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Sustainable Marketing Approaches for the Rubber Industry

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ABSTRACT

Rubber industry is unique because it has four major environments; environmental, economical and social issues must be addressed for the sustainable marketing strategies. It further examines the relevant strategies that fit responsibility for ecological concern to the competitive market strategies. Information includes best practices in sourcing and supply chain management, circular economy and environmental sustainable promotion of rubber products. Moreover there are still aspects such as stakeholder involvement, green accreditation and clear message to the consumer that should be identified and developed to boost customers confidence and customer associations. Much importance is accorded to minimization of the output of greenhouse gases and generation of value by incorporating new designs in products as well as management of the lifecycle of the product. The results express the concept of sustainable marketing as achieving both global environmental issues solutions and substantial long term revenues and competitive advantage in the rubber industry. When sustainability goals of the rubber industry are aligned with the consumer pull, the industry can manage the existing and emerging regulatory forces and support systemic sustainable roles in a highly competitive market structure.

Keywords: GPI, AI, SRMs

INTRODUCTION

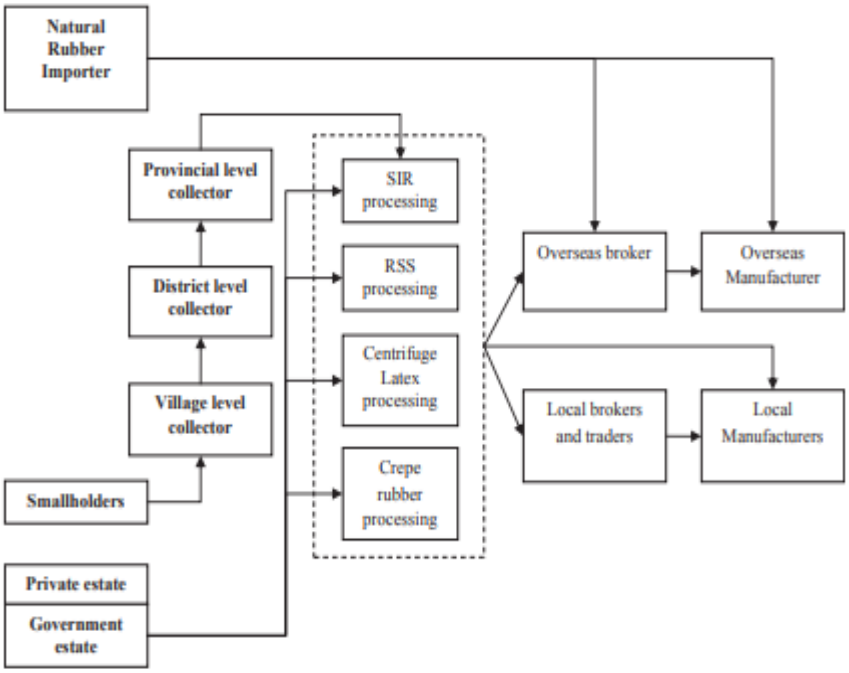
Rubber Industry is an integral part of the manufacturing industry worldwide because the material has found a home in almost all aspects of life from automobile to medical. However, its use of natural and synthetic resources is a major source of environmental and social problems. Sustainable production and consumption of rubber have a number of concerns including deforestation, generation of carbon emission and disposal of wastes. Natural rubber production is associated with deforestation and abuses of ecosystems, while the supply of synthetic rubber raises concerns of direct consumption of fossil fuels and emissions of greenhouse gases. However, the best known ecological concern originating from rubber product usage is pollution, and deterioration of waste disposal management. To these challenges, sustainable marketing can be regarded as an effective solution that intensively involves the concerns of environment, economy and society. Sustainable marketing as a concept aims at the marketing of products and services that have low environmental impact, maximized resource utilization and are fair on social structure in the entire marketing channel. With green innovation, ethical supply chains and customer awareness, the common threats act as success factors for business. The following report examines the role of these strategies in effecting change on the rubber industry highlighted on their ability to foster achievement of sustainable development goals as well as creating better market competitiveness. In relation to sustainability, the rubber industry also has the opportunities to not only respond to environmental problems effectively, but also to develop closer relationships with newly concerned consumers and achieve more sustainable profits in a changing market environment.

