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Management ingredients to embrace the new paradigm: green

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Abstract

Purpose – The purpose of this paper is to identify three critical ingredients that are necessary to support the upcoming Green Paradigm. Existing research indicates the uprising of Green Paradigm through emergence of Green products and services. Extant literature discusses critical questions such as "what" and "how" in silos. Each of the ingredients is anchored in literature, highlighting the past, showcasing the gap and proposing future direction.

Design/methodology/approach – Fundamentally, a combination of literature review and qualitative technique is used to achieve the main objective of the paper.

Findings – Gaps in the literature support and suggest the need to focus on three different perspectives: corporate, management research and management education, which needs to be looked from a long range to support Green Paradigm. This finding is substantiated through qualitative research.

Research limitations/implications – The limitation of the research is, only a 10 year period is considered for key word search in journals. The journals are restricted to top journals as given by UT Dallas research rankings, 2011. It is quite possible that there are other journals that focus more heavily on green perspective.

Originality/value – This paper introduces a holistic perspective that fits all major lenses of the society to foster Green Paradigm, in turn, environmental sustainability.

Keywords Sustainability, Green, Green CSR, Green education, Green research, Green supply chain

Paper type Conceptual Paper

1. Introduction

Faber *et al.* (2005), in an attempt to decipher what sustainability means, state that, as per Chiesa *et al.* (1999), "Sustainability as a term was introduced for problems concerning the deteriorating relationship between global ecology and ongoing economic development". Since the past decade, companies are moving closer to natural ecosystem through reducing the negative impact on the environment in a step-by-step manner (Harriss, 2010). To gel with this shift, three identified elemental management ingredients are established through support from the literature. Gap was showcased in each of the ingredients and their combined effect surfaced.

First, green corporate (GC) is a combination of green supply chain management and self-motivated GC social responsibility. Simply put, conversion of supply chains into green(er) supply chains (Beamon, 1999) and change over from corporate social responsibility (CSR) into CSR with self-motivation (Maignan and Ralston, 2002) form the essence of GC. This ingredient brings a major change internally and externally to an organization.

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Second, the fundamental idea of green management research (GMR) is to re-orient all the areas of management research with environmental sustainability as much as possible through a gradual and concerted effort. This would help re-examination of the relevance of the existing theories (Kotler, 2011).

Third, the central idea of green management education (GME) is to merge the present curriculum of management education with environmental sustainability in business context in all functional areas gradually. This provides the young and developing management minds to learn and sensitize environmental sustainability while in the classroom. The effect of "catch them young" (Heckman, 2006) was understood.

In this paper, all three ingredients are discussed in detail by showing the past trend and present status through literature review and the gap to be bridged for the future. This paper takes contextual time relevance, as the extant gap is visible because all these ingredients are not implemented with due importance. A few real-life examples are drawn as parallel to illustrate the idea more clearly. This paper contributes to the existing body of knowledge in two ways:

(1) By acting as a literature review, hence, demonstrating the need for all the three ingredients.

(2) This paper brings out the interconnection among these ingredients in supporting Green Paradigm, thus giving a holistic perspective.

The paper is organized in the following way. To begin with, the traditional paradigm that leads to business revolution was discussed. Few effects of the paradigm were also indicated. These effects lead to the emergence of a new thought process concerning environmental sustainability. This is followed by projecting the importance of each management ingredient with literature support. Finally, a model capturing the interconnection between the ingredients and their impact on Green Paradigm is presented.

2. Paradigm

Kuhn, principally known for introducing the term paradigm, doubts the appropriateness of the word for social sciences (Mintzberg, 1978). Kuhn (1970), introduced two basic points about paradigm which are key to this conceptual paper. One, how the emergence of a paradigm affects the structure of the group that practices in the field, and two, paradigm-based research. In addressing the initial point, Kuhn (1970) continued to mention that:

> […] an individual or group first produces a synthesis able to attract most of the next generation's practitioners, the older schools gradually disappear. In part, the disappearance is caused by members' conversion to the new paradigm. Paradigms gain their status because they are more successful than their competitors in solving a few problems that the group of practitioners has come to recognize as acute.

In the present scenario, it is proposed that the concept of Green has just begun to unfold as a dominant paradigm through the need for green products and services.

