

Drivers of Green Business Practices in Kerala

¹K K Jithina & ²K V Thomas (Dr)

¹Research Scholar, Research and P G Department of Commerce, Marian College, Kuttikkanam, Idukki (India)

²Associate Professor, Research and P G Department of Commerce, Marian College, Kuttikkanam, Idukki (India)

ARTICLE DETAILS

Article History

Published Online: 29 Sep 2018

Keywords

Drivers
 Green Business Practices
 Exploratory Factor Analysis
 Environmental Sustainability

*Corresponding Author

Email: [kkjithina.blsy\[at\]gmail.com](mailto:kkjithina.blsy[at]gmail.com)

ABSTRACT

Green practices drive us towards environmental sustainability. Business' contributions to sustainability through green practices are one of the focal point of discussions now- a- days. Green practices are the practices or activities that are meant to reduce or eliminate the environmental degradation. The aim of the study is to bring out the drivers that contribute to the adoption of green practices among the manufacturing enterprises in Kerala. The data were collected from 148 micro and small manufacturing enterprises operating in Kerala during the period 2015- 2017. The review of literature has revealed that there are several drivers or factors that drive the business entities to adopt such green practices. The evidence suggests that six prominent drivers that influence the adoption of green business practices. They are 'Technical expertise for innovation and strategic advantage', 'Stakeholder pressure', 'Environmental consciousness', 'Economic benefits', 'Regulatory mechanism' and 'Better market prospects'.

1. Introduction

Green business practices are those practices aimed at reducing environmental issues. According to Cekanavicius, Bazyte, & Dicmonaite(2014), "Green business is an organisation that is committed to the principles of environmental sustainability in its operation, strives to use renewable resources, and tries to minimise the negative environmental impacts of its activities". Business community is seriously thinking about the environmental sustainability and there are certain forces or factors pushing the organisations to adopt the same. They think that the business contributions to environmental sustainability will gain more significance in future days (Eva Collins, 2010). Some interventions take place for achieving environmental sustainability like compulsory legislations as well as voluntary arrangements. There should be some interventions or pressures for the business organisations to achieve environmental improvement at maximum (Parker, Redmond, & Simpson, 2009). The purpose of the study was to identify the drivers of green business practices among manufacturing enterprises in Kerala.

2. Statement of the problem

Montreal protocol, Kyoto Protocol and Paris summit reveals that the global concern regarding the environmental degradation. In this context, business community has a responsibility to improve the environmental sustainability by implementing green business practices. There were several drivers that influence the business organisations to adopt such practices. Several authors (Govindan, Diabat, & Shankar, 2015; Cecerea & Mazzantic, 2017; Raja Ghazilla et al., 2015; Singh, Singh, & Dhingra, 2012; Dodds et al., 2013; ElTayeb, Zailani, & Jayaraman, 2010; Tay et al., 2015; Stoughton & Ludema, 2012; Mittal, 2013) were studied these aspects in past years. But in Kerala context there were no studies discussing this topic. The objective of the present study is therefore;

The objective of the study is to analyse and interpret the drivers of green business practices among micro and small manufacturing enterprises in Kerala.

3. Review of literature

Reducing negative environmental impact by implementing green business practices became a hot topic (Guo, Qu, & Tseng, 2017). The business enterprises who have taken it as opportunity will sustain in future (Kabiraj, Topkar, & Walke, 2010). Now- a- days almost all the business entities are trying to incorporate environmental sustainability aspects in their operations (Nadaf & Nadaf, 2014; Stoughton & Ludema, 2012). There might be certain pressures influencing business organisations to become green (Mittal, 2013). Authors gave emphasis on these pressures or forces and treated them as drivers for eco innovation (Marinescu, Ciocoiu, & Cicea, 2015). Past studies revealed that the drivers were not same; it may vary according to the factors like industry, size and region of the business enterprise (Bottcher & Muller, 2015).