LITERATURE REVIEW

Value chain analysis for green productivity improvement in the natural rubber supply chain

According to Mariminet al.2014: The author focuses on a strategy known as green productivity or GP, which is essential for improving productivity and sustainability in natural rubber supply chains. The research draws on lean and green principles together to manage the environmental and economic problems of traditional processes, focusing on areas where resource consumption is suboptimal or waste excessive. The study establishes an evaluation of material streams that enables the research to point out specific methodologies that include reusing the processing water and adopting cleaner production techniques as a way of enhancing productivity of green waste sources. The interventions that have been proposed here are to improve the GPI in order to ensure that growth of the economy follows a sustainable natural resource conservation agenda. Thus, the systemic approach of this study acknowledges that various activities in the supply chain are interdependent, upstream and downstream activities interdependency for coordination to sustainable effects. In addition, the research underlines the need to discuss two different measures productivity and sustainability in one preservation and

improvement context and reveals the way to optimize material input and waste outputs as well as to increase business income. These two perspectives of productivity and sustainability have set a benchmark for industries engaging in economic performance while at the same time embracing the environment hence explaining how GP can foster innovation of large improvements in natural rubber supply chain.



(Source: https://d1wqtxts1xzle7.cloudfront.net)

Figure 1: Rubber supply chain

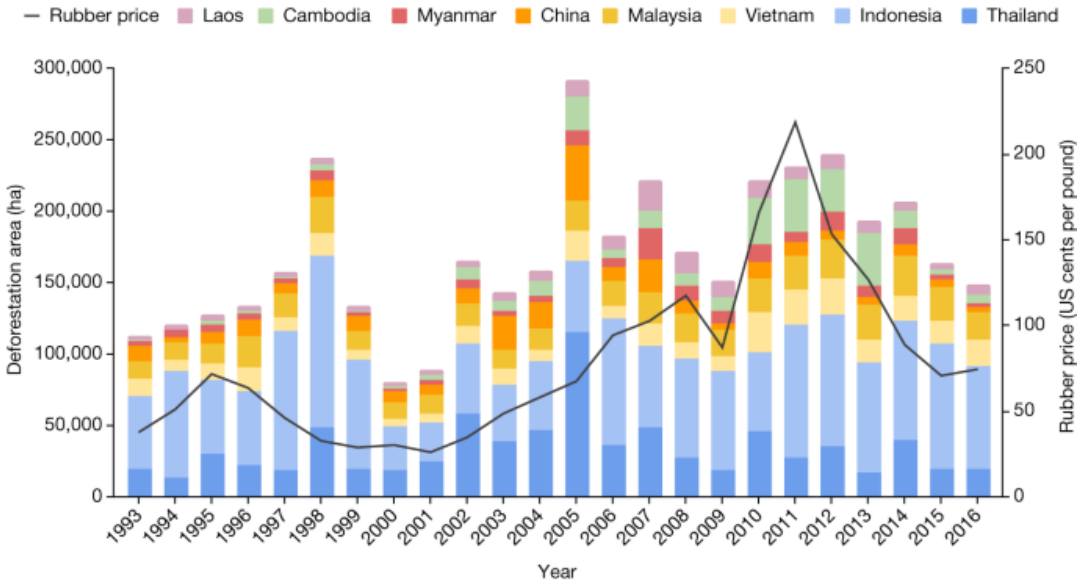
Increasing Demand for Natural Rubber Necessitates a Robust Sustainability Initiative to Mitigate Impacts on Tropical Biodiversity

According to Warren-Thomas et al.2015: The authors review the dramatic increase in rubber plantations and the consequent huge impacts on ecosystems most notably in South East Asia. Predictions for future demand are that by 2024, between 4.3 Million to 8.5 Million additional hectares of land may be needed for rubber plantations globally and that raises questions about deforestation, loss of biodiversity and rising carbon emissions.

