ultimate duty of any firm is to maximize returns for its shareholders. The shareholders provide the financial support or capital to run the business and therefore have considerable influence and authority to expect maximum returns from the same (Hill & Jones 1992 and Madden et al. 2006). Firms would therefore undertake sustainability practices only if they perceive certain benefits resulting out of such activities which would in turn satisfy their shareholders. This theory forms the basis of the first proposition on the perceived benefits.

According to the Resource Based View (RBV) theory, the tangible and intangible resources available with a firm will determine the nature of activities or the strategies which it would execute (Conner & Prahalad 1996; Hart 1995; Russo & Harrison 2005). Lozano et al. (2015) stated that the appropriate bundling of these resources helps acquire competitive advantage. This competitive advantage becomes a sustainable competitive advantage when it cannot be replicated by its competitors. The RBV theory ensures the maximum utilization of available resources. Lozano et al. (2015) also state that the theory contributes to the social dimension, as it affects the internal stakeholders. Hence the proposition based on the firm competence was formulated

Drawing from the stakeholder theory, Ansoff (1965) states that firms strive to balance the conflicting demands of the different stakeholders. In the context of corporate sustainability, Cormier et al. (2004) state that stakeholder theory offers the micro framework for firms to undertake sustainable development activities to satisfy the interest of the various stakeholders or the external market forces. Hence, the final proposition of this study on the market forces was arrived at. Murphy (2012) defined environmental sustainability as “The practice of responding to environmental issues in a socially responsible manner”. According to Beheiry et al. (2006), the economic pillar of sustainability is “The implementation of business practices with the assurance of future economic growth”. Social sustainability means the responsibility of business towards the social well-being of the stakeholders. Socially sustainable firms add value to the society in which they operate.

Based on the comprehensive literature review and conceptual framework the propositions arrived at is presented in Table 1.

Table 1 Propositions and Corresponding Literature Review

PROPOSITIONS	LITERATURE REVIEW
There is a positive relationship between Perceived Benefits and Environmental, Economic and Social Sustainability Practices	Hill & Jones 1992 and Madden et al. 2006, Stubblefield Loucks et al. 2010 , Battacharya et al. 2008 , Marin & Ruiz 2007, Aragon- Correa et al. 2008, Baron et al. 2014
There is a positive relationship between Firm Competence and Environmental, Economic and Social Sustainability Practices	Conner & Prahalad 1996; Hart 1995; Russo & Harrison 2005 , Brammer et al. 2012; Collins et al. 2010 , Williams & Scheafer 2013, Castka et al. 2004 , Revell et al. 2010
There is a positive relationship between Market Forces and Environmental, Economic and Social Sustainability Practices.	Jones & Wicks 1999; Kassinis & Vafeas 2002 , Schaper 2002 , Yu and Bell's 2007, Masurel 2007, Ervin et al. 2013; Bonilla Priego et al. 2011

3. Research Methodology

This is an empirical study conducted in the Coimbatore district of Tamil Nadu. The sampling frame is derived from the members listed in CODISSIA which is the manufacturing cluster representing SMEs in Coimbatore city. Of the 1691 members, only 1102 members were found fit to the definition of SMEs and were operating with a labour strength of more than 10 employees. An interview request was sent to all the 1102 members through e-mails, mails and phone calls. 262 members out of the selected population responded from the data collection process. Out of this 262,

42 questionnaires were found to be incomplete and therefore, could not be included for further analysis and finally the sample size of 220 was achieved which comprised of ancillary machinery manufacturers. This sample size approximates to 23% of the population considered. In this study statistical correlation was used to understand the degree or extent to which environmental, economic and social sustainability practices co-relate with the perceived benefits, firm competency and market forces.

The sampling technique used was simple random sampling and the data was collected using a structured interview schedule. The questionnaire comprised of questions relating to demographic characteristics, perceived benefits (PB), Firm Competence and Market Forces (MF) on the Environmental (ES), Economic (EC) and Social (SO) sustainability practices.

Table 2 Demographic Characteristics

Demographic Characteristics	Frequency	Percentage
Number of people employed full time in the organization		
Up to 15	72	32.7
15-30	76	34.5
More than 30	72	32.7
Age of the business		
Less than 10	100	45.5
10-20	64	29.1
More than 20	56	25.5
The generation currently managing the business		
First	104	47.3
Second	96	43.6
Third	20	9.1

Instrument Validity

The instrument used for this study was tested for reliability and validity. The reliability of the instrument was tested using the Item Purification Process. The Cronbach alpha scores and the composite reliability scores ensured the construct validity and the internal consistency. These results are depicted in Table 3 and Table 4.