Experience and expertise (Stoughton & Ludema, 2012), concern about the environmental impact (Dodds et al., 2013), sustainability feelings (Stoughton & Ludema, 2012) and awareness (Abuzeinaba & Arif, 2014) of entrepreneur affected the green practice implementation. Environmental concern of the firm (Singh, Singh, & Dhingra, 2012), social cultural and ethical factors (Tariq et al., 2017) technological factors (Tariq et al., 2017; Abuzeinaba & Arif, 2014) Improved and Satisfactory technological Alternatives (Singh, Singh, & Dhingra, 2012), internal CSR practices (Tay et al., 2015), and other social responsibilities (Raja Ghazilla et al., 2015; ElTayeb, Zailani, & Jayaraman, 2010; Dodds et al., 2013) market demand (Cecerea & Mazzantic, 2017; Raja Ghazilla et al., 2015; Singh, Singh, & Dhingra, 2012), and Market factors (Raja Ghazilla et al., 2015; Govindan, Diabat, & Shankar, 2015; Tariq et al., 2017) were also affected the green business practices. Some entrepreneurs came in world of environmentalism because of peer pressure like business to

business pressure (Raja Ghazilla et al., 2015), industry groups (Stoughton & Ludema, 2012) and collaborations and networking factor (Tariq et al., 2017) or due to public pressure (Cecerea & Mazzantic, 2017; Singh, Singh, & Dhingra, 2012; Dodds et al., 2013) and it includes influence of NGOs (Singh, Singh, & Dhingra, 2012; Stoughton & Ludema, 2012) and good community relation (Raja Ghazilla et al., 2015). Management (Tay et al., 2015; Singh, Singh, & Dhingra, 2012; Dodds et al., 2013; Govindan, Diabat, & Shankar, 2015; Stoughton & Ludema, 2012), employees ((Tay et al., 2015; Singh, Singh, & Dhingra, 2012; Dodds et al., 2013; Stoughton & Ludema, 2012) and suppliers/ distributors (Tay et al., 2015; Singh, Singh, & Dhingra, 2012; Stoughton & Ludema, 2012) supported the business entity in implementing the green practices. Better recognition and status (Govindan, Diabat, & Shankar, 2015; Cecerea & Mazzantic, 2017; Raja Ghazilla et al., 2015; Singh, Singh, & Dhingra, 2012; Dodds et al., 2013; EITayeb, Zailani, & Jayaraman, 2010) were also attracted the

entrepreneurs while some others went for green business to enjoy better competitiveness/ competitive advantage (Singh, Singh, & Dhingra, 2012; Dodds et al., 2013; Raja Ghazilla et al., 2015; Cecerea & Mazzantic, 2017; Tay et al., 2015). Some entities implement green practices to enjoy economic benefits like tax rebate (Raja Ghazilla et al., 2015; EITayeb, Zailani, & Jayaraman, 2010; Cecerea & Mazzantic, 2017), Cost reduction (EITayeb, Zailani, & Jayaraman, 2010; Singh, Singh, & Dhingra, 2012; Dodds et al., 2013) and government grants (EITayeb, Zailani, & Jayaraman, 2010; Raja Ghazilla et al., 2015; Cecerea & Mazzantic, 2017; Singh, Singh, & Dhingra, 2012). In previous studies, legislation (Dodds et al., 2013; Raja Ghazilla et al., 2015; Cecerea & Mazzantic, 2017; Tay et al., 2015; EITayeb, Zailani, & Jayaraman, 2010; Singh, Singh, & Dhingra, 2012), future legislation ((Mittal, 2013) and penalty (Raja Ghazilla et al., 2015) was also treated as drivers since it pressurise firm to implement green practices. The summary of the review of literature is presented in Table 1.

Table 1: Review of literature - Summary

Sl. No.	Authors	(Govindan, Diabat, & Shankar, 2015)	(Singh, Singh, & Dhingra, 2012)	(Stoughton & Ludema, 2012)	(Cecerea & Mazzantic, 2017)	(Raja Ghazilla et al., 2015)	(Abuzeinaba & Arif, 2014)	(Tariq et al., 2017)	(Tay et al., 2015)	(EITayeb, Zailani, & Jayaraman, 2010)	(Dodds et al., 2013)	(Mittal, 2013)
	Variables											
1.	Technical expertise			✓								
2.	Innovative use of technologies		✓				✓	✓				✓
3.	CSR					✓			✓	✓	✓	
4.	Helps for innovation and creativity	✓				✓	✓					
5.	Competitive advantage Motive		✓		✓	✓			✓		✓	✓
6.	Environmental awareness/ environmental consciousness of entrepreneurs		✓	✓			✓	✓			✓	
7.	Tax rebates				✓	✓				✓		✓
8.	Government grants and subsidies		✓		✓	✓				✓		
9.	Cost reduction motive		✓							✓	✓	
10.	Better recognition and status	✓	✓	✓	✓	✓				✓	✓	
11.	Demand for green products		✓		✓	✓						
12.	Better market share	✓				✓		✓				
13.	Penalties					✓						✓
14.	Current environmental legislation	✓	✓		✓	✓			✓	✓	✓	✓
15.	Future legislation											✓
16.	Local communities, media, politicians& NGOs		✓	✓	✓	✓			✓		✓	✓
17.	Positive attitude of trade and business associations			✓		✓		✓				✓
18.	Employee support	✓	✓	✓					✓		✓	
19.	Management support		✓	✓					✓		✓	
20.	Support from suppliers and distributors		✓	✓					✓			

