

**EMPLOYEE AWARENESS OF GREEN CORPORATE IDENTITY IN
MANUFACTURING COMPANIES IN KERALA**

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Abstract:

Green Corporate Identity (GCI) is the strategically designed unique identity of a company which communicates its environmental commitments to its stakeholders. The purpose of the study was to investigate the employee awareness of the Green Corporate Identity in Manufacturing Companies in Kerala. The study examined the awareness of employees on seven components of GCI by gathering data from employees of a leading Manufacturing company with a Green policy. The data was analysed using Multivariate Analysis of Variance to understand the extent of employees' awareness of the factors of GCI. This study identified the need to formulate strategies to create employees' awareness of GCI and its factors to achieve the environmental commitment of the company. This study explored the emerging concept of Green corporate Identity in the Indian context to address the relevance of creating a Green identity to develop environmentally conscious companies.

KeyTerms: Green Corporate Identity, Green Corporate Communication, Green Visual Communication, Green Corporate Behaviour

Introduction

Business organizations across the globe have been en route to change in their business strategies as the focus has shifted from traditional profit-making strategies to corporate sustainability strategies. Hence, the recent challenge in the business world is to achieve competitive advantage by finding innovative ways to conduct business with energy-efficient and environment-friendly processes, products, technologies and waste management. India has pledged a more than 45% reduction in the "carbon intensity" of its economy by 2030. Hence, the Greening of Manufacturing Industries is of utmost importance. Green Corporate Identity (GCI) is the perceptions of stakeholders including shareholders, employees, customers, and the community on every aspect of the environmental concern of that particular company. (Shrivastava, 1994; Green et al 2000; Harris, & Crane, 2002). Employees play a vital role in the efficient functioning of any company and its achievement of organisational objectives. Every employee ought to be aware of the need for Greening; green vision, green mission, green policies, green methods, green products/ services, and green goals of their company. Hence an employee with well understanding of his company's Green Corporate Identity can efficiently contribute to the achievement of its environmental goals. As GCI is a relatively new concept in the Indian context, this study aims to understand the employees awareness of GCI which is characterized by eco-friendly, energy-efficient unique values embedded throughout the organization which are communicated to its stakeholders through its mission, vision, goals, structure, symbols, culture, policies, processes, products and services in the Indian manufacturing sector

Literature review

Green Corporate Identity (GCI)

The Green Corporate Identity is a term developed from the Corporate Identity by focusing on managing the company's identity to represent the environmental concerns which can successfully contribute to the Greening of a company through environment-friendly employee performance and commitment, operational efficiency, involvement of stakeholders, the interest of customers, Green corporate image and Green corporate reputation, and competitive advantage (Onputtha et al 2020). Definition of Green Corporate Identity proposed in this paper is 'the strategically designed unique identity or status of a company to be perceived by its stakeholders based on its Green initiatives or environmental commitments'. When a company presents its GCI, entire stakeholders will value the

company for its efforts in providing environment-friendly products and services in creating a healthy, safe, sustainable environment and thereby increasing customer loyalty ultimately leading to competitive advantages. Green Corporate Identity aims to make a company distinctive by clearly differentiating itself from competitors in terms of its environmental commitments.

