

Green Strategy Management Towards Sustainable Development

Dr. S.B. Ronald¹, Dr. Psnh Ramachandra Rao², Dr. B. Ananda Kumar³
^{1,2,3}Department of Chemistry, Sri Y.N.College, India

Abstract: The global recession and continued concern over climate change calls into question the ability of current models for economic growth to foster long-term prosperity. Faced with economic hardship and pressing social problems, countries around the globe have pursued a wide range of policy and investment strategies to jumpstart economic recovery. The green economy is defined in different ways, but according to all definitions, a green economy is one that is environmentally sustainable in the broadest sense, that is, it operates without infringing environmental limits.

The objective of this paper is to identify major works on green strategic management research integrating Environmental, Health and Safety (EHS) toward sustainable developing thinking into all instruments and procedure management, and thereafter, to classify them so as to identify gaps, issues and opportunities for further study and research. Therefore, in order to implement this right and fundamental conceptual model relying on literature review of green strategy management (GSM) on the one hand and the key elements of sustainable development other hand, the conceptual model has been proposed.

The concept of GSM, the functional Model of an organizational supply chain with an environmental impact, differences between conventional management and GSM and models for the implementation of GSM registered in the literature have been discussed. Various approaches of GSM, implementation of a Green Management and key factors affecting GSM have been also described. Depending on one's view of the environmental limits, more or less change to production is needed. Everyone agrees that this change will result from a combination of changes in technology and in consumption patterns. However views on the likely mix differ, and reflect views on the relative achievability of technological and socio-economic change. Views on this then influence views on the kind of mechanisms needed to make the changes happen, for example regulation as opposed to structural change. Much of these disagreements are really about what is achievable politically, and views on this will influence views on what needs to be done in the national and international political arenas.

Keywords: analytic hierarchy process, environmental health and safety, green economy, green strategy management, sustainable development

I. Introduction

Environmental degradation, increasing resource scarcity and economic globalization have caused green strategic management (GSM) to become an important competitive approach for organizations involved in international trade.

Widespread concern for environmental protection emerged dramatically with the advent of the Industrial Revolution. Public outcries over smoke pouring from the stacks of coal burning factories, along with the eventual expansion of the petroleum industry, led to an early foothold for the "Environmental Movement"^[1] Perusal of the literature shows that a broad frame of reference for Green Strategic Management (GSM) is not adequately developed. In early environmental management frameworks, operating managers were involved only at arm's length. Separate organizational units had responsibility for ensuring environmental excellence in product development, process design, operations, logistics, marketing, regulatory compliance and waste management.

Environmental practices have been accepted and adopted in the world of business^[2]. The numbers of organizations are contemplating to integrate environmental practices into their strategic plans and daily operations^[3]. Increasing government regulations and stronger public mandates for environmental accountability have brought the green issues high on the strategic planning agenda of manufacturing firms^[4]. Green strategic management (GSM) adds 'green' component to the conventional procedures by including practices like green operations, green design, green manufacturing, reverse logistics and waste management^[5]. Strategic planning in GSM context means the identification of relevant goals and specification of long term plans for managing those goals^[6].

II. Difference Between Conventional Strategic Management And Green Strategic Management

Strategic management involves the formulation and implementation of the major goals and initiatives taken by a company's top management on behalf of owners, based on consideration of resources and an

assessment of the internal and external environments in which the organization competes^[7]. Conventional Strategic Management usually concentrated on economy and control of the final product but seldom considers its ecological effects. Green strategic management is an experimental tool, which can be used to evaluate alternative long term strategies using total supply chain profit as measure of strategy effectiveness^[8].

A green strategy for an enterprise – public or private, government or commercial – is one that complements the business, operations, and asset strategies that are already well understood and often well-articulated by the enterprise. A green strategy fundamentally helps an enterprise make decisions that have a positive impact on the environment. The principles that form the basis of a green strategy should lead a business to make decisions based on solid business logic and make good business sense^[9]. GSM is defined as ‘integrating environmental, health and safety (EHS) toward sustainable developing^[10] thinking into all instruments and procedure management, including product design, material sourcing and selection, manufacturing processes, delivery of the final product to the consumers as well as end-of-life management of the product after its useful life’.

III. Environmental Limits And Natural Resource Depletion

This work identified nine planetary boundaries which represent the limits of the safe space for human development. The boundaries are the lower end of the range of possible values for tipping points - points beyond which “irreversible and abrupt environmental change” may result. There are boundaries for climate change, biodiversity loss, and nitrogen removal from the atmosphere, phosphorus in the ocean, ocean acidification, land use, water consumption, ozone depletion, atmospheric aerosols and chemical pollution. Of these, according to the authors, the first three have already been crossed, the next five have not yet been crossed and the last two have not yet been measured.

