

Environmentally Sustainable Consumption: A Review and Agenda for Future Research

***Meenakshi Sharma and **Leela Rani**

BITS, Pilani (Rajasthan), India

The term 'Sustainable development' entered the development discourse in early 1970s and it was legitimized following the United Nations Conference on Environment and Development, which was held in Rio de Janeiro, Brazil in 1972. The underlying idea which laid the foundation for defining what sustainability means arose at United Nations Conference on Human environment, Sweden, in 1992. Sustainability refers to economic, social and environmental dimension. Environmental sustainability is about making responsible decisions that will reduce negative impact on the natural environment. Researchers have become increasingly interested in understanding environmentally sustainable consumption of customers and this topic is being studied in many countries. This paper will provide an exhaustive review of the literature available on environmental sustainable consumption. First section of the paper describes and highlights the historical development of sustainability and in the second section of the study leading journals are considered and a review of literature is presented. It is thus an attempt to provide a future research direction of sustainable consumption in marketing.

Keywords: Sustainability, Environmentally sustainable consumption, sustainable attitude

1. Introduction

“the people who will succeed fifteen years from now, the countries which will succeed, are those which are most based on a sustainable vision of the world. That is what we should be training people to do.

Rt Hon Charles Clarke MP, Secretary of State for Education and Skills, 25th March 2003. (cited Forum for the Future, 2004)

In past few years, research on environmentally responsible consumption or sustainable consumption has made growth in unfolding the problems with existing marketing and consumption practices and with recommending and analyzing approaches to resolve them. In spite of the work done in academia, by government & non government organizations and by the business community to recognize and alter unsustainable practices, such practices continue and are being augmented by the constant growth of the global economy [1]. Sustainability is a word with over three hundred definitions. Because of a need of consensus on clear definition and understanding of the variables that influence sustainable living, sustainability impedes strategies that change attitudes and behavior and develop sustainable policy and practice [2]. Research is needed to understand when and why consumers do not behave in accordance with their articulated, pro sustainability values [3]. Researchers have determined various contributing factors; including perception, knowledge, awareness, attitude etc about the sustainable behavior, but more research is required. This paper represents the shared viewpoint of a varied group of researchers on topic needed for further research. It determines the area that needs marketers, public policy makers, consumer researcher's attention to support the conversion to sustainable modes of marketing and consumption. The paper is organized with the literature survey of the following areas: Sustainability and sustainability consumption, sustainable attitude and behavior, Research opportunities for sustainable consumption and conclusion. According to Webster and Watson (2002) systematic and structured approach in search and review is strongly recommended. A systematic search has been done using online ProQuest, IEEE, Jstor and other bibliographic sources with keywords such as "sustainability", "sustainable consumption", "sustainable behavior" and "sustainable attitude".

2. Literature Review

Sustainability and Sustainability Consumption

Two-third of the world's resources has already been 'used up'; we can no longer take for granted the ability of Earth to sustain future generations. Human activities are putting such a strain on the natural functions of the Earth that sustainability becomes a key element in general and for organizations in particular. The unforeseen result of economic, social and environmental growth which uses ecological resources makes consideration of sustainability important. Sustainability refers to economic, social and environmental base that must be viewed, synchronized and addressed to ensure the long term viability of our community and the planet [4]. Sustainability or sustainable development is broadly defined as "forms of progress that meet the needs of the present without compromising the ability of future generation to meet their needs"[5]. Knowledge, influence, conclusion, implementation and affirmation are behavioral adoption stage of sustainable development[6]. The idea which formed the underlying foundation for defining what sustainability means arose at a United Nations Conference on Human environment in 1992 in Sweden[7]. Sustainable development entered the development discourse in early 1970s which was legitimized following the United Nations Conference on Environment and Development held in Rio de

Janerio, Brazil in 1972[8]. *Sustainability is a way of life that balances immediate needs for commerce, living, habitation, food, transportation, energy & entertainment with future needs for these resources.* Definition and interpretation of sustainability vary depending on the context[9]. Some definitions are given below:

- **Brundtland** in year 1987 defined sustainable development as development that meets needs of present without compromising needs of future generations to meet their own needs[9].
- **Pearce, Makandia & Barbier (1989)** [10] explained that sustainable development involves devising a social and economic system, which ensures that following goals are sustained, real incomes rise, educational standards increase, health of nation improves, and general quality of life is advanced.
- **Pearce (1989)** [11] stated that sustainable development is concerned with the development of a society where costs of development are not transferred to future generations, or at least an attempt is made to compensate for such costs .