Components of GCI

According to the Corporate Identity Mix or Program, corporate identity can be studied by focusing on its components (Onputtha et al 2020). Green Corporate Identity comprises seven dimensions: Green corporate communication, Green corporate visual identity, Green corporate culture, Green employee behaviour, Green policy, Green forces and drivers, and Green products and services quality. (Onputtha and Siriwichai, 2021). Green Corporate Communication refers to how a company communicates its environmental concerns and commitments to its stakeholders (Melewar and Jenkins, 2002), through a clearly presented Vision statement, Mission statement, company website, company App, news bulletins and press releases. Green Visual Identity can be referred to as how a company visualizes its environmental commitment to its stakeholders (Melewar and Jenkins, 2002) through product, location, vehicle, print and other media. Elements of Green Visual Identity include naming, logo, colour palette, corporate font, business card, letterhead, envelope, info-graphs, symbols, graphic designs, architecture, office layout and typography. Green Corporate Culture refers to how a company manages its corporate culture, and values in terms of its environmental commitments. Green Corporate Behaviour refers to how the organization manages corporate behaviour in terms of its environmental commitment (Melewar and Jenkins, 2002). The level of understanding of Green concepts and its working knowledge dictate in-role and extra-role Green behaviour of employees (Norton et al., 2014; Yang et al., 2019) leading to the successful management of GCI. The Green Corporate Drivers include public opinion, shareholder value, government reduction, industry leaders, and environmental management legislations. Green Corporate Motivating Factors include regulatory mandates, economic advantages, reduced waste treatment and disposal costs, conservation of energy, water, and raw materials, product collect-back system, supply chain requirements, corporate image and employee satisfaction. Other studies also suggest that there are other external forces like industrial involvers, internationalisation, technological innovations, regulatory factors, and society (Alhamali (2019), Chidcho&Pianthong (2020)). As an organization is in constant interaction with its environment, it must respond in accordance with the changing environment perspective of suppliers and consumers (Green et al (2000)). Green products and service quality are essential as these can create customer satisfaction and loyalty (Balmer&Stotvig, 1997; Melewar& Wooldridge, 2001).

Objectives of the study

To analyse the employee awareness on Green Corporate Identity in the manufacturing companies in Kerala

To assess the awareness of employees on all the seven constituents of GCI in the manufacturing companies in Kerala

Methodology of the study

The study was descriptive and analytical in nature based on the secondary and the primary data. Primary data collected through a well-structured questionnaire after an extensive review of literature and discussions with experts in the field. The questionnaire was finalized after the pilot study and the Cronbach's Alpha test was used to prove the internal consistency of statements with a seven-point scale.

Sample Distribution

Even though the company consists of 9 departments, major departments playing vital role in manufacturing, process/product development and marketing of the products were selected for research.; Production Department, Materials Department together with maintenance Department (as they work together), Research & Development Department, Marketing department. Production department with its six subunits; a Mineral separation unit, an Acid regeneration plant

an Oxygen plant, an Ilmenite beneficiation plant, a Pigment production plant, Utility section works on the manufacturing with the help of Materials and Maintenance departments. The Research and Development department has been working on environment-friendly projects and other Green initiatives. The marketing department markets their products. A total of 284 executives work in the selected departments(excluding casual workers, night shift workers, employees on leave). Cochran's sample calculation formula was used to find the required sample size.

$$n_0 = z^2 pq / e^2$$

$$p = 0.5 \text{ and hence } q = 1 - 0.5 = 0.5; e = 0.05; z = 1.96$$

$$= ((1.96)^2 (0.5(1-0.5)) / (0.05)^2 = 384$$

Where, n_0 = sample size, z = critical value of desired confidence level, p = estimated proportion of an attribute that is present in the population, $q = 1 - p$, e = desired level of precision

Sample Size Calculation of Factors

Minimum Sample size according to Cochran's sampling calculation method = 384

Required sample size from total population (284)

$$RS = (SS \times P) / (SS + P - 1), RS = \text{Required Sample Size}, SS = \text{Sample Size (Minimum)} = 384, P = \text{population (284)}; RS = (384 \times 284) / (384 + 284 - 1) = RS = 164$$

Then the population was proportionally distributed among selected department and a simple random (Lottery Method) sampling method was used to select the respondents. Sample distribution table is shown below:

Table 1: Sample Distribution of the Study				
SL. No.	Departments	TP	P	SS
1	Manufacturing Centre	97	0.34	56
2	Materials and Maintenance	79	0.28	46
3	Research and Development	52	0.18	30
4	Marketing	56	0.20	32
	Total	284	1.00	164
TP= Total Population, P=Proportion, SS= Sample Size				
Source: KMML				

