

Holistic Organizational Gains via Green Strategies: A techno-legal perspective

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ABSTRACT

The eco-educated millennial generation employee is attracted towards a company that promises value driven business culture aligned with sustainability. Corporate ethical code of the 21st century is 'Being Green'. Green technology cannot stand in isolation without its management in action. A management perspective is significant for organizations slated towards growing green. Collaborating economic capacity building with environmental sensitivity should be the prime objective of today's business organizations. An attempt is made to draft a conceptual blueprint which encapsulates the steps for implementing green management and linking it with organizational sustainability indices. The existing greening strategies of 6 R's namely recycle, repair, recondition, remanufacture, reduce and reuse for eliminating hazardous impact of carbon footprints need a practical translation. The objective of the paper is to decode the organizational gains obtained via implementation of green management strategies with their techno- legal implications and subsequently propose a conceptual model depicting the same. To achieve these, conceptual framework analysis (qualitative approach) has been applied to vital literature frames derived from rich and authentic social sciences & environment oriented technical secondary data repositories. Subsequently, a techno-management approach is applied to establish a strong relationship between environment related green strategies and organizational sustainability. The present paper is likely to serve two fold benefit: (I) it provides a major first mover competitive advantage for business organizations implementing them for cost effectiveness and branding and (II) it will help to create an ecologically driven sustainable society.

Keywords

Eco-educated, Environmental Sensitivity, Green strategies, Organizational Sustainability

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Research Objective

To decode the organizational gains obtained via implementation of green management strategies with their techno- legal implications and subsequently propose a conceptual model depicting the same.

Introduction

Rapidly declining resources and constantly degrading environments are the major global concerns for many business organizations around the world. These challenges therefore, require urgent thoughtfulness to overcome resource and environment related issues. In this context, "Green techno-management" has been found to provide some solutions to the emerging resource and environment related problems. The Green techno-management addresses jointly the issues of industrial ecology and environmental sustainability and offers advantages like, (i) it provides to extended producers' liability (ii) facilitate to analyze life-cycle in a better way (iii) help to control material use and resource flows, and (iv) it is inexpensive and eco-friendly. Considering the multiple benefits of green technology concept, widely distributed regulatory agencies especially those associated with environmental pollution and greenhouse gas (GHG) emission, are desperate to adopt greener practices for creating quality environment for business activity. Undeniably, the green management concept is huge, which plays some bigger and important roles in strategizing business, technology driven organizations and public policy pertaining to the

environment. Furthermore, different factors for example, pressure from laws forming and implementing agencies, environmental standards, public and disproportionate economic globalization are compelling variable enterprises to improve their environmental performance also. Indeed, "Green Management" in recent times has attracted greater attention of modern entrepreneurs / industrialists as a viable, inexpensive and sustainable technological alternative and is briskly used as a part of Corporate Social Responsibility (CSR) initiatives. The green management apart from assessing some of the traditional marketing mix such as product, price, place and promotion, also require a better perceptive of public policy processes and its practical implementation.

The World Commission on Environmental Development in a meeting held in 1978, emphasized that fulfilling the needs and requirements of the present generation should not be compromised with the needs of the future generation and future generations should be able to fulfill their own demands. Taking these into consideration and following the Environmental Health and Safety regulatory compliance and CSR (Corporate Social Responsibility) initiative it is possible to promote and maintain the course of development within any business sector / organization. And, for any responsible company to be socially acceptable, it is important for companies to follow regulatory policy set up by different organizations including both government and public / private sector.

This paper attempts at identifying the green management initiatives that leverage the organizational impact on its vertical variables like finance, marketing and human

resources. Also, the environment claims made by marketers to gain a competitive edge should not be misleading and ambiguous. Any such claim made to the public should be specific, substantiated and be legally and scientifically sound. The steps undertaken to assess and mitigate the risks in making environmental claims are of paramount importance and have been outlined. Based on the research conducted on this aspect so far, a step guide has been drafted that may act as a conduct for environmental marketing in conformity with legal requirements. Furthermore, a nexus is created between these steps, 6 R greening strategies and its consequential impact on organization and environmental benefits.

