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SMEs and environmental performance – A framework for green business strategies

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Abstract

Increasing concern about the environment has forced industry to innovate and reduce its environmental impact. Due to various reasons, SMEs may have been left out of the regulatory and social pressures. The time has arrived where ignoring environmental impacts of SMEs is no longer viable.

Objective – This paper attempts to offer a framework for SMEs to improve their environmental performance.

Methodology – Literature review on green competitive advantages for firms, followed by in depth interviews with environment managers or sustainability practitioners in large firms and then with SME owners.

Practical implications – SMEs can set about sustainability practices by following the approach in this paper.

Originality – This paper presents a unique green approach for SMEs, which has not been offered till date for Indian SMEs.

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Keywords: Green business; Green strategy; Competitive advantage; SME, Sustainability, India

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1. Introduction

1.1. Industry and the Environment

In our lifetime we have witnessed some of the worst natural calamities. Warnings of polar ice melt, tsunamis, hurricanes and snowstorms are scarily frequent. Deaths from such causes are steadily on the rise. Are these the vagaries of the planet or is this a response to human activities? This question has been extensively debated in the last few years, creating more questions - environment or industry? Planet or people? Natural resources or technology? These are some of the uncomfortable questions whose answers are not quite easy to comprehend within our structure of market economics.

The response of industry towards improvement of their environmental management developed in two eras in two decades, beginning 1970 (Fischer & Schot, 1993). In the first era, companies faced regulations for which they had to act through improvements. Air, water and soil pollution regulations forced firms to correct or improve their environmental performance. The early approach was a reactionary approach. This has been termed as the “resistant adaptation” (Fischer & Schot, 1993) of industries. The norm of this era could be summed by in one word “Compliance”. As these green practices became accepted by industries, the differentiation they offered the firm reduced. The environmental practices improved and helped the environment. Next came the sustainability era, which we see on the rise in today’s business scenario. The sustainability approach finds its roots in the Brundtland Commission report titled “Our Common Future” (WCED, 1987) This report defined sustainable development as "development which meets the needs of current generations without compromising the ability of future generations to meet their own needs" (WCED, 1987). It advocates economic and social development, particularly for people with a low standard of living while underlining the importance of protecting the natural resource base and the environment.

The sustainability initiative provokes industries to look beyond the obvious and redesign their products and processes for the environment. Over the years, the sustainability approach has gained momentum due to research efforts of NGOs, universities, consulting firms and industry itself. Many firms saw the emerging opportunity for differentiation with the growing awareness for the environment. Some firms used a strategic approach in their environmental practices to create a competitive advantage. This acknowledged that environmental policies need to be based on economic fundamentals of the business. The strategic approach mitigated the growing risks associated with environmental performance – risks of facing government and competitor’s actions, public outrage and employee issues. But pursuing improved environmental performance does not automatically create opportunities of advantage and profitability.

Proliferation of internet has helped spread the environmental concerns that the planet faces, and the sustainability imperative which has the potential to lower the impact of businesses on the planet. The internet has also contributed to improving awareness in society in general. Scores of large business houses and industries have realized that sustainability is no longer an option. In India companies like Godrej, Infosys, Mahindra and Mahindra, Tata group and others have been proactive in their sustainability efforts. Internationally, GE, 3M, Cummins, Wal-mart, Ike and many others have displayed environmental stewardship in their own industries. While it is understandable that large businesses have the knowledge and resources to undertake sustainable practices in their own businesses, SMEs have neither the resources nor the cash required for setting such practices within their operations (Bianchi & Noci, 1996).