Sustainability refers to economic, social and environmental concerns that must be viewed, coordinated and addressed to ensure the long term viability of our community and the planet[12]. The present paper discusses about environmental dimension of sustainability which involves making decisions and taking action that are in the interests of protecting the natural world, with particular emphasis on preserving the capability of the natural environment to support human life. Environmental sustainability is about making responsible decisions that will reduce negative impact on the natural environment[13].

Sustainable development has traditionally given importance to environmental dimension of sustainability framework. Molly Scott Cato (2009) [14] in his book “Green economics” explained the three pillars of sustainability suggesting that both economy and society are constrained by environmental limits.

Consumption is nowadays not only restricted to meet the private needs, but goes beyond as it also regards social justice and the environmental aspects[15]. According to American Marketing Association consumption is defined as “the direct and final use of goods or services in satisfying the wants of free human being”. Therefore sustainable consumption is defined as “the consumption of goods and services that have minimal impact upon the environment are socially equitable and economically viable whilst meeting the basic needs of humans, worldwide. Sustainable consumption targets everyone, across all sectors and all nations, from the individual to governments and multinational conglomerates”[16]. Research has shown that a variety of factors can motivate people to consume sustainably. In reviewing the basic methods suggested by philosophers notes that there are essentially four main strategies that could motivate consumers to make sustainable consumption choices: “government laws and regulations, incentives, programmes of education to change people's attitude, small group/ community management and moral, religious or ethical appeals”[17].

Currently new sustainable initiatives are being taken up by different countries. For example, San Francisco on March 4, 2014 became the first major city in the U.S. to ban the sale of plastic water bottles on public property. Australia was the first country to announce that incandescent light bulbs would be completely phased out by 2010 and replaced by florescent models which use about 20% of the electricity to produce the same amount of light. Canada has developed new standards with the intent of eliminating incandescent lighting by 2012. In 2002, India banned the production of plastic bags below 20 μm in thickness to prevent plastic bags from clogging of the municipal drainage systems and to prevent the sacred cows of India ingesting plastic bags as they confuse it for food. Although after making such initiative by government and public policy there is a lack of sustainable attitude and sustainable behavior.

3. Sustainable Attitude and Behavior

There is a ubiquitous and generally recognized gap between positive attitudes toward sustainability and people's unsustainable consumption behavior. Studies found that attitude is an influencing factor for such behavior [Table 1].

Table 1 : Research studies which have listed the internal and external factors leading to environmental sustainable behavior

Author	External Factors	Internal factors	Respondents	Findings
Sigit Sudarmadi (2001)[7]	Environment literacy	Perception, Knowledge, Awareness, Attitude	Educated and community groups in Jakarta	(1)Environmental problem in the educated group better attitudes for environmental problems (2)Education needed to develop environmental actions and ethics in developing countries (3) Environmental education through popular mass media, newspapers and other means should be used to literate people for environmental problems
Harold Hungrford (1990)[18]	Environmental Education	Awareness, motivation, Knowledge, Intention, Attitude	Article	(1)Environmental behavior issues must be focus of instruction. (2)Student must be given the opportunity to develop the sense of "ownership" and "empowerment".
Sibel Mansuroghi (2009)[19]	Socio-Demographic, Socio-Economic, Environmental Education	Environmental Sensitivity, Awareness, Attitude, values, Emotions, knowledge	Inhabitants of Antalya city	(1)Awareness scores of young and educated individuals were higher than their attitude and sensitivity scores. (2)Linear relation between education level and environmental awareness, attitude and sensitivity levels (3) Marital status, age, profession and income had no significant effect where as courses on protection of environment have effect on the awareness, attitude and sensitivity.
Joe E.Heimlich (2008)[20]	Environmental Education	Attitude, environmental Knowledge, Environmental Values, motivation,	Article	(1)Attempted to provide a foundation for behavior-related discussions in environmental and conservation education
Serpil Onder (2006)[21]	Environmental Education	Perception, knowledge, awareness, attitude	Selcuk university students, turkey	(1)Education most appropriate solution that can be taken against environmental issues. (2)Printers and electronic media are regarded as most provocative equipment to boost awareness.