Kuhn (1970) quotes the works such as Aristotle's *Physica*, Newton's *Principica* etc., to showcase that these:

> […] works served for a time implicitly to define the legitimate problems and methods of a research field for succeeding generations of practitioners. They were able to do so because they shared two essential characteristics. Their achievement was sufficiently unprecedented to

attract an enduring group of adherents away from competing modes of scientific activity. Simultaneously, it was sufficiently open-ended to leave all sorts of problems for the redefined group of practitioners to resolve.

2.1 Traditional paradigm

Swan (1971) initiated the idea of a crisis situation that, "at the root of the ecological crisis […] are the basic values which have built our society". The same thought had been furthered by several other researchers, citing such values as individualism, materialism, limited government and progress (Caldwell, 1970; Christensen and Norgard, 1976; Harblin, 1977; Dunlap and Kent, 1978). The development of "Dominant Social Paradigm" or "DSP" (Pirages, 1977) encompassed the constellation of "common values, beliefs and shared wisdom about the physical and social environment" which contributes to a society's basic world view, and this is being transmitted through generations. Several authors indicate that values such as commitment to laissez faire, individualism, progress and growth are no longer adaptive in the era of ecological limits. Clearly, the replacement of the traditional paradigm with the environmentally friendlier paradigm (Pirages, 1977; Catton, 1980; Drengson, 2008; Rifkin, 1980; Robertson, 1978, and Reiley, 1997) is evident. A pattern is found so far in the traditional paradigm. Every time industry pollutes and affects public health, stakeholders raise alarm and alert the government. The government then takes necessary steps to curb the effect (Reiley, 1997).

For instance, the buzz around the environmental regulatory work started after the Union Carbide plant accident in Bhopal, India. This is one of the precursors for creation of Environmental Management System (EMS), later on emerged as ISO 14000 Standard (Reiley, 1997). These were developed to provide business with a structure for managing environmental impacts. Reiley (1997) further lists all major environmental events that happened during the 1960s and 1970s. These events triggered the thought for environmental protection. Earth day was conceived and celebrated since April 22, 1970. During this day, Environment Protection Agency was formed. In the same paper, Reiley (1997) discusses about how several action oriented steps were taken and new legislations were formed, including The Clean Air Act, Clean Water Act, Resource Conservation and Recovery Act and Comprehensive Environmental Response Compensation and Liability Act etc. These Acts, he calls as Command-and-Control statutes and regulations. Jackson and Garthwaite (2001) point out changes in the context of a shift toward a new environmental paradigm. The key issues toward the new paradigm are, sustainability, integration, environmental leadership and public involvement (Brunson and Kennedy, 1995).

Few other instances are, the use of chlorofluorocarbon as a coolant, which can actually create holes in the ozone layer, the use of dichlorodiphenyltrichloroethane – a pesticide which used extensively caused damage to soil, farm animals and people. The common thread that connects these examples is that the solution found to address an issue was not thought for sustainable usage and its negative effects on the environment. King (1995) describes these outcomes as surprises and suggests taking clues from long-standing communities such as Medieval village communities in Japan (Imabori 1,050 to 1,550). Kotler (2011), in his work, included sustainability as one of the important factors in marketing and urged the need to re-examine existing theories in marketing:

> Marketers in the past have based their strategies on the assumption of infinite resources and zero environmental impact. With the growing recognition of finite resources and high

environmental costs, marketers need to reexamine their theory and practices. They need to revise their policies on product development, pricing, distribution, and branding. The recent financial meltdown has added another layer of concern as consumers adjust their lifestyles to a lower level of income and spending. Companies must balance more carefully their growth goals with the need to pursue sustainability. Increased attention will be paid to using demarketing and social marketing thinking to meet the new challenges (Kotler, 2011).

2.2 Recent paradigm changes (in progress)

Prominent descriptive characteristics of paradigm are:

- the unifying or integrating theme;
- substantial orthodoxy in basic parameters of research, theory, methods and values; and
- predictive or exploratory capability (Jones, 1983).

The prime factor to the paradigm of sustainability is social control of the business. It is the quantum of pressure that society exerts on a business. It is the underlying paradigm that guides the thought, the actions of people of a particular culture (Stead and Stead, 1994). The current myth of economic wealth has brought us to the state of what it is now. The change in a myth can only change the way attitude and actions of the people. This is the paradigm shift as suggested by Kuhn (1970). These paradigm shifts are rare and happen very few times in human history (Mumford, 1956). Due to excessive anthropocentric activities as described as an anthropocentric paradigm (Purser *et al.*, 1995), the limitations that nature poses makes us think of adapting to the new paradigm of sustainability (Ulhoi, 1995).