Literature Review

Stringent government regulations and varying customer demands have made things tougher in business ranging from materials procurement to distribution. While majority of the companies realize the environmental pressures and by applying different measures try to maintain the health of the planet. Very sadly, only few of them have been successful in translating such concerns into interventions by adopting environmentally viable, green supply chain practices. For example, Ziegler and Rennings (2004) and Rehfeld et al. (2006) in a study demonstrated positive effects of green management measures on green technology especially those on future environmental products or process innovations. The quality and safety of product is however, extremely important for consumers and if product is not of high green quality, they (consumers) do penalize the producing companies that obviate the environment protection laws or which emit high levels of toxins into the environment. There are reports that the hygiene of greenness varies greatly which has been substantiated by the findings of Ottman (1996) who observed that 33% of adults refused to buy products, from companies with poor environmental facilities. However, in order to avoid the rejection / refusal of products by consumers, companies can set up certain goals for enhancing the corporate environmental performance. To achieve this, they need to take certain measures such as to employ certified environmental management systems (EMS) or develop modern tools that could help to assess the life cycle activities of the basic components of "Green management" systems (Coglianese and Nash, 2001; Johnstone, 2001). Moreover, inducing organizational learning and providing environmental information is critical for the success of green management practices (Melnik et al., 2003). Globally, there is excessive use of toxic materials / chemicals, packaging of materials/products is of inferior standards and the transportation practices that carry products from one place to the other or from one region to the other region, and all these together hamper the prospect of businesses considerably. However, there are laws to regulate such malpractices in business. Accordingly, business decision makers examine the quality of their own operational processes and those of their suppliers on routine basis in order to maintain the quality of their products. Also, if found guilty of their products, organizations can be punished by the court of law, the court of public opinion, or both. Moreover, suppliers can also be prosecuted or even they can

face shutdown situation if they ignore/avoid the environmental policies of the regulatory authorities.

Many companies around the world adopt green marketing concept which leads to a sustainable market development due to reasons such as (i) effective pollution management (ii) energy- efficient operations (iii) green and biodegradable packaging, and (iv) inexpensive and ecologically safe products. However, the awareness about the environmental issues has increased substantially at global scales due to which there is more focus on improving the quality of environment (Cope and Winward, 1991; Hopfenbeck, 1993; Swenson and Wells, 1997).

Due to alarmingly decreasing raw materials, continuously waning environment, regular discharge of untreated pollutants into the environment, declining lands and overflowing waste lands, the "Green management" concept has therefore, become popular and widely acceptable among manufacturers in today's competitive world. So, there are three ways by which any organization can 'green' themselves: (i) through value-addition processes (Value Chain) (ii) by re-engineering of management systems (Organization level) and (iii) by product redesigning / innovation (Product level). These three important aspects could be achieved by applying 6 'R' greening strategies which involves (i) Recycle (ii) Repair (iii) Recondition (iv) Remanufacture (v) Reduce and (vi) Reuse. In this regard, the manufacturers who adopt 6 'R' greening strategies have been suggested to consider the following technical points: (i) manufacturers should always plan for recyclability considering both the design and the selection of materials (ii) manufacturers should try to eliminate / reduce excessive packaging (iii) they should use reusable or refillable materials for packaging (iv) they should find ways to avoid wastage and to prevent theft at working / delivery points (v) alternative to non-toxic pigments and stabilizers and (vi) design / develop biodegradable plastics. To achieve these massive goals, concerted efforts from business personnel, law regulating and enforcing agencies, stockholders, government sector, employees, the general public, consumers and many others are urgently needed. The objective of greening the value-addition processes / management reengineering / product innovation could envisage redesigning / eliminating / modifying technology and / or inducting new technology.

The implementation of green management practices is whether profitable or burden-however, is questionable and hence, there are contrasting views on this management practice. Some researchers argue that the green policies and the resulting products of such technologies are cost effective and profitable and are likely to modulate future regulations and reap first-mover advantages (Porter and van der Linde, 1995; Rugman and Verbeke, 2000). On the contrary, there are few who believe that the green management may not provide better solution to majority of the industries. For instance, Potoski and Prakash (2005) in their study (originally developed by the International Organization for Standardization (ISO)) found that the amenities which follow the EMS standard (ISO 14001), were able to reduce the emission of pollution more efficiently than the non-certified facilities. Additionally, even-though the green policies provides benefits in the beginning but later on it

becomes expensive, claims Walley and Whitehead (1994). Due to this, many firms regularly charge some premium prices for their green products. Conclusively, if the cost of green products is cheaper than other products, it will be more acceptable and affordable for consumers.