1.2. SMEs and the environment

The small and medium enterprises constitute an important segment of the Indian economy. This sector is a “nursery of entrepreneurship” and contributes to about 8% of the GDP, 45% of the manufactured output and 40% of exports (Report of Prime Minister's Task Force on MSME, 2010). This sector’s contribution to employment is second highest next to only agriculture (SME World). In spite of business advantages of proactive environmental strategies, SMEs generally adopt reactive strategies which focus on compliance rather than sustainability (Hobbs, 2000). Recent studies show that the firm size is one of the major determinants of a firm’s green strategy – environmental actions undertaken are inversely proportional to the company size (Bianchi & Noci, 1996). In the 2011 survey on Sustainability and Innovation, the MIT Sloan Business School too had similar findings (MIT Sloan Sustainability Dashboard).
SMEs follow business instincts to reduce resource use and waste. But when faced with the prospect of no short term gains, SMEs may find these investments as a non priority expense (Esty & Winston, 2009). The cumulative contribution of SMEs to pollution and environmental concerns is not documented, yet is suggested to be equal, if not more, by some researchers (Hobbs, 2000). Thus, the potential contribution of SMEs to cleaner environment may not be realized yet. In India, present policy and legal frameworks do not encourage and support SMEs in this direction. With lack of enforcement mechanism, the local regulatory bodies may be missing much of the environmental impacts by SMEs.

The objective of this research paper is to prepare a framework for SMEs to improve their environmental performance while benefiting the business. This is undertaken through a study of practices of large firms and review of research literature on competitive advantages of going green.

2. Methodology

The approach followed for developing insights into the green practices of Indian SMEs was as follows:

a. In depth interviews were recorded with fifteen SME owners in Pune region. These included SMEs from electronics, engineering and plastics industries.

b. In addition to the interviews, site visits were conducted and industry statistics and annual reports were examined to increase research validity.

c. A visit to manufacturing plants and offices of five large companies – Persistent Systems, Cummins India, Kirloskar Brothers, Godrej & Boyce and Godrej Industries. An in-depth interview was held with either the sustainability manager or the person in charge of environmental practices.

d. Review of research on SMEs and environmental performance.

3. Differentiating green practices and green strategies

Interviews conducted in large firm’s yielded information about how they approached green practices. The green efforts and their business impacts were asked. In the analysis, it was attempted to separate the practices and strategies were separated. This helped in the understanding if they undertook “necessary but not sufficient” green practices or whether they employed a green strategic approach. Green practices resulted in short run benefits while a strategic focus created differentiation in the long run. The five study firms can thus be classified in a grid as below.

![Fig 1: Green efforts and benefits](image-url)
Persistent Systems have been following green practices in their offices. They follow the CII Green Building norms and have invested in cleaner technologies. Efforts are made to reuse and reduce water consumption and older HVACs are retrofitted to save energy. Reduction in number of printers and consolidation of server rooms has helped save energy. They also manage their server rooms more efficiently by a purpose built software developed by themselves. Training and awareness about the environment is built into their employee training calendars. When asked about the motivation for these efforts and the business impact, the respondent replied that the vision of the founder was the driver for these efforts. About the business impacts, they have realized a saving in energy costs, while the cleantech employed are expected to start paying within 2 years.

Godrej on the other hand has a strategic focus on the environment. This is presented in their “Good to Green” program which is visible across their offices and plants (Godrej Good & Green). They also subscribe to the CII Mission for Sustainable Growth “MSG” program. One of their objectives is “Having a third of our portfolio revenues comprising good and/or green products and services – defined as products that are environmentally superior or addresses a critical social issue...” . Thus their green practices do not focus only on short run savings. For example, Godrej Appliances launched India’s first fully green refrigerator in 2002, and to date Godrej is the only company to have such a product. Their new range of air conditioner has a 7 star rating – ahead of what competition has on offer in India. Godrej & Boyce received the Leader in Energy Efficiency & Sustainability Award. Their Reduce-Reuse-Recycle program has prompted them to look for sustainable recyclable packaging, even when it does not result in savings. Godrej positions itself as a green product company.