Sociological scientists have been working on understanding the change of anthropological paradigm to non-anthropological paradigm (Gregory, 1983). These changes bring about a completely different thought process where the environmental effects are also concerned for having a mutual sustenance of business and human societies. This leads to the formation of New Environmental Paradigm (Dunlap and Van Liere, 1978). It has been well mooted that the next paradigm is Green Paradigm leading to a state of Green Economy generating green jobs (Forstater, 2004). The shift in paradigm is also conceded by Gordon's speech at the United Nations. The following quote from Gordon Brown clearly demonstrates this point in his speech delivered to the United Nations Ambassadors on April 20, 2006 (Brown, 2006):

> Environmental sustainability is not an option – it is a necessity. For economies to flourish, for global poverty to be banished, for the well-being of the world's people to be enhanced – not just in this generation, but in succeeding generations – we have a compelling and ever more urgent duty of stewardship to take care of the natural environment and resources on which our economic activity and social fabric depend.

While it is visible that a new paradigm is taking over the older one, as a witness to this, we also need to understand the implications of the same while in transition. According to Sheldon (1980):

> When a new paradigm is born from an old one, the old terms, concepts, and approaches fall into new relationships with those of the new paradigm. This inevitably leads to some kind of misunderstanding between the two competing schools of thought, for the proponents of each practice that trades in a different world and sees different things when they look from the same

point in the same direction. Because this shift is a transition between different worlds, it cannot be a step at a time, but must occur all at once, although not necessarily instantaneously.

The proposed three fundamental management ingredients that can help us embrace and nurture the juvenile Green Paradigm are given below:

(1) GC;
- self-motivated GC social responsibility (SMG-CSR); and
- green supply chain (GSC).

(2) GMR; and

(3) GME.

3. Management ingredients

3.1 Management ingredient 1 – GC

To bring enough gravity to this ingredient, it is critical to look back at history. The First Wave (Toffler and Shapiro, 1985) called as Green Revolution, dominated until around 1650-1750. The essential characteristics of this wave were, "land was the basis of the economy, life, culture, family structure and politics" (Toffler and Shapiro, 1985). The economy was decentralized so that each community produced most of its necessities (Toffler and Shapiro, 1985). After the First Wave, came the Second Wave. Second Wave is the Industrial Revolution. This lasted till the middle of the nineteenth century. Few major changes brought by this wave were, spread of literacy, improvement in roads and transport, a new social character – the industrial man, mass media, bigger corporations and damage to the earth's fragile biosphere. Two important factors that lead to the discontinuation of the Second Wave were, non-renewable energy resources are drying up and excessive damage to the biosphere (Toffler and Shapiro, 1985). It is the Third Wave that is prevailing now, which Toffler and Shapiro (1985) call, the Information Age. There were debates if Fourth Wave had started (Maynard, 1996).

These waves, as proposed by Toffler and Shapiro (1985), provide us insights in a broad perspective. Industrial Revolution brought many things into the society that was not existent in the First Wave. Two major outcomes of industrialization were damage to the biosphere and extensive dependence on nonrenewable energy are attributed by extensive industrialization (Rosenstein -Rodan, 1963). Thus, it provides enough support that a positive change in companies across the globe toward eco-friendly practices will have a significant positive impact on the environment (Hart and Ahuja, 1996). It can be understood that GC is a key ingredient that can help embrace a Green Paradigm.

To understand how GC works, it is unwrapped into two sub-ingredients which address both internal and external policy drivers of a company. It is proposed that SMG-CSR works as an internal policy driver, and the GSC works as an external policy driver. Internal policy driver refers to matters relating within an organization and external policy driver refers to matters relating to a company's transaction with its outside stakeholders.