In addition to these planetary boundaries, environmental limits can also refer to more local boundaries, defined in the same way by reference to tipping points, but where the consequences may not be global environmental change, but levels of degradation to the local environment agreed to be unacceptable. In either case, the critical point is that boundaries represent tipping points: because the consequences of breaching them are so potentially extreme, irreversible, and uncertain that the associated externality cannot be priced.

While the need to remain within environmental limits is recognised throughout the literature as a basis for which transition to a green economy is necessary, noticeably less emphasis is placed on the need to limit depletion of non-renewable natural resources. This seems likely to result from the uncertainty with which scientists are able to predict how much non-renewable natural capital remains available for extraction. This uncertainty, contrasted with current detailed understanding of safe limits for atmospheric concentrations of greenhouse gas emissions, may explain the greater emphasis on environmental limits.

With the exception of Herman Daly^[11], who calls for depletion quotas to be auctioned by government, those authors who do acknowledge the need to limit depletion of non-renewable natural resources tend not to set explicit policies and targets for limiting natural resource depletion, which seems likely to be due to the previously stated uncertainty surrounding remaining stocks, and therefore the degree of action required. Instead, these authors tend to call for inclusion of changes in the stock of natural resources in national accounts^[12].

IV. Technological Innovation Will Play The Key Role

According to this view, the economy will continue to do what it does now, producing broadly similar goods but at much higher levels of environmental efficiency. Our review of the literature and interviews with experts suggests that proponents of this view may well accept that technological development is uncertain, but they also believe that technological improvements are more likely to deliver a reduction in environmental degradation than significant changes in consumption patterns (the only alternative), whether the latter are the result of individual or collective (i.e. political) decisions and whether the latter involve new forms of consumption or simply less consumption. In other words, advocates of this view believe that there won't be a significant shift to environmentally sustainable consumption in the future, any more than there has been in the past 20-40 years. Some proponents of this view also believe that consumption patterns reflect free choices and that therefore changes should not happen, but this is an extreme view and not essential to the position. The broader point is that given the difficulty of achieving consumption changes, it is better to focus efforts on what might work than on what clearly won't work. Indeed attempting to change consumption creates the risk that voters and thus politicians will be alienated from the environmental project, and that as a result, even technological innovation will not get the support that it needs to optimise. It should also be noted that many commentators in this group compared to the other groups are more sanguine about the environmental limits, meaning they can accept a lower environmental status to achieve higher economic or social outcomes.

V. Transitioning To The Green Economy Does Imply Trade-Offs, Which Need To Be Managed

Other commentators make the case that the benefits produced by the types of policies outlined in Box B may exist, they are clearly too weak to compensate for the costs associated with transitioning to a green economy, for a range of reasons, including that the benefits can be created in much more cost effective ways, or that the advantages created will only be beneficial for certain groups, and will make things more difficult for other groups. Advocates of this view call for what they would call a more honest or realistic approach to overcoming the political difficulties associated with transitioning.

VI. New Consumption Patterns Will Be Needed

Proponents of this view do not deny that technological breakthroughs could make a huge difference; however, they believe that sufficient technological innovation at sufficiently low cost is at best highly uncertain. They also believe that simply rolling out existing technology will be expensive (i.e. will have to be paid for through reduced consumption) and/or not enough (i.e. will have to be supplemented by reduced consumption). Finally, they are relatively sanguine about the possibilities of achieving changes in consumption patterns. Hence they place more, or at least as much, emphasis on the latter as on technology, some suggesting consumption can continue to grow if along new lines, and some suggesting it needs to fall, and can fall in the developed world. It should also be noted that many commentators in this group compared to the other groups are more concerned about the environmental limits, meaning they would accept lower economic or social outcomes to achieve a higher environmental status. Many commentators in this group also have other objectives than just staying within the environmental limits. So they see many of the social changes needed (lower working hours, less consumption) as worthwhile in themselves.

VII. The Developing Versus The Developed World

Our literature review and interviews were weighted towards developed world opinion and this section is something of an overview as a result. There are concerns from the developing world that the aim of transitioning to a green economy is not relevant to developing-world needs. Specifically, policy instruments (such as sustainable public procurement, green subsidies and taxes, certification and standardization tools and green industrial policy) are expected to marginalise vulnerable communities further, rather than reducing poverty. For example, small-scale farmers may not be able to afford 'green' certification systems and many poor people rely on subsidized fossil fuel prices in order to afford energy or transport. Developing world governments also fear that the green economy approach will lead to trade protectionism in international markets. As such, it is important that the transition takes account of the needs of the developing world.