Green practices and efficiency are closely related. These may not create competitive advantage since as firms get more efficient their differentiation is reduced (Porter M. E., 1996). Competitive advantage does not rest on static operational efficiencies but comes from the capacity to innovate. Green strategies direct organizational capacity towards green objectives and focus on outcomes and not technologies and processes. Green strategies start from top down. While green practices look from the businesses costs and drive innovation in solving them, green strategies address a firm’s environmental impact and innovate to reduce it. Green strategies define the scope and decide the advantage that the firm wishes to create for itself. They have a long range focus and require an organization wide commitment, as opposed to short term results and departmental solutions for green practices. Green strategies address environmental objectives proactively rather than as a reaction.

4. What Competitive advantages can be expected from Green strategies

Porter and Linde (1995) have argued that the most competitive firms are not the ones with cheapest inputs or largest scales, but ones which have the capacity to innovate more. They discuss several examples where environmental regulation has caused firms to innovate for solutions thereby creating a cost advantage. Firms which proactively pursue green strategies stand to benefit in many ways than just profits. A green competitive advantage is the potential for environmental performance to improve long term profitability. The benefits are classified into four categories (Figure 2).
a) Emerging market opportunities: Research has shown that here is a growing class of customers who care about how the product they buy is made and what is let out in the process. Grail research (Grail, 2009) shows that 85% of US customers have bought green products of which, 8% choose to buy green products for a majority of their purchases. 58% Americans recycle, 29% buy green products regularly and 18 percent commute in an environmentally friendly manner (Gallup, 2011). Even in b2b markets, executives are measuring their sustainability initiatives (PwC, 2012).

For SMEs, this helps open new doors to business environment with less intense competition.

b) Early mover advantage: The benefits are many – Although the Mahindra Reva is not yet a popular car, it will always be remembered as the first producer of electric cars. This creates a challenge for followers since customers now have an anchor or reference in their minds. Early movers are likely to profit more from the reduced costs. Because of green practices, their costs are lower before others. Early movers can also challenge existing standards and influence industry them thus forcing competitors to comply or nudging customers to change.

This is a prime opportunity for SMEs. With very few SMEs going green and positioning green, clearly, this is one area where a small firm can stand to gain.

c) Managing costs and risks: Reducing material costs and generating less waste is one of the earliest known ways in which firms have benefitted environment through their business objectives. Stricter norms and compliances spawn innovative practices in industry leading to reduced costs. Environmental risks are a growing threat for many industries. Many firms have realized the hard way that prevention is better than cure.

Investments aimed at reducing risks are not on the priority of SMEs. They do not result in a saving. Yet, the cost of mitigating risks is easily less than cost associated with the happening of the event.

d) Environmental stewardship: Society’s expectations about corporate behavior are changing. A firm which abuses local environment can incite public wrath as happened with the case of Vedanta Aluminium recently in the Niyamgiri hills in Odisha (Business Standard, 2013). Public can strip a firm of its ‘social license’ to operate. Recently in Pune Dow had to cancel its Rs. 400 crores R&D project due to intense public pressure (Business Standard, 2008). People had not forgotten the Union Carbide disaster in Bhopal over 25 years ago. On the other hand environmental good is looked at positively by an increasing number of customers (Gallup, 2011) (Grail, 2009). Godrej’s efforts in conservation of a large tract of mangrove ecosystem has fetched them the Green Governance award at the hands of the Prime Minister of India. This sort of publicity generates far more goodwill than advertising can. FabIndia, a retailer of ethnic Indian wear has a system of certifying its products with green, blue or yellow logos to signify the extent of organic and green practices followed. This has been one of FabIndia’s most successful product range and one that is growing (Centre for Science & Environment).

Companies strongly projecting environmental stewardship are preferred by prospective employees. A 2008 survey by Monster.com revealed that 92% of undergraduates wanted to work for a green company (Esty & Winston, 2009). People want to be associated with good values – customers and society.