3.1.1 Management ingredient 1a: SMGCSR. The fundamental question to be answered is why any manager would take an environmentally friendly decision. The cost benefit analysis would provide the answer for the decision (Hart and Ahuja, 1996). It can be explained using Herzberg's (1959) two-factor theory. When hygiene factor is aligned with motivator (Herzberg, 1959), for instance, company policy aligned with responsibility builds the internal policy driver. Because company policy is not so frequently

changed, the internal policy driver continues to work in favor of taking environmentally friendly decisions. This creates a positive spiral in the company, which extends to its suppliers and customers (Heide and John, 1990). The key point which provides existence to this ingredient is this self-sustaining motivation to take eco-friendly managerial decisions. Sustainability has become the key issue with the business community in this century (Amran *et al.*, 2010). Companies around the world have a major role in shaping the economy (Gray and Bebbington, 2001). The companies are expected to take care of the social and environmental impact caused by their enterprises within their respective territories. However, skepticism abounds as to whether the sustainability of the environment can be left in their care (Gray, 1992). To create environmental value, companies are looking for green product innovation and marketers are facing increasing challenges to attract, satisfy and retain customers (Dangelico and Pujari, 2010). The new paradigm has brought environmental improvement and competitiveness together (Porter and Van Der, 1995). According to Datamonitor, companies have so far launched 458 products that claim to be "sustainable", "environmentally friendly" or "eco-friendly", and this number is likely to touch 1,570 new green products launched this year (Greenbiz, 2009). To understand what is required for this emerging paradigm from this ingredient perspective, it is important to review the literature on CSR. According to Carroll (1979):

> For a definition of social responsibility to fully address the entire range of obligations business has to society, it must embody the economic, legal, ethical, and discretionary categories of business performance. The figure shows how the social responsibilities can be categorized into the four groups. (The proportions simply suggest the relative magnitude of each responsibility.)

Later, the discretionary domain of responsibility has been renamed as philanthropy (Carroll, 2000). The majority of the population expects companies make charitable donations (Sexty, 1995). Therefore, companies need to consider economic, ethical and legal aspects of business where all the three domains co-exist (Schwartz and Carroll, 2003). While multinational corporations are helping developing countries in their development, they also tend to generate a negative spillover on ecology (Christmann, 2004). Porter and Kramer (2006), proposed to have a different look at the relationship between business and society that does not treat corporate success and social welfare as a zero-sum game. In this context, it is significant that SMG-CSR is one key sub-ingredient in GC. The self motivation referred in this sub-ingredient is parallel to the self motivation to increase profits and overall shareholder value quarter on quarter and year on year of a company.

3.1.2 Management ingredient 1b: GSC. The company can only be as good or as green as its supply chain (Walker, 2008). Supply chain management well encompasses several functions within an organization such as finance, sales and marketing, to production planning (Ballou, 2004). GSC can be achieved only when the complete supply chain gets a makeover instead of just a few partners in the chain take the effort. This is more of the team effort rather than individual effort (Carter and Rogers, 2008 and Kleindorfer *et al.*, 2005). Sarkis (1999) provides several definitions given for GSC. According to Green *et al.* (1996), "Green supply refers to the way in which innovations in supply chain management and industrial purchasing may be considered in the context of the environment". Few of the other definitions developed are, "Environmental supply chain management consists of the purchasing function's involvement in activities that include reduction, recycling, reuse and the substitution of materials" (Narasimhan and Carter,

1998). "The practice of monitoring and improving environmental performance in the supply chain […]" (Godfrey, 1998):

> The term "supply chain" describes the network of suppliers, distributors and consumers. It also includes transportation between the supplier and the consumer, as well as the final consumer […] the environmental effects of the research and development, manufacturing, storing, transporting, and using a product, as well as disposing of the product waste, must be considered. (Messelbeck and Whaley, 1999).

Srivastava (2007) indicates that there are many drivers for greening the supply chain. To enumerate, green sourcing, green design, green manufacturing and re-manufacturing, green packaging, reverse supply chain, environmental management system, green innovation and customer awareness are proposed as drivers of GSC in a manufacturing environment. Rao (2002) shows various parameters that companies have integrated for greening the supply chain. To itemize, Green purchasing, total quality management, employee empowerment, customer focus, continuous improvement and zero waste, life cycle analysis, environmental marketing, etc. contribute to GSC. There have been instances where companies were held responsible for their liabilities of their suppliers and also calls for integrating social and environmental concerns with economic concerns to promote sustainability (Rao, 2002). Simpson *et al.* (2007) brings out various prior works on Greening supply chains with relationship between buyers and suppliers as the key premise. "Green-Supply" is a potentially effective mechanism for supply chain managers to improve organizations record on CSR, minimize reputational risk, reduce waste and increase flexibility in response to new environmental regulations (Green *et al.*, 1998; Bowen *et al.*, 2001; Melnyk *et al.*, 2003). In addition to academic research, organizations across the world have started talking about carbon footprint that looks at a big picture of the environmental impact. Definition as available in the gray literature (Wiedmann and Minx, 2008):

> […] a technique for identifying and measuring the individual greenhouse gas emissions from each activity within a supply chain process step and the framework for attributing these to each output product (we [The Carbon Trust] will refer to this as the product's "carbon footprint") (Carbon Trust, 2007, p. 4).