4. Methodology

The variables were identified through a detailed review of literature. The study was based on primary data and secondary data. The primary data was collected from 148 sample respondents from Kerala using a structured interview schedule. The population of the study consists of all the micro and small

manufacturing entities registered in Kerala. In the first stage, out of 14 districts in Kerala, 3 districts were selected randomly. In the second stage, stratified random sampling method was adopted to select the sample respondents. For this, a sampling frame was created considering all the micro and small manufacturing enterprises registered under DIC in the selected districts. These enterprises are divided into two strata's and the

samples were selected randomly from these two strata's. The Exploratory Factor Analysis was used to isolate the prominent drivers of green business practices.

5. Findings and Discussion

Among the 148 sample enterprises, 13.3% were grown up companies which were in operation of more than 15 years. Majority were young companies having the number of years in operation between 5 and 15. 72% were young companies. Infant companies were those less than 5 years of operation and 14.7% of sample enterprises were infant companies. As far as concerned to the entrepreneur, 85.3% were male entrepreneurs and 14.7 were female. The entrepreneurs having the age of below 30 was named as young entrepreneurs and only 8% of sample entrepreneurs come under this group. Majority (70.7%) of the respondents were middle aged and 21.3% belongs to old aged.

The review has brought out 33 variables that can be considered as potential drivers of green business practices. The first draft of questionnaire was fixed after a pilot study among 15 respondents. Ten variables was removed as it was found significantly improving the reliability score (Alpha). Before taking a decision to delete the variables, the opinions of subject matter experts were also sought. The data was collected using a 5 point measurement scale. To reduce the number of dimensions to a manageable few, Exploratory Factor Analysis (EFA) was applied on the collected data.

Before the EFA was administered on the collected data, the researcher examined whether the sample size was adequate for administering EFA. The Kaiser- Meyer- Olkin Measure of Sampling Adequacy and Bartlett's test of sphericity established that the data was sufficient for EFA. The result showed a value of .737 for KMO. Since the KMO value indicates the sampling adequacy, the value .737 is satisfactory to proceed with factor analysis. Bartlett's test value shows the suitability of the data to the structure and the measure ($p < .001$).

Table 2: KMO Test value

KMO and Bartlett's Test	
Number of items	23
Kaiser- Meyer- Olkin Measure of Sampling Adequacy	0.737
Bartlett's test of sphericity	1365.150
P value	<.001

The following Table 3 shows the result of Exploratory Factor Analysis. The extraction method was Principal Component Analysis and rotation method was Varimax with Kaiser Normalisation. It extracted 6 components and they are labelled 'Technical expertise for innovation and strategic advantage', 'Stakeholder pressure', 'Environmental consciousness', 'Economic benefits', 'Regulatory mechanism' and 'Better market prospects'.

Table 3: Drivers of Green Business Practices

Codes	Factor/ Variables	Factor Loading	α Value
Technical expertise for innovation and strategic advantage			
TES1	Technical expertise	.838	.853
TES2	Helps for innovation and creativity	.801	
TES3	Social Responsibility	.786	
TES4	Availability of green technologies	.779	
TES5	Competitive advantage Motive	.610	
Stakeholder pressure			
SP1	Public pressure	.779	.736
SP2	Peer pressure	.740	
SP3	Employee support	.669	
SP4	Management support	.640	
SP5	Supplier and distributor support	.539	
Environmental consciousness			
EC1	Willingness to improve business environmental quality.	.874	.740
EC2	Conservation of natural environment	.834	
EC3	Reduction of environmental impact	.643	
EC4	Awareness about natural issues	.591	
Economic benefits			
EB1	Government grants and subsidies	.860	.773
EB2	Tax rebates	.855	
EB3	Cost reduction motive	.519	
Regulatory mechanism			
RM1	Penalties	.880	.712
RM2	Current environmental Legislation	.844	
RM3	Future legislation	.716	
Better market prospects			
BMP1	Better recognition and status	.746	.715
BMP2	Demand for green products	.654	
BMP3	Better market share	.652	

The table 3 shows the factor loading for each variable and reliability score for each factor. All the values are above the

threshold limit of 0.7 indicating the internal consistency of the data. Factor loading above 0.5 are retained.