5. What must Green strategies address to gain competitive advantages

For green strategies to work up a competitive advantage, they should integrate all the firm’s approaches towards the environment. The strategic planning process must be able to address the following factors (Figure 3)

Regulation and compliances – Staying within rules is the primary responsibility of a firm. Regulation has been increasingly pressing producers to improve their environmental performance. The REACH legislation (EUR, 2009) in the EU makes it mandatory for producers to register every chemical they make, is one such example. The Bharat Stage 4 emission norms force automobile manufacturers to design their products to meet the standards. Extended producer responsibility is on the horizon already. New ‘take-back’ laws may soon find their way in the Indian markets. They emphasize "producer responsibility" that holds manufacturers responsible for their packaging.

The environment itself – The firm’s green strategic management process must focus on reducing its impact on the environment – in terms of consumption of natural resources and pollution of air, water and soil. A strategic focus will drive firms to redesign their products and processes for the environmental. As SMEs form a large segment of the Indian industry, it is imperative for them to indulge in sustainable practices.
The customers - SMEs have been facing pressures from their large buyers to improve environmental performance. In the automobile industry in India, car makers are increasingly pressurizing their vendors to align them to achieve their own green goals. Those SMEs which are proactive in green performance can offer the differentiated advantage. For example, when Toyota Kirloskar Motors in India wanted self-adhesive foam parts for the dashboard of Innova, the pre-qualification was meeting strict VOC norms in manufacturing. This led to automatic disqualification of most of the small firms making such components without considering these high standards. Only a few large ones who had invested in these technologies stood to benefit. Similarly, many cost leaders with excellent quality records, in the electro-plating industry are disqualified from supplying the airline industry, which is known to follow very high waste and pollution standards.

Much research has shown that here is a growing class of customers who care for how the product they buy is made and what is let out in the process. Green strategies will help firms choose their customers, decide the products and manufacturing processes and invest in sustainable practices.

The business risks of environmental violations – these can cripple a small firm. Risks of litigation can result in loss of man-hours in SMEs and penalties can be expensive. The social license allowed by the society to do business, can be taken away by them. A proactive strategic focus to the environment can help mitigate the environmental risks of businesses.

Changes in the industry - large companies with strong research base can influence policy makers to strengthen or modify current industry standards. SMEs may find it challenging to respond in short times and often with large unbudgeted cash outflows which can potentially make them weaker. Competitive playoffs can change in an industry when competitors bring out changes in their product design which can drive down lower production. Recently, the EU made it mandatory for cell phone manufacturers to use the micro USB charging pin. This is done to produce and sell fewer chargers. A large number of SMEs make phone chargers for European markets. Those with low sunk costs will be more competitive.

New environmental technologies – early movers will profit more before others get in. SMEs which look at these as strategic investments instead of unnecessary costs can secure this advantage leading to new business opportunities.

Community awareness and Social initiatives – are much more visible. NGOs have been successful in creating customer awareness about environment. For example the WWF “Check Your Paper” campaign is a a global database of eco-rated papers. It helps paper buyers find products with the lowest environmental impact. This campaign includes about 100 paper products with “good” or “excellent” environmental score. Customers can easily pick out green businesses by such awareness drives. Public opinion is increasingly being influenced by social initiatives. International public opinion also matters in issues with a high impact potential (Elkington, 1994 Winter).
Stakeholder pressures – are growing. Stakeholders include those directly related to the firms and those that are not. Bankers, investors and insurers, customers, suppliers, community, competitors and social organizations and media. Many banks now conduct an environmental impact assessment of the project before financing. A negative report may lead to disqualification. Investors too are growing wary of these aspects. A high environmental risk situation can put them off. Insurance firms raise their prices for higher environmental risks. Some of these stakeholder pressures did not exist a few years back.

Ethical motives – Wal-Mart’s CEO Lee Scott is known to be a strong advocate of good environmental performance. Even in times of economic downturns his speeches to employees kept them focused on Wal-Mart’s environmental goals and objectives. For ethical motives to be driving green strategies requires stewardship of strong visionary leadership. For example, Infosys’s approach to corporate sustainability (Infosys) is a result of vision of top leadership and reliance on processes. Leadership is a critical factor for the success of green initiatives, 88% of companies with such programs include the CEO in development and communications, while 91 percent have appointed a dedicated leader for their green efforts (Buck Consultants, 2010).