The conversion of forests or traditional swidden agricultural systems into monoculture rubber plantations has been documented to have serious effects on avian and insect diversity and the general framework of ecosystems, as well as provisos soils and hydrological cycles. These changes show substrates of the enlarged environmental issues which rubber production brings into detail.

One such measure is rubber agroforestry because it retains some forest species and is feasible for producers. But this work raises questions as to whether more immediate efforts are needed to increase returns on planted capital and improve the sustainability certification on existing estates to lessen the geographical spread on ecologically vulnerable land.

Such interventions are important for increasing demand and the conservation of the environment as well. In particular, the study stresses the need for achieving a better trade off between the economic returns from rubber production and the unsustainability of impact on natural resources in areas that have been extensively affected by plantation development.

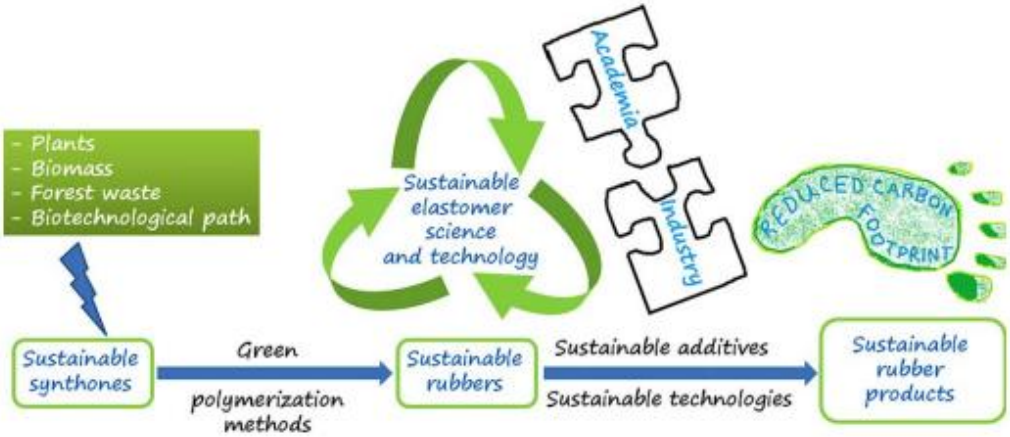


(Source: https://media.springernature.com)

Figure 2: Sustainable Deforestation

Sustainable rubbers and rubber additives

According to Sarkar and Bhowmick 2018: The Authors review the state of the art in elastomer science with an emphasis on the current attempts to reduce reliance on synthetic rubbers and additives derived from fossil fuels. Examining various inferior materials, the study shows that there are potential natural materials of similar properties like Hevea rubber including bio based elastomers like guayule and Russian dandelion. These alternatives not only pay attention to the environmental issue but also fit into the current market needs for sustainable products within the sector. Recent development in rubber technology to minimize the energy intensity associated with the manufacturing of rubber products, increase the utilization of renewable feedstock, and improve reprocessing capabilities. Indeed the incorporation of green chemistry principles act as the central pillar to this transition in focus towards biodegradable and non hazardous additives that encompass the circular economy. These activities help in the strive to decrease the influence of rubber production on the environment without compromising on performance in different uses. The findings also mean that an active partnership between academic and industrial partners is needed to commercialise these technologies and include them in manufacturing systems. Sustainability rubber technologies also imply a significant striving toward the accountability for environmental concerns within the elastomer industry and the global consciousness about resource scarcities and the problems of waste besides offering the platform of innovations into material digestion.



(Source: https://onlinelibrary.wiley.com)

Figure 3: Concept of sustainable elastomer science and technology

Methods

This research employs a qualitative research technique to investigate sustainable marketing practices in the rubber sector. These include review of published literature, analysis of industry reports data and case studies. Information was gathered from outlets that specialize in such responsible procedures which are ethical sourcing, waste elimination or life cycle management. The best part was the examples of companies moving towards greater sustainability that demonstrated how it could be done in the real world. Other emergent themes including green certification practices, customer awareness campaigns and use of new age tools and platforms such as block chain in managing supply sequences were eminent in the samples(Darmawanet al.2014). Measurable criteria for assessment were the levels of greenhouse gas emissions, the volume of total recyclates, and the overall consumers awareness. From the papers reviewed, challenges and opportunities identified in the implementation of sustainable practices were also discussed (Rasutis et al.2015). To achieve the objective, the data collected through the research instruments were analysed and triangulated to establish the effect of sustainable marketing on environmental, economic and social or environmental, economic and social aspects in the rubber industry.