The attitude- behavior gap is challenging in the current situation because of its direct effect on sustainability and its indirect effect through producers of sustainable product alternatives. This limits the availability of sustainable product alternatives and thus limits movement toward more sustainable consumption [1]. Studies found that

although consumers are willing to buy sustainable products but very few actually do so. The following studies discussed the some of these aspects

An exploratory investigation by Hume (2010)[2] reports the extremes of behavior offering and actual practice of young consumer. Respondents suggest that depending on time and financial circumstances they may adopt sustainable consumption practice but those would be exception to their behavior.

Young et al. (2010)[6] conducted in depth interview to explore consumers' actual purchasing behavior and reasoning for such behavior. Author found that consumers are concerned about environmental issues but they are struggling to translate this into purchase. Lack of time for research, decision making and purchase, price of product, lack of available information on the environmental performance of products, cognitive effort in researching and prioritizing of non green criteria were main barriers for purchasing green products.

Asmuni et al. (2012)[22] had examined the conservation behavior of university students and the results show statistical significant difference between urban and rural students' background and parents with school education as their highest education level with sustainable consumption behavior.

In a recent study by Kopnina (2011)[23], it was found that environmental attitudes, knowledge, and behavior greatly varied between respondents.

From the above studies it is found that attitude-behavior gap exist and wider research is needed to provide foundation for incorporating various interventions or discourse programs. This research has opened the repository of research on environmental attitude towards environmental behavior. Most of the studies discussed have respondents as young consumers because study of environmental behavior in this population is important as they are very open to changes and can be molded accordingly. They represent the future of our society as they are the future consumers, future workers, and future innovators. They are catalyst of change when considering sustainable consumption but authors suggest that their social awareness has not translated into compassionate practice [2]. Thus proper guidelines have to be designed which can help marketers to understand attitudes, features and behavior for green concern.

4. Research Opportunities for Sustainable Consumption

Factors underlying the attitude-behavior gap are likely to be different during consumption cycle stages. Post choice behavior of consumers including product usage, product life extension and disposal, all have a significant impact on the sustainability of consumption [24]. However with the exception of recycling [25], these post choice behaviors received very little attention [26].

Research should focus on more effective interventions to promote behaviors that are sustainable such as reduction, reuse, sharing of products. Studies [2] have shown that there exist clear contradiction between what the consumers know about sustainable consumption and what they practice. Therefore, research that focuses on discourse, interventions and programs for enhancing sustainable consumption behavior could

focus on how these initiatives affects the way consumers think and act. Also if it does not affect than how these can be adapted in the future.

Authors provide an overview of research on education aiming at enhancing behavior that decrease individual's negative impact on nature and increase life sustaining action [27]. Review of studies [Table1] reveals that education has significant effect on different measures of environmental concerns. Research intends to inform educational and policy specialists that the divergent strategies of teaching to different groups of individuals is needed. Effectiveness of education for sustainable consumption must be measured by degree to which it changes the attitude and behaviors of individual in their collective as well as individualistic responsibilities.

It could be envisioned that the understanding of stimulus-attitude role and attitude-behavior role will benefit marketers and policy makers in the field of education. Therefore, if marketers and policy makers of educational tools/products understand the mechanism of development of environmental attitudes and its impact on student's behavior towards environment, the learning tools can be created to build the correct emotional state that will trigger the most appropriate behavior.

Authors have suggested that social experiment should be used to test out different information sources and motivational methods, or policy scenarios to determine the influence of barriers and facilitators of sustainable consumption behavior on sustainable consumption decision making. As social learning continually complement experiences in real life. In addition to direct experiences, consumers learn by observing others around them such as from media, peers and parents. Such experiments also helps to explain that how observing others' sustainable consumption behavior influence one's own behavior which might suggest new interventions to marketers and policy makers.

5. Conclusion

From the sustainability perspective there is a need for establishing marketing and business systems and public policy that encourage people and organizations to consume and produce within ecological limits. Such behavior can be enhanced by educating individuals from their childhood as perception about nature and different experiences of natural world are acquired in the childhood. Education generates concern over unsustainable practices. It also increases our capacity to confront and master change; therefore it can be used with great advantage in learning environment and decision making process to promote a societal shift towards environmental sustainability. Education empowers people to assume responsibility for creating a sustainable future. There is a need to refocus current education policies, interventions so that they can build and enhance the concepts, skills, motivation and commitment needed for sustainable consumption behavior. The same presents a challenging area of study for which there is a need to investigate about the relationship between behavior and the personal factors related to behavior.

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