This sums up that, both Academia and Industry converge that greening the supply chain would lead to better utilization of resources and thus minimal damage to the environment.

Together, SMG-CSR and GSC contribute to internal and external policy drivers of a company to give shape to GC.

3.2 Management ingredient 2 – GMR

The sustainability paradigm pushes management research toward interdisciplinary and transdisciplinary modes of research (Gladwin *et al.*, 1995). The study of sustainability may draw researchers beyond the puzzle-solving exercises of normal science (Kuhn, 1970) toward the realm of post-normal science (Funtowicz and Ravetz, 1993). Interdisciplinary and integrated modes of inquiry are needed for understanding sustainability. The cause and effect are not fundamentally linear in fashion. They demonstrate multistable states and discontinuous behavior in both time and space (Holling, 1993). As an example to the work done with reference to environmental sustainability, the new environment paradigm scale developed by Dunlap and Van Liere (1978) to measure

environmental concern has been widely used by researchers (Luck, 2003). Diving deep into the extant work on research that considered environmental sustainability is critical at this stage to know about the "as-is" situation.

To quantify the gap, an investigation has been undertaken using key word search in two different sets of journals. The total number of articles published and articles that have sustainability (green) perspective is compared as a percentage. Below is the list of journals as used in ranking business schools in research (UT Dallas research rankings, 2011). The reason for adapting this rank list is that the journals appeared are highly influential. Total articles published during the past 10 years (2002-2011) within these journals were taken and content analysis of the abstract was done to understand how many papers actually talk about environmental sustainability. While journals such as *Journal of Business Ethics*, and *International Marketing Review* could have been considered, the list is taken solely on the business school research rankings is considered. Key word search was undertaken using the following words: Ecology, Ecosystem, Eco-friendly, Environment, Environmental degradation, Environmental impact, Environmental protection, Environmentalism, Climate change, Green, Green movement, Greenhouse gas, Sustainability, Sustainable.

Table I provides a snapshot of total number of articles published in journals versus those articles that had green orientation.

The results from the key word search support the need for more focus toward articles that consider research with a green perspective, as only 1.03 per cent of total articles (15,837) published between 2002 and 2011 have such a perspective. This is similar to an investigation by Ragavendran and Sanjeevi (2013) as shown in Table II, to check on a similar trend on papers in top marketing journals during the past 10 years, the results of the study were also similar (1.64 per cent) to the previous table.

These tables provide evidence on the percentage contribution of papers that actually include environmental sustainability to the total number of articles published in the last decade. Hence it is important to nurture GMR to unravel more understanding between theory and practice. In order to illustrate how a highly researched domain looks like, a similar investigation is done. Key word search was carried out for the domain, Advertisement, in the same list of journals (as in Table II.) as mentioned above for a smaller period of five years, and it is shown in Table III. The reason for choosing advertisement area is it is known to marketers, researchers and management students. The key words used were: Advertisement – advertising, Advertise – ads.

The results indicate a significant percentage contribution of articles that are centered around advertisement to the total number of articles (Table III). Two journals were intentionally left in this investigation, as they are focused only on advertisement domain (to avoid skewness): *Journal of Advertising* and *Journal of Advertising Research*. Comparing Tables II and III, the significant gap (about 2.7 per cent) explains the focus that a domain received.

3.3 Management ingredient 3 – GME

Many studies have talked about a competency based model for MBA education (Camuffo and Gerli, 2004; Boyatzis and Kolb, 1991 and 1995; Burke and Day, 1986; Hansson, 2001; Mulcahy and James, 2000). Ghoshal (2005) argues that bad management theories are destroying good management practices. According to him, "Our theories and ideas have done much to strengthen the management practices that we are all now