Pilot Study

A pilot study was conducted among 20 employees from each selected departments

Table 2: Internal Consistency of Questionnaire

Sl. No.	Factors	No. of Items	Cronbach's Alpha
1	Green Corporate Communication	8	.874
2	Green Visual Identity	4	.984
3	Green Corporate Behaviour	8	.899
4	Green Corporate Culture	16	.801
5	Green Corporate Policy	14	.869
6	Green Corporate Forces & Drives	9	.881
7	Green Products and Services Quality	16	.901
		75 Items	.884

Source: KMML

Table 2 shows the internal consistency of selected factors and statements used in the questionnaire with a sufficient Cronbach's Alpha value of more than .80. Thus all the statements and the scale used in the questionnaire were proved to be appropriate to find out the employee awareness of Green Corporate Identity.

Table 3: Communalities from factor analysis

Q. Code	FL	Q. Code	FL	Q. Code	FL	Q. Code	FL
GCI2.1	.831	GCI5.1	.801	GCI6.1	.793	GCI8.1	.719

GCI.2.2	.932	GCI.5.2	.955	GCI.6.2	.832	GCI.8.2
GCI.2.3	.923	GCI.5.3	.955	GCI.6.3	.902	GCI.8.3
GCI.2.4	.894	GCI.5.4	.955	GCI.6.4	.877	GCI.8.4
GCI.2.5	.794	GCI.5.5	.955	GCI.6.5	.853	GCI.8.5
GCI.2.6	.869	GCI.5.6	.955	GCI.6.6	.868	GCI.8.6
GCI.2.7	.833	GCI.5.7	.987	GCI.6.7	.822	GCI.8.7
GCI.2.8	.785	GCI.5.8	.987	GCI.6.8	.711	GCI.8.8
GCI.3.1	.952	GCI.5.9	.987	GCI.6.9	.834	GCI.8.9
GCI.3.2	.958	GCI.5.10	.987	GCI.6.10	.889	GCI.8.10
GCI.3.3	.957	GCI.5.11	.987	GCI.6.11	.777	GCI.8.11
GCI.3.4	.721	GCI.5.12	.987	GCI.6.12	.990	GCI.8.12
GCI.4.1	.813	GCI.5.13	.987	GCI.6.13	.769	GCI.8.13
GCI.4.2	.976	GCI.5.14	.987	GCI.6.14	.821	GCI.8.14
GCI.4.3	.976	GCI.5.15	.987	GCI.7.1	.959	GCI.8.15
GCI.4.4	.767	GCI.5.16	.987	GCI.7.2	.883	GCI.8.16
GCI.4.5	.984	Factor One=78 per		GCI.7.3	.883	
GCI.4.6	.984	cent		GCI.7.4	.906	
GCI.4.7	.984	Factor Two=58 per		GCI.7.5	.818	
GCI.4.8	.984	cent		GCI.7.6	.914	
		Factor Three=82 per		GCI.7.7	.816	
		cent		GCI.7.8	.816	
		Factor Four=76 per		GCI.7.9	.816	
		cent				
		Factor Five= 72 per				
		cent				
		Factor Six=82 per				
		cent				
		Factor Seven=68 per				
		cent				

Source: KMML

Table: 3 shows that all the variables have more than .70 factor loading and each factor has more than 60 per cent variance except the second factor showing a 58 per cent variance. Hence, it is inferred that these variables will predict the accurate result of employee awareness of Green Corporate Identity. One- sample t-test was performed to find out the statistical significance of respondents' awareness of Green Corporate Identity. The study was formulated with two Hypotheses;

H₀: There is no significant evidence the executives are aware of Green Corporate Identity

H₀: Executives' awareness of Green Corporate Identity is not significantly different across departments.

