International Journal of Advanced Research in Engineering Technology & Science
ISSN: 2349-2819
Impact Factor: 7.10
( Peer-Reviewed, Open Access, Fully Refereed International Journal)
Email: editor@ijarets.org Volume-11, Issue-2 February – 2024 www.ijarets.org

# DETERMINE THE ROLE ON MANUFACTURING COMPANIE'S MARKETING PERFORMANCE IN THE STATE OF UTTRAKHAND

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## ABSTRACT

The environment and energy play a major part in a country's development. As energy generation has increased, so too have carbon emissions, but the Third World countries have found it incredibly difficult to keep up technologically and capital-intensively. Even in India, where there has been extensive electrification, the increase in energy consumption has greatly outpaced the expansion of installed capacity. An important factor is the rise in energy-intensive economic activity. It gets harder for the industrial sector every day to comply with international standards, especially when it comes to lowering environmental hazard requirements from clients abroad and maintaining competitive production costs. The industrial sector's production costs are rising daily due to rising energy costs, which is a major problem in today's corporate world. The manufacturing sector in international business now faces significant challenges due to the environment's growing effects. It is now very difficult for the manufacturing sector to comply with regulations and compete worldwide due to rising carbon emission levels. My goal is to use this study as a model for Uttrakhand's manufacturing enterprises, helping them to overcome issues related to energy and environmental practices, aspects, and company performance growth while lowering carbon emissions for sustainable development.

**Keywords:** Energy Management Practices, Environmental Management Practices, Market performance.

## INTRODUCTION

Growing globalization has forced organizations to prioritize sustainability while making marketing decisions in the recent past. As a result, businesses are increasingly aligning their operations and focusing on environment and economy focused marketing strategies (Richey et al., 2014). Companies that prioritize sustainability in their business models are currently looking for strategies that align with their social and environmental commitments and help them accomplish sustainable goals (Comin et al., 2019). Despite realizing the importance of sustainability for their modest situations in several aspects, businesses are uncertain about how to implement their energy and environmental management practices (Montabon et al., 2007). Crucially, businesses are becoming more environmentally proactive as a result of the increasing

deterioration of environmental health linked to greenhouse gas emissions and pollutants produced by manufacturing. As previously indicated, companies are very concerned with the specifics of implementing energy and environmental management practices, and top management's involvement is essential to the outcome. The main factors influencing environment management performance are energy management techniques. Top management may successfully translate result-oriented adoption of environmental management principles if they actively participate in understanding the business's social posture while taking into account their environmental impact (Huse, 2005).

The social expectations for energy security and sustainability are increasing the importance of environmental management practices for economic gain (Kleindorfer et al., 2005; Porter and van der Linde, 1995; Pagell and Gobeli, 2009; Sroufe, 2003; Yang et al., 2010). The relationship between environmental management and financial performance has been the subject of extensive discussion, although the results are erratic and ambiguous (Jimenez and Lorente, 2001; Russo and Fouts, 1997; Rao and Holt, 2005). This alternative viewpoint holds that businesses who recognize the value of environmental and energy sustainability for their capacity to compete are unsure about how to apply environmental and energy management strategies (Montabon et al., 2007). Many organizations are currently facing resource constraints on a worldwide scale. At the same time, countries like India are facing difficulties in achieving higher levels of economic growth as well as concerns related to rising energy consumption. Energy efficiency has a lot of promise. Energy efficiency provides significant support for the low-carbon transformation in the Indian setting. Energy efficiency improvement has been identified as the most important factor contributing to India's economic growth. As a result, it has been agreed that cutting down on waste and unnecessary energy use in a number of industries is necessary to develop and execute new, creative policies. Covid has shown us that industry 4.0, or process and production automation, will alter the face of the energy business in the future. India will be resource-efficient, autonomous, and secure through the adoption of new technology, the creation of numerous energy programs, and education and awareness campaigns about the advantages of energy conservation among the general public. Energy efficiency improvement has been identified as the most important factor contributing to India's economic growth. As a result, it has been agreed that cutting down on waste and unnecessary energy use in a number of industries is necessary to develop and execute new, creative policies. Covid has shown us that industry 4.0, or process and production automation, will alter the face of the energy business in the future. India will be resource-efficient, autonomous, and secure through the adoption of new technology, the creation of numerous energy programs, and education and awareness campaigns about the advantages of energy conservation among the general public.