Serial no.	Journal name	January 2002-December 2011 total articles	Identified articles	(%) Contribution
1	*The Accounting Review*	648	6	0.93
2	*Journal of Accounting and Economics*	402	0	0.00
3	*Journal of Accounting Research*	384	0	0.00
4	*Journal of Finance*	991	1	0.10
5	*Journal of Financial Economics*	1,016	0	0.00
6	*The Review of Financial Studies*	833	0	0.00
7	*Information Systems Research*	322	4	1.24
8	*Journal on Computing*	444	0	0.00
9	*MIS Quarterly*	397	8	2.02
10	*Journal of Consumer Research*	682	1	0.15
11	*Journal of Marketing*	526	9	1.71
12	*Journal of Marketing Research*	662	2	0.30
13	*Marketing Science*	594	0	0.00
14	*Management Science*	1,415	14	0.99
15	*Operations Research*	958	10	1.04
16	*Journal of Operations Management*	597	20	3.35
17	*Manufacturing and Service Operations Management*	328	2	0.61
18	*Production and Operations Management*	680	12	1.76
19	*Academy of Management Journal*	717	19	2.65
20	*Academy of Management Review*	650	14	2.15
21	*Administrative Science Quarterly*	575	7	1.22
22	*Organization Science*	597	5	0.84
23	*Journal of International Business Studies*	686	4	0.58
24	*Strategic Management Journal*	733	25	3.41
	Total articles	15,837	163	1.03

Table I. Articles in top journals (UT Dallas research rankings, 2011) with environmental sustainability orientation

so loudly condemning." Ghoshal (2005), also indicates that influential theories of management and business span across a wide variety of disciplines but have collectively converged on a pessimistic view of human nature. In a study with *Financial Times*, Global MBA rankings top 100 at major universities in Australia and New Zealand indicate that, courses on ethics found only to have 50 per cent penetration level among the respondents (Wright and Bennett, 2011). It is only a small proportion of 6 per cent of the schools have found to have incorporated the topic of Sustainability in their core curriculum (Wright and Bennett, 2011). The paradigm shift has important consequences for our vision of the world, knowledge, its production and its social reach (Diaz and Carlos, 2002) and higher education as a source of sustainability (Sibbel, 2009). Courses such as business ethics, CSR and other core courses related to sustainability are a minority of the postgraduate program and they barely exist in undergraduate programs in Spain (Fernandez and Sanjuan, 2010). The Ministry of Education in Thailand and Michigan State University joined hands to design and implement imparting sustainable environmental education to school children in primary and secondary levels (Gallagher *et al.*, 2000). In a recent initiative taken at Universiti Sains Malaysia, where a new MBA program called MBA (SD) has been introduced (Amran *et al.*, 2010), in the recent past, where sustainability in business education is

Journal rank	Journal name	January 2002-December 2011 total articles	Identified articles	(%) Contribution
1	*Journal of Marketing*	526	4	0.76
2	*Journal of Marketing Research*	662	2	0.3
3	*Journal of Consumer Research*	682	0	0
4	*Journal of Retailing*	389	0	0
5	*Journal of the Academy of Marketing Science*	499	0	0
6	*Marketing Science*	594	0	0
7	*Harvard Business Review*	3,537	103	2.91
8	*Journal of Business Research*	1,716	27	1.57
9	*Journal of Advertising*	365	1	0.27
10	*Journal of Advertising Research*	528	2	0.38
11	*Management Science*	1,415	14	0.99
12	*Journal of Personal Selling and Sales Management*	306	0	0
13	*Advances in Consumer Research Proceedings*	N/A	N/A	N/A
14	*Journal of Public Policy and Marketing*	309	4	1.29
15	*Journal of Marketing Education*	268	5	1.87
16	*Psychology and Marketing*	551	7	1.87
17	*Sloan Management Review*	767	37	4.82
18	*Journal of Business*	N/A	N/A	N/A
19	*Journal of International Business Studies*	687	2	0.29
20	*Industrial Marketing Management*	931	10	1.07
21	*Journal of Consumer Marketing*	804	16	1.99
22	*California Management Review*	317	26	8.20
	Total	15,853	260	1.64

Source: Ragavendran and Sanjeevi (2013)

Table II. Articles in top marketing journals with environmental sustainability orientation

infused in a full-time basis. Business management programs bolstering sustainable business practices gradually change the way business management is taught (Amran *et al.*, 2010). While the practice of imparting GME has begun, the full potential can only be observed when it is implemented across the world at the majority of the schools.