There appear to be two main issues:-

- To what extent should the developing world follow a development path similar to that of the developed world?
- How much does the developed world need to 'give' to the developing world in order to achieve a global green economy?

Broadly there are two types of position:-

7.1. The developing world should attempt to become like existing developed countries in key respects (although of course preserving their distinctive cultures). After all, why should their citizens not aspire to or be entitled to the standard of living achieved in the developed world? Having said this, of course they should be more environmentally efficient than the developed world is now – but this can be achieved using existing and emerging technologies.

7.2. Developing countries should create their own visions of progress, which are not simply imitations of developed countries. This is for three reasons: levels of wellbeing in the developed world are not all they might be, and citizens of developing countries can aspire to more than this; if the developed world is seen as the model, the development process will produce very high levels of disruption, damaging wellbeing, and very high levels of inequality (or at least fail to address existing very high levels of inequality); a world of 9bn people with life styles similar to those in the developed world now is simply unsustainable – and citizens of the developing world will be the first to suffer the effects of environmental catastrophe. Of course the last point does not mean that citizens of the developing world should have a lower standard of living than citizens of the developed world – change is needed everywhere.

VIII. Conclusions

8.1. This proposed framework must address the needs of various executives in developing and implementing green strategies in company along with best business. So, the strategies can start as a project

which can be joined to form a cross-organizational program managing Environmental, Health, Safety and Energy (EHSE) issues in company. However, for effectiveness successfully of building and starting the frame work, as the learnt lessons, there are some special suggestions for the company who would like to start for the best green strategic management practice.

8.2. Be sure everyone is working from the same definition of sustainability. When the company uses the word sustainability, many customers have a very different interpretation of what the means. It's important to specifically define sustainability from the stakeholders involved.

8.3. The impact of employee behaviors and policies on the environment is significant. Commute time and business travel form a large part of an individual's carbon footprint. The use of online collaboration tools and policies that support reduction in commuting and traveling can also have an impact on costs. Companies also are discovering that their EHSE policies and practices can impact their ability to attract and retain top talent.

8.4. For each of your company existing goals, be sure to add realistic and doable actions, with outcomes that lead to sustainable outcomes. Look at company priorities through the lens of sustainability: financial, community and EHSE achievement. Perform a gap analysis to better understand where company land now, and what types of measures the company would like to achieve in the future - then set a timeline with specific and actionable steps to get there.

8.5. Companies need to reduce the cost and greenhouse gas emissions of their physical assets-from office buildings to truck fleets. The process starts with determining and managing the environmental impact of physical assets and properly maintaining all property for energy-efficient operations and reduced environmental impact. Through improved maintenance and through improved tracking, deployment, location, and management of facilities and properties, reductions in environmental impact can be achieved.

8.6. To help monitor company's green strategic plan, company will want to keep score of its progress. Third party certifications are now numbered in the hundreds. Be it a green cleaning designation such as Green Seal, a corporate sustainability program such as B Corp certification (B-Corp), or a green building rating like Leadership in Energy and Environmental Design (LEED), using a third party verification is the best key.

References

- [1]. W.C. Culley, *Environmental and Quality Systems Integration* CRC Press, USA, 1998.
- [2]. B.T. Nones, S. Morques, R. Evgenio, 'A Theoretical Approach for Green Supply Chain Management' Federal University, Industrial Engineering Program, NATAL-BRAZIL, 2004.
- [3]. J. Sarkis, *J. Cleaner Product.* **11**, 397 (2003).
- [4]. S. V. Walton, R.B. Handfield, S.T. Melnyk, *Int. J.Purchas. Mater. Manag.*, **34**, 2 (1998).
- [5]. S. Srivastava, *Int. J. Manag. Review*, **9**, 53 (2007).
- [6]. R.K. Mudgal, R. Shankar, P. Talib, T. Raj, *Int. J.Logistics Systems Manag.*, **7**, 81 (2010).
- [7]. R. Nag, D.C. Hambrick, M.J. Chen, *Strategic Manag. J.*, **28**, 935 (2007).
- [8]. Y. Su, Z. Jin, L. Yang, Web-Based Green Products Life Cycle Management Systems: Reverse Supply Chain Utilization, *IGI Global*, 2008, p. 301.
- [9]. E.G. Olson, *J. Business Strategy*, **29**, 22 (2008).
- [10]. A. Padash, in: *World Renewable Energy Congress.Sweden: (2011)*, p.3034.
- [11]. Brundtland, G. (1987). *Our common future: Report of the 1987 World Commission on Environment and Development*.
- [12]. Centre for Alternative Technology (2010) *Zero Carbon Britain: Rethinking the Future*. Centre for Alternative Technology.