6. Green Strategic Management for SMEs

Forest Reinhardt (Reinhardt, 1999) talks about five approaches that a firm can take towards green strategic management. Differentiating products on the basis of green positioning, helping shape industry regulations and “managing” competition, cutting costs through environmental improvement programs, managing environmental risks for the firm and redefining markets have been suggested. Paul Shrivastava (Shrivastava, 1995) talks of environmental technologies as a source of competitive advantage. The author says that the strategic variable which fundamentally changes environmental impacts of businesses is choice of technologies. Product design and manufacturing determine basic costs and ecological impacts. He argues that environmental technologies can be used to gain competitive advantage. The other perspective for green strategic approach is given by Renato Orsato (Orsato, 2006). He talks of four strategies which are result of cross tabulating generic strategies of cost leadership and differentiation with focus on process or products.

The way for SMEs to approach Green Strategic Management in their own firms is prepare a Green Strategic Plan document. This document will lay out the following elements from an environmental impact perspective: vision and objectives, life-cycle plan for present products, new products that will be introduced, new markets to be accessed, technologies that will be employed and organizational focus and commitment that it will generate. The generic strategic planning process is illustrated in Figure 4.

Step 1: Setting Mission and Goals. The environmental mission talks about two things – why you exist and the major goal you have set for the firm. The vision shows the direction to be taken and the goal to be reached. Precise and measurable objectives are also set. When setting the mission and objectives the Green Impact Map (Figure 1) should be considered. For guidance, the Coalition for Environmentally Responsible Economies (CERES) publication of “The Ceres Principles” (Ceres Principles) can be used. This is a ten-point code of corporate environmental conduct. Similarly, the International Chamber of Commerce (ICC) has prepared the ‘Business Charter for Sustainable Development’ which sets out 16 principles for environmental management. The Charter covers environmentally relevant aspects of health, safety and product stewardship. Its objective is 'that the widest range of enterprises commit themselves to improving their environmental performance in accordance with the principles, to having in place management practices to effect such improvement, to measuring their progress, and to reporting this progress as appropriate, internally and externally. This too can be used as guiding principles. The mission, goals and objectives should be communicated to the organization.

Step 2: Situation analysis.

Three tools are suggested for external analysis –
a. **Stakeholder analysis:** Stakeholder analysis consists of an analysis of the firm’s customers, community, investors and risk assessors, regulators and watchdogs, employees, business partners and competitors (Esty & Winston, 2009). This should capture the changes on the horizon and the potential risks that the firm is exposed to from each of the stakeholders. The analysis should address the four parameters:

What is the power and influence of this stakeholder in my business?

What is my focus on him now?

How would they react to our green behavior?

What is the risk of not meeting their expectations?

b. **PESTLE:** This is a tool for assessing the macro-environmental factors. The acronym stands for Political, Economic, Sociocultural, Technological, Legal and Environmental factors. It is evident that the factors analyzed in this tool cannot be influenced by the firm. Thus these will be the constraints that the strategic planning process must operate within.

c. **Analysis of the Firm’s Industry in other developed countries.** Industry analysis in developed countries is important because it tells of a regulatory trend which Indian markets are likely to follow.

Internal analysis looks at the firm’s own strengths and weaknesses. Strengths and weakness should be looked at from four perspectives: Product, Processes, Management, Research & development.

![Figure 4: Strategic Management Process](image)

**Step 3:** Strategic Choices

Porter suggested three generic strategy choices – cost leadership, differentiation or focus. A firm can choose one strategic position based on value to the firm’s core customers and also the industry structure. Based on the external
and internal analysis, a strategic position should be chosen for the firm. Thus, a firm can choose one of the following (Esty & Winston, 2009)

- Lower its cost compared to competitors through environmental improvement practices
- Differentiate on environmental objectives and performance

The first strategic position – lowering costs – is where most SMEs are good at. This also makes it the weaker position in terms of duplication. For example one label manufacturer switched from solvent based inks to water based ones. This resulted in lower cost of ink but meant an investment in solar dryers and increased space. The investment was offset within a year by the lower costs of solvent inks. But there may be investments which are not obvious until driven by strategic focus to improve environmental performance.