6. Implications of the study

The green practices of business organisations were mainly due to certain drivers that were motivated them to do such green activities. The drivers derived through the analysis were 'Technical expertise for innovation and strategic advantage', 'Stakeholder pressure', 'Environmental consciousness', 'Economic benefits', 'Regulatory mechanism' and 'Better market prospects'. The issue of environmental degradation had attained a global attention. People realised that the business

men can do even better for environmental sustainability. So the business community and the policy makers can focus on the drivers or the motivating factors that were mentioned earlier, since they help to implement the green business practices.

Acknowledgement

The authors are thankful for the co-operation of the micro and small manufacturing enterprises. They are also grateful for the support of the DICs in Kerala.

References

1. Abuzeinaba, A., & Arif, M. (2014). 'Stakeholder engagement: A green business model indicator', *Procedia Economics and Finance*, 18,505-512.
2. Bottcher, C. F., & Muller, M. (2015). 'Drivers, Practices and Outcomes of Low-carbon Operations: Approaches of German Automotive Suppliers to Cutting Carbon Emissions', *24, Business Strategy and the Environment*, 477-498.
3. Cecerea, G., & Mazzanti, M. (2017). 'Green jobs and eco-innovations in European SMEs', *Resource and Energy Economics*, 49,86-98.
4. Cekanavicius, L., Bazyte, R., & Dicmonaite, A. (2014). 'Green business: challenges and practices', *Ekonomika*, 74-88.
5. ElTayeb, T. K., Zailani, S., & Jayaraman, K. (2010). 'The examination on the drivers for green purchasing adoption among EMS 14001 certified companies in Malaysia', *Journal of Manufacturing Technology Management*, 21(2),206-225.
6. Eva Collins, J. R. (2010). 'Sustainability Practices: Trends in New Zealand Businesses', *Business Strategy and the Environment*, 479-494.
7. Govindan, K., Diabat, A., & Shankar, K. M. (2015). 'Analyzing the drivers of green manufacturing with fuzzy approach', *Journal of Cleaner Production*, 96, 182-193.
8. Guo, L. I., Qu, Y., & Tseng, M.-L. (2017). 'The interaction effects of environmental regulation and technological innovation on regional green growth performance', *Journal of Cleaner Production*, 162, 894-902.
9. Kabiraj, D. S., Topkar, D. V., & Walke, R. (2010). Going Green: A Holistic Approach to Transform Business.', *International Journal of Managing Information Technology*, 2(3), 22-31.
10. Marinescu, C., Ciocoiu, C. N., & Cicea, C. (2015). 'Drivers of Eco-Innovation within Waste Electrical and Electronic Equipment Field', *Theoretical and Empirical Researches in Urban Management*, 10(4), 5-18.
11. Mittal, V. K. (2013). 'Development and Validation of Drivers for, Barriers to and Stakeholders of Green Manufacturing. Pilani: Birla Institute of Technology and Science.'
12. Nadaf, Y. B., & Nadaf, S. M. (2014). 'Green Marketing: Challenges and Strategies for Indian Companies in 21st century', *IMPACT: International Journal of Research in Business Management*, 2(5), 91-104.
13. Parker, C. M., Redmond, J., & Simpson, M. (2009). 'A Review of Interventions to Encourage SMEs to Make Environmental Improvements', *Environment and Planning C: Politics and Space*, 279-301.
14. Raja Ghazilla, R. A., Sakundarini, N., Abdul-Rashid, S. H., Ayub, N. S., Olugu, E. U., & Musa, S. N. (2015). 'Drivers and barriers analysis for green manufacturing practices in Malaysian SMEs: A Preliminary Findings', *Procedia CIRP*, 26, 658 - 663.
15. Singh, A., Singh, B., & Dhingra, A. K. (2012). 'Drivers and Barriers of Green Manufacturing Practices: A Survey of Indian Industries', *IJMRS's International Journal of Engineering Sciences*, 1(1), 5-19.
16. Stoughton, A. M., & Ludema, J. (2012). 'The driving forces of sustainability', *Journal of Organizational Change Management*, 25(4), 501-517.
17. Tariq, A., Badir, Y. F., Tariq, W., & Bhutta, U. S. (2017). 'Drivers and consequences of green product and process innovation: A systematic review, conceptual framework, and future outlook', *Technology in Society*, 51, 8-23.
18. Tay, M. Y., Rahman, A. A., Aziz, Y. A., & Sidek, S. (2015). 'A Review on Drivers and Barriers towards Sustainable Supply Chain Practices', *International Journal of Social Science and Humanity*, 5(10), 892-897