The advent of new green management measures in this regard has been considered as the organizational environmental innovations. The term organizational innovations commonly used in business parlance refers to (a) the introduction of significantly changed organizational structures (b) application of new management tools viz. Total Quality Management (TQM) and (c) the implementation of new or largely varied strategic corporate orientations (Oslo-Manual of the OECD and Eurostat 1997). Some of the certification policy introduced recently includes- (i) Waste disposal interventions (ii) Introduction of eco labeling of green products (iii) Life-cycle assessment activities, and (iv) EMS such as ISO 14001 and EMAS. All these measures fulfil the definition of new management techniques to the extent that they are called organizational innovations. Technological environmental innovations on the other hand involve environmental product and process innovations (Ziegler and Rennings, 2004). Thus, the goal of both the organizational innovation and technological environmental innovation is to improve the performance of a product through its entire life. The green management measures however, does not directly improve the environmental performance rather such measures act in tandem to improve the products and therefore reduce the environmental risks indirectly. As an example, before any product is ready for environmental labeling, it may undergo certain changes via performing the life cycle assessment (LCA) and by observing its overall environmental impact which, in turn, could possibly help the manufacturers / firms to reduce the adverse environmental impact of the product. Some of the factors that hugely affect the technological innovations include the strategy, structure, and core capabilities of any firm (Elster, 1983). And, for better performance of green management measures there is huge requirement of financial resources and technically sound and skilled personnel. Firms endowed with sufficient environmental capabilities are likely to perform more aggressively and in a cohesive manner in order to achieve their product targets. And so, the firms which have realized environmental products or process innovations earlier are the firms which had the better infrastructure and are resource rich. The establishment of useful organizational routines and sound understanding of environmental issues forms the basis of any technological environmental innovations. Of these, organizational routines also influence the green management interventions such as certification of ISO 14001 or simply the life cycle assessment (LCA) of green products. These unique abilities are included as '...the coordinating machineries which pave way for the most efficient and competitive use of the firm's assets – be it tangible or intangible' (Sharma and Vredenburg, 1998). Of the two assets, intangible assets for instance, reputation, learning processes may result in certain innovations and subsequently be advantageous since they have been found as rare and difficult to copy than financial resources (tangible assets). Conclusively, in order to find a long-term solution to the business problems, concerted efforts from

different sources like government, industry, and individuals working as partners are needed at global scales.

Research Gap

Based on vast literature search, it is observed that there is scarcity of organized official data on corporate technological environmental innovations. Any such innovative practice, if, identified and implemented, has never been offered in a conceivable manner so that it could be linked to business unit interventions in marketing, finance and human resources in a holistic fashion. Furthermore, no step guide has been drafted that may act as a conduct for environmental marketing in conformity with techno-legal requirements. Without a techno-legal dimension, and a strategic outlook towards adopted green strategy, the concept of Green Management does not find a practical grounding. A rich nexus of techno-legal cum management philosophy was never captured and subsequently related to green strategies and organizational sustainability at a single go. This paper is an attempt to fill those gaps and propose a vital construct for the same.

Research Methodology

Paper category: Conceptual

Research type: Exploratory

Applied analysis: Qualitative

Research tool: Conceptual framework analysis (by dividing the filtered literature into four vital frames). The obtained literature is fragmented into four frames namely, green strategies; steps for strategy implementation, organizational impact and environmental benefits.

Research technique: Carbon footprint reduction interventions of various organizations have been analyzed and then their positive impact on organization and environment health has been identified and depicted in the form of a model.

Data mining technique: Systematic data mining technique utilizing specific key words is used to filter concepts of finance, marketing and human resources pertaining to green management in techno-legal context.

Deduction mechanism: Inductive

Source of Data/ Literature: Rich, authentic, exhaustive and reliable social sciences & environment related technical and legal secondary data repositories.

Findings

An extensive multiple organization study approach centered on green management practices / activities has been extrapolated to observe type of green strategic move. Also, the associated benefits have been qualitatively or quantitatively earmarked to specify the organizational gains and are presented in Table 1. Additionally, the steps for implementing green management strategies have been outlined by networking the literature existing on technical and legal aspects pertaining green management (Table 2).