## RESEARCH METHODOLOGY

### Hypotheses of the study

*H0: There is no significant influence of top management commitment on company's marketing performance.*

*H8: There is a significant influence of top management commitment on company's marketing performance.*

### Research design

The design of a research study defines the plan and structure of it to gain answers to the research questions. Hence, if we take a broader out-look, the present study can be defined as „Descriptive, Non- experimental and Quantitative" in nature. The descriptive analysis is presented through sample profiling, reliability analysis of measurement scale of variables and item analysis of each variable.

***Sampling methodology:***

**Target population**

The data for the study were collected from manufacturing companies within Uttrakhand state, India, as they are responsible for a significant portion of the environmental degradation .The study focused on Large, medium- and small-sized manufacturing companies from Uttrakhand, India. In terms of industrial production, Uttrakhand is responsible for 18% of India's output. Therefore, Uttrakhand was selected for the study.

**Size of companies:**

Micro, Small, Medium and Large.

**Sample size**

Statistically, the minimum sample size required was 385. The formula that determines the size of the sample is as follows

$$n = p(1-p)\left(\frac{z}{e}\right)^2$$

$$n = 0.50(1-0.50)\left(\frac{1.96}{0.05}\right)^2$$

$$n = 385$$

The sample size for the study is 594. The sample data was collected based on type of the company, size of the company and designation of the respondent. Table Table 3-1 presents the details of the sample according to the type of the company, size of the company and designation of the respondent.

**Sample Company Profile**

| Company type | Designation (1) | Type (2) | Sample (3) | Total (1)x(2)x(3) | Designation Of | Type | No. |
|---|---|---|---|---|---|---|---|
| **Micro** | 1 | 6 | 6 | 36+6=42 | CEO | Chemical | 6 |
| | | | | | | Dyes | 6 |
| | | | | | | Furness | 6 |
| | | | | | | Engineering | 6 |
| | | | | | | Motor | 6 |
| | | | | | | Valve | 6 |
| | | | | | | | **36** |
| | | | | | CEO / owner | Chemical | 6 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Small** | 6 | 6 | 6 | 216 | Marketing Manager | Engineering | 6 |
| | | | | | Production Manager | Insecticides / reactive | 6 |
| | | | | | Finance Manager | Dyes | 6 |
| | | | | | Stores / Purchase Manager | Steel / rolling mill | 6 |
| | | | | | Engineeri | Textiles | 6 |
| | | | | | **ng Manager** | | |
| | | | | | | | **36** |
| **Medium** | 12 | 6 | 4 | 240 | CEO | Chemical | 6 |
| | | | | | HOD - Engineering | Engineeringg | 4 |
| | | | | | HOD - Purchase | Pharma | 4 |
| | | | | | HOD - Store / Dispatch | Dairy | 2 |
| | | | | | HOD - Marketing | Sugar | 2 |
| | | | | | HOD - Environment | Paper & pulp | 2 |
| | | | | | HOD - Finance | | |
| | | | | | HOD - Productionn | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | | Manager - Maintenance | | |
| | | | | | Manager - Production | | |
| | | | | | Manager - R & D | | |
| | | | | | Manager - Utility | | |
| | | | | | | | **20** |
| **Large** | 8 | 4 | 3 | 96 | Factory Manager | Fertilizer | 3 |
| | | | | | President - Production | Heavy engineering | 3 |
| | | | | | HOD - Marketing | Chemical | 3 |
| | | | | | HOD - Engineering | Oil & gas | 3 |
| | | | | | HOD – Purchase | | |
| | | | | | HOD - Store | | |
| | | | | | HOD - HSE | | |
| | | | | | HOD - Finance | | |
| | | | | | | | **12** |
| | **Total** | | | **594** | | | **104** |

**Sample Composition**

| Variables | Particulars | Frequency N=594 | Percentage |
|---|---|---|---|
| Type of the company | Chemical | 222 | 37.4 |
| | Dairy | 24 | 4.0 |
| | Engineering | 168 | 28.3 |
| | Fertilizer | 24 | 4.0 |
| | Oil & Gas | 24 | 4.0 |
| | Pharmaceutical | 48 | 8.1 |
| | Pulp & paper | 24 | 4.0 |
| | Sugar industry | 24 | 4.0 |
| | Textiles | 36 | 6.1 |
| | 0 to 30 | 42 | 7.1 |
| | 31 to 100 | 216 | 36.4 |
| | 101 to 200 | 123 | 20.7 |
| | 201 and above | 213 | 35.9 |
| | Public Ltd. | 287 | 48.3 |
| | Private Ltd. | 188 | 31.6 |
| | Partnership company | 2 | .3 |
| | Others | 117 | 19.7 |
| | Micro | 51 | 8.6 |
| | Small | 212 | 35.7 |
| | Medium | 236 | 39.7 |