The second position has to start with identifying customers that the firm wishes to serve and understanding the value proposition that the firm can offer based on green differentiation. Without a large or growing customer segment, this position can be a hard choice. It is also important to get the communication strategy right. To maintain this differentiated position the firm must protect imitation. Often, an early mover gains an edge over followers.

One wire harness manufacturer in Ahmednagar, for example, stopped buying non UL approved PVC tapes for its customers and switched over to all UL approved ones only because of a potential risk of serving its largest customer who only allowed UL approved tape in the wire assemblies. This set apart the small manufacturer of wire harnesses and also gave it the early mover advantage over others.

SMEs can decide based on two criteria – the tangibility of results and the certainty of the outcome.

Step 4: Strategy formulation

To understand how the strategies need to be formulated the generic competitive environmental framework is useful (Orsato, 2006). Orsato suggested that cross tabulating the two generic strategic positions with Internal processes or products could result in four strategies (Figure 5)

As a starting point, SMEs can take up Eco-efficiency as a strategy. This will help them manage their priorities and focus on the desired change – lowering process costs innovatively. There are various avenues for SMEs to improve organizational processes. They could hire the services of environment consulting firms or EMS implementation companies, they can pursue ISO 14001 and also achieve desired results or it could be addressed internally too. The competitive advantage here is when a firm can create a system of continuous improvement in this area, helping stay ahead of competition. This will focus on innovation which should drive costs lower.

In the next step, firms can address Environmental cost leadership as the strategy. This will help get in their knowledge and experience in the earlier step into their products or services. In this strategic approach, firms shall design new products for the environment, besides modifying present products. This approach also requires firms to rethink at their customer segments.

Differentiation through organizational process or “Beyond compliance leadership” and “Eco branding” are the more difficult strategies for small firms. This requires not only innovative approaches towards processes and products, but also a rethink in the firm’s value chain. With a strategic environmental focus, one painting contractor
of automobile parts changed the way he did business. With a high rework rate, loss of paint, plastic parts and time were always costly. Instead of billing the client for consumed paint and labour, he agreed to be billed on accepted painted parts. This not only drove his team to paint better but also helped his client in their overall green objectives. This kept other competitors out of the running.

**Step 5: Implementation**

This step can make or break good strategies. If the strategic imperatives are not followed or selectively followed, then the risk of not achieving the desired position is high. An SME with scarce human resources can create a strategy team for this purpose. This team should:

- Be trained in the strategic planning and implementation process.
- Should be empowered to make changes, set things right or take strategic decisions.
- Be incentivized for milestones and results.
- Prepare a plan and schedule of the plan and manage the process
- Identify key metrics before, during and after the plan period
- They must meet periodically and show the results of the previous periods
- Besides this, the top leadership should display a commitment to the strategic focus. Small celebrations of achieving milestones is a good motivator as reported by one small firm (Keetronics, Pune)

**Step 6: Evaluation and control**

Regular evaluation should be part of the strategy team. Once during the year, an independent audit can be conducted.

7. **Conclusions**

There are already strong reasons to build greener businesses for tomorrow. The changes brought about by industry on this planet have created adversities for human beings themselves. Small firms must respond to the environmental challenges facing the world. They can no longer remain insulated. Neglect will bring more harm and perhaps a quicker end.

Green practices do not always create a burden for industry. Traditional green practices which have reduced waste and improved business results must now be taken to strategic focus. Simple tweaking of existing products and improving operational efficiencies must now give way to a leadership focused green strategic approach towards the environment. For SMEs, this may need to start with improving the owner’s environmental knowledge and awareness. Sustainability of life on this planet rests in the hands of sustainable industries.

**References**