Table 4: Significance Evidence of Employees' Awareness of Green Corporate Identity				
Factors	Mean	SD	t	p-value
Green Corporate Communication	6.6189	.68812	11.518	.000
Green Visual Identity	4.5838	1.13683	6.577	.000
Green Corporate Behaviour	5.1860	.63820	3.732	.000
Green Corporate Culture	5.5941	1.35167	5.629	.000
Green Corporate Policy	5.1855	1.74759	3.360	.000
Green Corporate Forces & Drives	6.1104	.88927	15.991	.000
Green Products and Services Quality	4.8829	1.01636	6.084	.000
Source: KMML				

Table: 4 indicates that the mean score is higher than the test value of 4.2, and the result is statistically significant regarding all the factors as the p-value is lesser at 5 per cent significant level. Hence, it can be inferred that there is significant evidence that these executives are aware of green corporate identity. Hence, the null hypothesis stands rejected

H0: There is no significant evidence the executives are aware of Green Corporate Identity

Further, the study was processed the Multivariate test to find out the difference in the awareness of employees across the selected departments.

Table 5: Mean Significance among selected department employee's awareness of Green Corporate Identity						
Green Corporate Identity Factors	Test	Value	F	H-df	E-df	P
Green Corporate Communication	Wilks' Lambda	.946	.357	24.000	444.348	.998
Green Visual Identity	Wilks' Lambda	.970	.396	12.000	415.674	.965
Green Corporate Behaviour	Wilks' Lambda	.971	.382	12.000	415.674	.970
Green Corporate Culture	Wilks' Lambda	.940	1.094	9.000	379.814	.366
Green Corporate Policy	Wilks' Lambda	.921	.867	15.000	431.049	.602
Green Corporate Forces & Drives	Wilks' Lambda	.898	.932	18.000	433.235	.540
Green Products and Services Quality	Wilks' Lambda	.852	.498	48.000	432.060	.998
Source: KMML						

Table: 5 indicate that all the factors are not statistically significant as the p-values of all the factors are greater at a 5 per cent significant level. Hence, it can be inferred that all the department executives having same level of awareness of Green Corporate Identity. Hence, the null hypothesis stand accepted;

H0: Executives' awareness of Green Corporate Identity is not significantly different across the departments.

Table 6: Multi-Dimensional Scaling Techniques -ALSCAL (Factors)								
Green Corporate Identity Factors	Manufacturing		Materials		R&D		Marketing	
	D1	D2	D1	D2	D1	D2	D1	D2
Communication	.1434	.3178	.0333	.2094			.0610	.1430
Visual Identity							.7421	.1005
Behaviour					.4742	.1204		
Culture							1.2838	.0093
Policy	3.0802	.0246	3.0920	.0418				
Forces & Drives							.7669	.8259
Quality								
Two dimensions positive coefficient values are shown in the table, negative values were excluded								
Source: KMML								

A multi-dimensional scaling technique was applied to assess the executives' awareness on factors of Green Corporate Identity with two-dimension perspective. Each of the departments tested with multidimensional scaling techniques. It was observed that the executives in Manufacturing and materials departments have high level of awareness of Green Corporate Communication (D1=.1434, D2=.3178; D1=.0333, D2=.2094), and Green Corporate Behaviour (D1=.3.0802, D2=.0246; D1=.3.0920, D2=.0418). The Research and Development Executives have high level of awareness of Green Corporate Behaviour factor (D1=.4742, D2=.1204), executive Marketing department have high level of awareness on Green Corporate Communication (D1=.0610, D2=.1430), Visual Identity (D1=.7421, D2=.1005), Green Corporate Culture (D1=.1.2838, D2=.0093), and Green Corporate Forces & Drives (D1=.7669, D2=.8259).

Major findings of the study

Based on the analysis of seven factors of Green Corporate Identity, the study shows that executives are aware of the factors of GCI but their level of understanding of each factors of GCI varies. It was also observed that the level of awareness of GCI and its factors are different across departments.

Conclusion

The study shows that executives are aware of the factors of Green corporate Identity of their company. This study points out the necessity to formulate strategies to create all employees aware of Green Corporate Identity and the factors of GCI in the manufacturing sector in India. Companies must devise plans to effectively establish their Green Corporate Identity to achieve competitive advantages. Apart from providing Green guidelines, companies should provide awareness programs to their employees across the hierarchy to ascertain the relevance of GCI in achieving their environmental goals. The awareness of employees on their company's Green Corporate Identity is a decisive factor in the effective implementation of Government's guideline on sustainability.

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