| | | |
|---|---|---|
| Large | 95 | 16.0 |
| Yes | 588 | 99.0 |
| No | 6 | 1.0 |
| Yes | 463 | 77.9 |
| No | 131 | 22.1 |
| 0 to 50 | 99 | 16.7 |
| 51 to 150 | 159 | 26.8 |
| 151 to 500 | 237 | 39.9 |
| 501 and above | 99 | 16.7 |
| Lower | 9 | 1.5 |
| Same | 165 | 27.8 |
| Higher | 414 | 69.7 |
| Much Higher | 6 | 1.0 |
| 0% or Negative | 1 | .2 |
| 1% to 5% | 148 | 24.9 |
| 6% to 10% | 344 | 57.9 |
| 11% to 15% | 101 | 17.0 |
| 0% to 5% | 4 | .7 |
| 5% to 15% | 193 | 32.5 |
| 15% to 25% | 150 | 25.3 |
| 25% to 30% | 247 | 41.6 |

## RESULTS

**Marketing Performance**

Multiple linear regression analysis was performed for Marketing Performance, taking as dependent variable. IVs were fed using enter method. This Regression Model was found significant [F(9, 579)=15.425,p<0.05], indicating the model fit means data really fits with theory. The model explanatory power was estimated through R-square which is a measure of % of variance explained. The marketing performance was explained upto 19.3% by all the independent variables.

The regression analysis revealed that following factors were found to be significant: energy awareness (β=0.094, t=2.287, p<0.05); energy audit (β=-0.089, t=-2.164, p<0.05); EMP- Organizational & Planning (β=0.128, t=2.892, p<0.05); EMP- product related operational (β=0.258, t=5.071, p<0.05); and top management commitment (β=0.123, t=2.229, p<0.05). However, energy efficient equipment and technology, energy knowledge EMP- process related operational, and EMP- communicational practices were found to be non-significant predictor for environmental performance (p>0.05).

**Model-fit statistics for Marketing Performance**

| **ANOVA[a]** | | | | | |
|---|---|---|---|---|---|
| Model | Sum of squares | df | Mean square | F | Sig. |
| Regression | 31.352 | 10 | 3.135 | 18.543 | .000[b] |
| Residual | 98.573 | 583 | .169 | | |
| Total | 129.925 | 593 | | | |
| a. Dependent variable: Marketing performance | | | | | |
| b. Predictors: (Constant) Top Management commitment environment,, Energy Audit, Energy awareness, Environment management product, Energy Efficient Equipment and technology, Energy knowledge, Environment management process, Top management commitment energy, Environment management communication,<br>Environment management Planning | | | | | |

**Table 4-43: Model Summary- Marketing Performance**

| R | R square | Adjusted R square | Standard error of the estimate |
|---|---|---|---|
| .491[a] | .241 | .228 | .41119 |

a. Predictors: (Constant), Top management commitment environment,, Energy Audit, Energy awareness, Environment management product, Energy Efficient Equipment and technology, Energy knowledge, Environment management process, Top management commitment energy, Environment management communication,

Environment management Planning

Further, there was no multi-collinearity in data as all the IVs have variance inflection factor (VIF) values less than ten.

Table 4.44 shows that *energy efficient equipment, energy knowledge, environmental process, environmental communication and top management commitment forenvironmental were non-significant* determinants *and all other dimensions* were significant determinants of Environmental Performance($p < 0.05$, $p < 0.1$, $t = 7.47$; $E = 0.221$). The relationship was significant positive.

**Table 4-44: Coefficients- Marketing Performance**

| Model | UC(Unstandardized Coefficients) | | SC(Standardized Coefficients) | t | Sig. | Collinearity Statistics | |
|---|---|---|---|---|---|---|---|
| | B | Std. error | Beta | | | Tolerance | VIF |
| Constant | 1.649 | .221 | | 7.470 | .000* | | |
| Energy awareness | .079 | .035 | .090 | 2.255 | .024* | .817 | 1.224 |
| Energy Efficient Equipments and technology | .043 | .047 | .041 | .924 | .356 | .662 | 1.511 |
| Energy knowledge | -.009 | .027 | -.014 | -.318 | .751 | .696 | 1.436 |
| Energy Audit | -.061 | .034 | -.073 | -1.784 | .075** | .769 | 1.300 |
| Environment management Planning | .198 | .037 | .269 | 5.316 | .000* | .506 | 1.975 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Environment management Product | .102 | .037 | .117 | 2.760 | .006** | .723 | 1.382 |
| Environment management process | -.029 | .046 | -.028 | -.629 | .530 | .646 | 1.547 |
| Environment management communication | .010 | .033 | .015 | .315 | .753 | .587 | 1.703 |
| Top management commitment for Energy Management | .223 | .053 | .192 | 4.172 | .000* | .614 | 1.630 |
| Top management commitment for Environment Management | .016 | .043 | .019 | .361 | .718 | .493 | 2.030 |