4. Conclusion

Through this conceptual paper, three elemental ingredients required to nurture the growing Green Paradigm are identified and discussed in length. SMG-CSR and GSC together contribute to the first elemental ingredient: GC. Second, GMR and, third, GME. This is mooted since, the Green Paradigm, we have recently entered, demands reexamination of existing fundamental elements in management, such as the business practices, research aligned with the business practice and management teaching which stems out through rigorous case study and theory-based curriculum. Greening the Corporate, especially through greening the supply chains (Rao, 2002), has an immense potential to nurture the Green Paradigm through developing new greener products, alternative products, better methods of recycling, reusability of products, innovation in creating new products, that were made from scrap of a another industry (Srivastava, 2007). This also enables the reduction in carbon footprint. The entire concept of recycle,

Journal rank	Journal name	January 2007-December 2011 total articles	Identified articles	(%) Contribution
1	*Journal of Marketing*	52	310	16.8
2	*Journal of Marketing Research*	74	396	18.7
3	*Journal of Consumer Research*	30	380	7.9
4	*Journal of Retailing*	3	237	1.3
5	*Journal of the Academy of Marketing Science*	14	242	5.8
6	*Marketing Science*	46	383	12.0
7	*Harvard Business Review*	8	1,716	0.5
8	*Journal of Business Research*	33	948	3.5
9	*Journal of Advertising (Intentionally left)*			
10	*Journal of Advertising Research (Intentionally left)*			
11	*Management Science*	12	749	1.6
12	*Journal of Personal Selling and Sales Management*	0	157	0.0
13	*Advances in Consumer Research Proceedings*	N/A	N/A	N/A
14	*Journal of Public Policy and Marketing*	14	153	9.2
15	*Journal of Marketing Education*	1	134	0.7
16	*Psychology and Marketing*	28	282	9.9
17	*Sloan Management Review*	2	388	0.5
18	*Journal of Business*	N/A	N/A	N/A
19	*Journal of International Business Studies*	3	422	0.7
20	*Industrial Marketing Management*	3	646	0.5
21	*Journal of Consumer Marketing*	23	366	6.3
22	*California Management Review*	4	138	2.9
	Total	350	8,047	4.3

Table III.
Articles in top marketing journals with work in "Advertising" domain

reuse and reduce can be gradually and effectively brought into implementation (Gadde *et al.*, 1997). The self-motivation in the GC ensures sustainability in continuous improvement toward developing greener products and services.

Development of new theories in management, in all functional areas, would provide fresh insights and better understanding of issues suitable to Green Paradigm, which is the central nerve of the second ingredient: GMR. Dearth in this ingredient is showcased through the qualitative research presented in Tables I-III. During the past 10 years, only 1.64 per cent (Ragavendran and Sanjeevi, 2013) of the articles have research with environmental sustainability in business context orientation. The contrast is vivid when this is compared with a well-researched domain, Advertisement (4.3 per cent; Table III) between 2007 and 2011 inclusive. This ingredient, when well supported, would produce more research output that can go hand in hand with understanding issues in GC.

GME has a direct bearing on the budding managers in management classrooms who would take up responsible positions in tomorrow's corporate world (Amran *et al.*, 2010). The theories and case studies developed in GMR can be directly applied in this ingredient to provide a solid grounding in management principles and concepts redefined to suit the Green Paradigm. This learning can be re-applied in GC in practice, allowing the concepts to be tested for continuous improvement as in self motivation of GC. This provides us a closed loop between GC, GMR and GME. The link between any

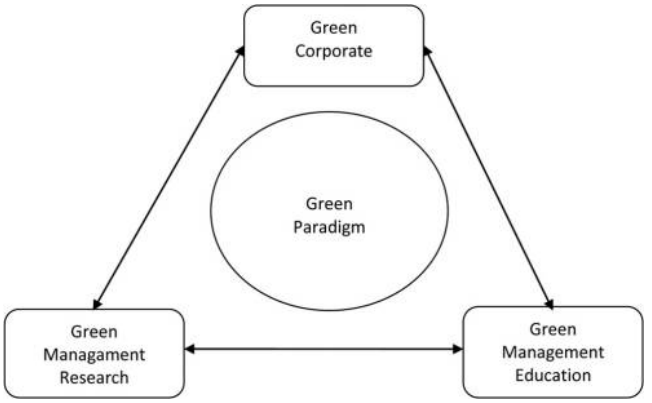

Figure 1.
Management ingredients for Green Paradigm

two of these ingredients is bidirectional, as information flow is possible in any direction between these three (Figure 1). As the circle of Green Paradigm increases, communication (shown as arrows in Figure 1.) enlarges, accommodating time to time update in all these ingredients.

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