Table 1. Organizational gains following green management strategies

<i>N o.</i>	<i>Organization</i>	<i>Green Activity</i>	<i>Gains</i>	<i>Strategic remark</i>
1	Anheuser-Busch	Developed aluminium cans which are 33% lighter than previous cans.	Company saving \$200 million per year.	Financial benefit via recycling plan.
2	Mc. Donald's Corp.	Reducing use of clamshell sandwich boxes and replacing them with one layered flexible sandwich wraps.	Avoided 3,200 tons of paper and cardboard wastage in 1999.	Financial benefit via reduce and recondition strategy.
3	Coca-Cola Co.	Environmental compliance via pro-environmental recycling and package modification activities.	Lowered cost as a competitive advantage.	Long term lean green strategy.
4	Gap Inc. (Retail)	Corporate headquarter positioned as a chief example of sustainable building with highlighting on energy conservation and waste management.	Talent attraction and acquisition through internal branding.	Strong human resource building via internal employer branding.
5	Toyota Motor Corp.	Launch of an environment friendly, fuel-saving hybrid vehicle (Toyota Prius).	Rapid market share pick up in small time frame.	Strong external employer branding.
6	The Body Shop, Patagonia	Biodegradable and decomposable tea bags, organic constituents and community partnerships.	Slated as one of the fastest emerging organic tea companies in the foods industry.	Image building through socially responsible brand identity.

Amalgamating the prescripts obtained from table 1 and 2, a dynamic four frame conceptual model (Fig. 1) has been developed that clearly specify the organizational and environmental advantages.

Limitations

Green management from a techno-legal perspective is a novel concept that has vision for the future and is a promise for organizational sustainability. However, due to limited literature available on the subject, there is problem in popularizing this very novel concept of green management. Furthermore, lack of awareness of this concept among marketing and HR professionals are other problems in its implementation. Despite such problems, some organizations have started to put green management into practice and are trying very hard to widen the scope of this technology to a larger section of different organizations. A gamut of organization study might have facilitated a better plotting of the proposed model and reflected a better impact spectrum.

Conclusion

Green techno-management is influenced by both technological environmental innovations and via unobserved impalpable corporate environmental proficiencies. Although compliance to environmental standards provide a competitive advantage yet stringent regulations increasingly make environmental responsibility a mandate. Once the collaborative effort of all the stakeholders is infused then root of sustainability could be established. For marketers, HR professionals and finance managers, the proposed model inter-relates various departments and practitioners to sustainability indices through active participation in the myriad of environment management programs. Green HR practices may support organizations in petitioning employers to adopt policies that bolster workers' health and well-being. For academicians, the research paper adds to the existing database with equivocal emphasis on greening strategies. Also, for the society the paper promises remarkable reduction in carbon footprints (via Green strategies) and a healthy sustainable future for the coming generations. The research paper indicates two- fold benefit for the organizations implementing greening strategies as: (i) potential cost- based reductions via amplified resource efficiency (ii) benefits related to image building, brand promotion and enhancing corporate reputation among competitors. Since more and more businesses and consumers are using environmental issues as a criterion in their purchasing decisions, there is high scope of progress in this area and hence, sales and marketing activities are likely to increase dramatically.

Table 2. Steps involved in implementing Green Management (techno-legal aspect) practices

<i>Steps</i>	<i>Technical Aspects</i>	<i>Legal Aspects</i>
Step 1 Inventory Environment Claims	Preparation and documentation of green claims made on: <ul style="list-style-type: none"> ▪ Product ▪ Promotional material ▪ Green innovation and technology ▪ Product packaging 	Documentation with validated data.
Step 2 Conduct an environment footprint analysis	Through life cycle assessment of product, evaluate impact on environment from the initial phase (raw material) to the final phase (final disposal by consumers)	Data validation at each assessment phase.
Step 3 Identify the compliance framework	-----	Enlist the regulatory authorities and their environment related norms.
Step 4 Conduct Environment Claims Assessment	-----	Conduct compliance verification against the claims as per the codes defined under environment jurisdiction statutes of the concerned nation(s).
Step 5 Substantiate and Testing	Establish control mechanisms via statistical tools for: <ul style="list-style-type: none"> ▪ Data tracing ▪ Data accuracy ▪ Data reliability ▪ Data verification and referencing 	Coded documentation of data verification regimes and control mechanisms.