*p <0.05

** p <0.1

a. Dependent Variable: Marketing performance

## DISCUSSION

Adopting Energy Efficient Equipments and Technology in manufacturing companies reduces energy cost per unit of production, overall energy cost, improving productivity hence improving financial performance, reducing wastages and environmental impacts improves environmental performance and being leader in adopting efficient system and technology improves reputation of the company hence improving marketing performance.

## CONCLUSION

Thus, the present study is a humble attempt to contribute in the field of manufacturing companies in general and impact of energy and environment management practices, top management commitment on manufacturing companies, marketing performance in particular. Impact of energy management practices as well as environmental management practices both along with top management commitment on business performance covering market performance, financial performance too along with environmental performance.

## References

Albuquerque, P., Bronnenberg, B. J., & Corbett, C. J. (2017).A spatiotemporal analysis of the global diffusion of ISO 9000 and ISO 14000 certification. *Management science*, *53*(3), 451-468.

Alcántara, J. M. (2023). Encouraging energy conservation in office environments through group feedback and individual comp arison feedback.

Amiri, M. M., Noubbigh, H., Naoui, K., &Choura, N. (2015). Environmental management system: environmental impacts and productivity. *International Journalof Business and Management*, *10*(11), 107.

Bull, R., & Janda, K. B. (2018). Beyond feedback: introducing the _engagement gap‘in organizational energy management. *Building Research & Information*, *46*(3), 300-315.

Buysse, K., &Verbeke, A. (2003). Proactive environmental strategies: A stakeholder management perspective. *Strategic management journal*, *24*(5), 453-470.

Darnall, N. M. (2002). *Why Firms signal "green": Environmental management system certification in the United States*. The University of North Carolina at Chapel Hill.

Darnall, N., Jolley, G. J., &Handfield, R. (2018). Environmental management systemsand green supply chain management: complements for sustainability?. *Business strategy and the environment*, *17*(1), 30-45.

Dasgupta, S., & Roy, J. (2017).Analysing energy intensity trends and decoupling of growth from energy use in Indian manufacturing industries during 1973–1974 to 2021–2022. *Energy Efficiency*, *10*(4), 925-943.

De Burgos Jimenez, J., &Lorente, J. J. C. (2001). Environmental performance as an operations objective. *International Journal of Operations & Production Management*.

Enshassi, A., Ayash, A., & Mohamed, S. (2018). Factors driving contractors to implement energy management strategies in construction projects. *Journal of financial management of property and construction*.environmental and financial performance: Insights from Indian SMEs. *International Journal of Production Economics*, *212*, 111-124.

Famiyeh, S., Adaku, E., Amoako-Gyampah, K., Asante-Darko, D., &Amoatey, C. T. (2018). Environmental management practices, operational competitiveness and environmental performance: Empirical evidence from a developing country. *Journalof Manufacturing Technology Management*.

Fernando, Y., &Hor, W. L. (2017). Impacts of energy management practices on energy efficiency and carbon emissions reduction: a survey of Malaysian manufacturing firms. *Resources, Conservation and Recycling*, *126*, 62-73.

Fernando, Y., Bee, P. S., Jabbour, C. J. C., &Thomé, A. M. T. (2018). Understanding the effects of energy management practices on renewable energy supply chains:Implications for energy policy in emerging economies. *Energy Policy*, *118*, 418-428.

Fresner, J. (1998). Cleaner production as a means for effective environmental management. *Journal of cleaner production*, *6*(3-4), 171-179.

Fuentes-Fuentes, M. M., Albacete-Sáez, C. A., &Lloréns-Montes, F. J. (2004).The impact of environmental characteristics on TQM principles and organizational performance. *Omega*, *32*(6), 425-442.

Gangolells, M., Casals, M., Forcada, N., Macarulla, M., &Giretti, A. (2016).Energy performance assessment of an intelligent energy management system. *Renewable and sustainable energy reviews*, *55*, 662-667.