(Source: https://www.mdpi.com)

Figure 4: Lean Sustainability

RESULTS

The findings indicate numerous positive impacts of adopting a sustainable marketing approach in the rubber industry of the companies. The study noted that increased use of sustainable sourcing practices lowered deforestation levels, and promoted biodiversity, especially in rubber plantations in farms(Rizzi et al.2014). The companies that implemented circular economy business models for management and utilization of end of life products found that the execution of recycling brought about significant reductions on waste and enhanced resource utilization efficiency(Dubey et al.2014).

Marketing audits of green brands reveal that certification and sincere marketing strategies paved the way for consumer confidence and brand loyalty. The application of some new technologies enhanced the working of the supply chain and developed the capability of tracking at the same time. However, there were some drawbacks such as high initial costs and even the responding of stakeholders to changes noted.

Collectively, the findings establish that sustainable marketing is not only compatible with managing environmental or social issues, but also potentially increases the companies profitability as well as improving competitive advantage in the market.

DISCUSSION

Sustainable marketing is an evolutionary concept in the rubber industry that targets to solve ecological, social as well as economic challenges with an indication to the open avenues to creativity and opportunity. Strategies such as ethical procurement, product life cycle management and circular economy principles all work towards improving the company's sustainability score and therefore the global sustainability standards(Leonidou et al.2013). The use of green certificates and honest narration increases the level of consumer trust and implements a better brand image(Taoketao et al.2018). Push factors for implementation include high start up costs, and resistance from key players in the industry call for effective leadership and cooperation. Applying blockchain and AI for supply chain transparency with the help of digital tools step up the sustainability process. In addition, in order to establish more effective and durable structures for sustainability, the development of relationships with the governmental and non governmental organizations and other stakeholders is crucial(Lopes et al.2017). Successful image appeals depicting the environmental factors associated with adopting eco friendly products can target the emerging market of socially aware clients. This approach does not only enhance the perception of the public but also leads to increased market share in companies that have involved themselves in sustainable management(Zeriti et al.2014). Through sustainability integration into SRMs strategic business processes, rubber industry can attain sustainable growth, compliance to legislation and improved linkages with consumers.

Future Directions

Industry practices should take steps towards the discovery of sustainable future technologies while future research should consider Inter sector collaboration. Some of them are bio based elastomers, recycling and digitalisation for processes efficiency. Government should set clean guidelines and bring out favorable policies to encourage companies to practice sustainable methods, while the companies on their part should unleash campaigns to encourage people to go green(Gheorghiu et al.2013). Often, innovation and commercial application of sustainable solutions are outputs of cooperation with academic and industrial stakeholders(Govindan et al.2015). Also, work should be done on the enhancement of global supply chain visibility and the promotion of fair treatment in the value chain. In this regard sustainability in the rubber industry is the key factor to the targeting and solving of environmental issues and economic growth and competitive advantage.

CONCLUSION

This study reveals that sustainable marketing strategies work as a feasible option to counter the key environmental and social issues troubling the rubber industry while achieving economic development. It indicates that by implementing ethical sourcing, circular economy concepts and green branding the industry can substantially minimize the detrimental impact on the environment and also contribute to the accomplishment of state and international sustainable development goals. Stakeholder collaboration, technologies and consumers play an important role in the emergency supply chain as highlighted by the findings. While such barriers like high costs of implementation may still be an issue, firms enjoy long term sustainability gains like high profitability and consumers loyalty. The demand for materials safe for the environment is constantly increasing and thus the rubber industry has a good chance of taking a lead role in environmental sustainability to ensure it creates a niche market in a more environmentally sensitive market environment.

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