Table 3 Validity Scores

Construct	Cronbach Alpha	Composite Reliability (Environmental)	Composite Reliability (Economic)	Composite Reliability (Social)
PB	0.814866	0.860313	0.850237	0.860567
FC	0.566663	0.755972	0.748787	0.756482
MF	0.799562	0.846676	0.843412	0.845655

Table 4 Cronbach Alpha and Composite Reliability of Environmental, Economic and Social Sustainability Practices

Construct	Cronbach Alpha	Composite Reliability
Envtl	0.799291	0.851803
Eco	0.896869	0.924344
Social	0.764996	0.833422

4. Results and Discussion

The objective of this study is to establish the positive relationship between perceived benefits (PB), Firm Competence and Market Forces (MF) on the Environmental (ES), Economic (EC) and Social (SO) sustainability practices. The results clearly indicate a positive correlation between these constructs as depicted in Table 6.

While the results portray the prevailing drivers of sustainability, it also clearly brings out certain factors which predominantly drive environmental sustainability as compared to economic and social sustainability practices. The research shows that environmental sustainability initiatives were driven more by the perceived benefits relating to new opportunities ($r = 0.741$), retaining qualified employees ($r = 0.737$) and cordial relationships with government ($r = 0.572$). Such new opportunities in terms of sustainable solutions seem to garner a lot of positive attention from many stakeholders and more importantly the customers and the government which in turn benefits the firms. Qualified employees like to be identified with green initiatives and retaining them becomes much easier.

Table 5 Correlation Matrix

		ES	EC	SO
PB	Pearson Correlation	.930**	.791**	.908**
	Sig. (2-tailed)	.000	.000	.000
FC	Pearson Correlation	.838**	.849**	.828**
	Sig. (2-tailed)	.000	.000	.000
MF	Pearson Correlation	.925**	.489**	.882**
	Sig. (2-tailed)	.000	.000	.000
a.	List wise N = 220			

On the other hand economic sustainability was driven by cost-savings ($r = 0.882$), profitability ($r = 0.751$) and first-mover advantage ($r = 0.721$). This is in line with the concept of the business case of sustainability. According to Salzmann et al. (2005), the economic justification for corporate sustainability is defined as “A strategic and profit-driven corporate response to environmental and social issues caused through the organization’s primary and secondary activities.” Social sustainability factors were driven by culture ($r = 0.694$), employees ($r = 0.631$) and new opportunities in business ($r = 0.599$). The study goes in agreement of the theory of Porter & Kramer (2006) who emphasize the social component of sustainability by stating that “Successful corporations need a healthy society, a healthy society creates expanding demand for business, as more human needs are met and aspirations grow.”

The study clearly showed that the advantages perceived from the three pillars of sustainability have a distinctive focus. Of the different firm competencies, the study clearly showed that the values ($r = 0.374$) and the commitment from the top management drives ($r = 0.562$) all three sustainability practices. While Associations/Networks ($r = 0.737$), Customers ($r = 0.687$) and Social Expectation ($r = 0.636$) were the market forces that drive both Environmental and Social Sustainability Practices, completely different factors like Stakeholder Commitment ($r = 0.882$), Globalization ($r = 0.882$) and Technology ($r = 0.751$) drive Economic Sustainability Initiatives. Therefore, the research shows that distinctive focus on the

different factors is essential to encourage SMEs towards environmental, economic and social sustainability practices.

Table 6 *A Comparison of the Different Sustainability Factors Influencing Environmental, Economic and Social Sustainability Practices*

Sustainability factors	Environmental	Economic	Social
Perceived Benefits	Eco friendly production Improvement in the employability skills through academic networking Government Lobby	Non-conventional energy systems Viz. Solar energy People, Planet, Profits (3P) Competitive edge	New social standards Congenial work place Less carbon print businesses Organizational culture
Firm competency	Eco-Concern in a holistic way Realization from strategic level	Social Cost- benefit balance Better Resources utilization and economy at all levels	Improved social index Fraternity at income and technology engagement
Market Forces	Matured industry interaction Socially responsible customers	Responsibility at micro level Green products for the world	Societal brands Interaction among all the partners of value chain

This study adds to the existing literature on sustainability, especially in the context of small and medium firms. Considering the importance of SMEs to the country's economy, it is imperative to identify which strategies work and how they work in order to encourage their smooth transition towards sustainability. This study has thrown light on the factors which are strong drivers of sustainability. The results of this study also provide the basic framework for policy makers to identify the ways and means through which the sustainability quotient of the SMEs could be enhanced. Inputs from this study could be used to formulate training modules on sustainability issues and implementation of sustainability practices could be encouraged, especially in developing economies like India to achieve the aim of creating responsible SMEs of the future.

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