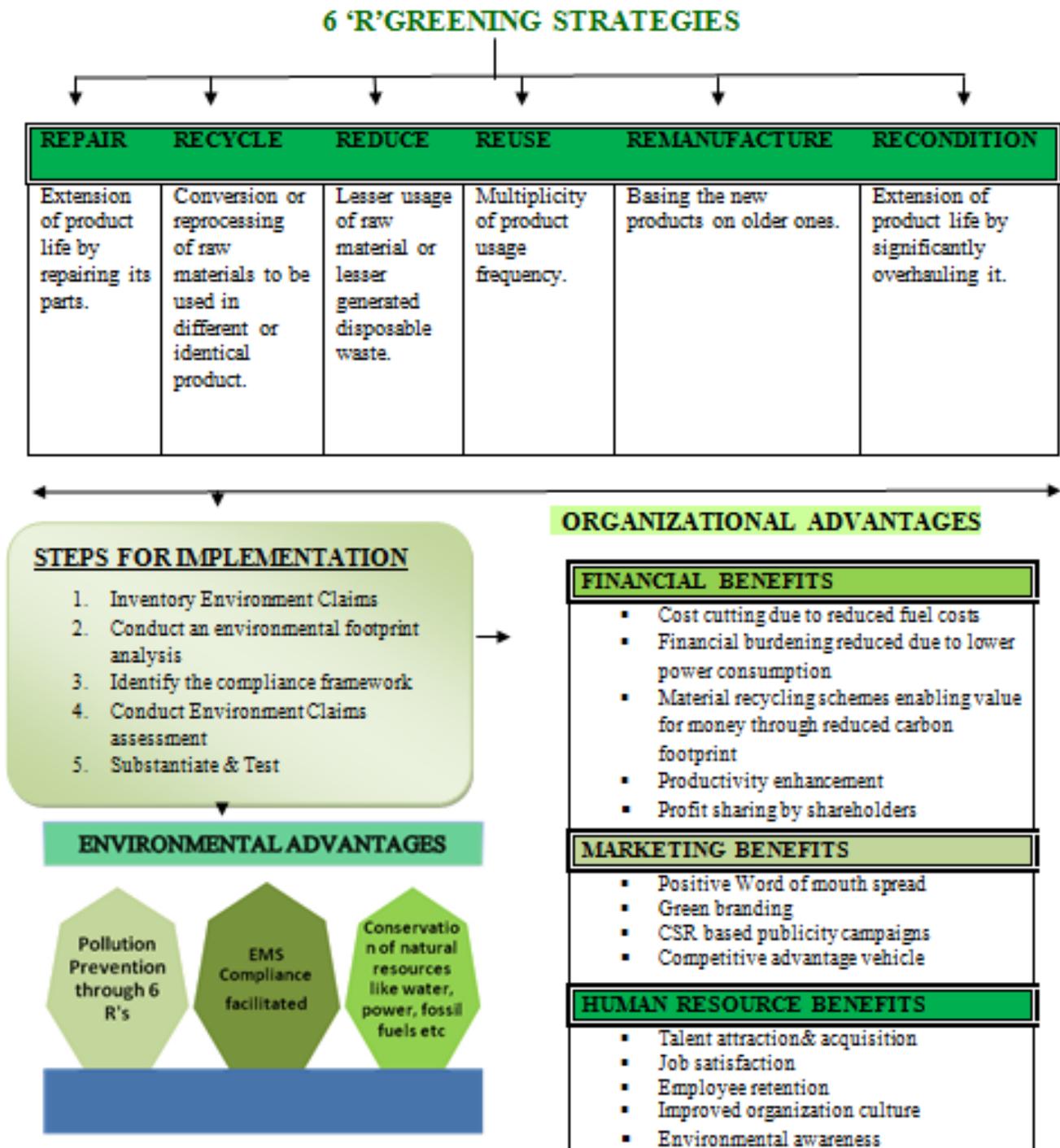


Fig. 1. Model signifying steps of implementation of 6 'R' greening strategies and extending it to depict organizational & environmental advantages

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