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A CRITICAL STUDY OF GREEN PRACTICES ADOPTED BY IT ORGANIZATIONS IN PUNE REGION: LITERATURE REVIEW

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Abstract

A research entitled “A Critical study of Green Practices adopted by IT Organizations in Pune region” was undertaken to assess the impact of green practices on ESG organizational performance of IT companies from Pune region. Businesses and individuals throughout the world are becoming increasingly interested in green practices because they believe that they are essential to maintaining the growth of competitive advantages. Managing environmental practices is crucial to supermarkets' survival in the current competitive, dynamic, and unstable environment. Nowadays, the environment is seen as a key factor for healthy economic development, national urban care, and local and global ecosystems. Businesses are placing a greater emphasis on environmental sustainability, a movement that has raised environmental consciousness and inspired people and organizations to collaborate in order to create a more sustainable and ecologically conscious future. Adopting ecological practices is part of this collaboration. This paper presents select literature review related to the topic.

Keywords: Green Practices, IT Organizations, ESG Performance, Pune region.

1. Introduction

The interest of companies and people in green practices has grown exponentially worldwide, and they see them as a key element in sustaining the development of competitive advantages. Given the current competitive, dynamic and turbulent environment of supermarkets, managing environmental practices is essential for their survival. Currently, the environment is considered a fundamental variable for proper economic growth, care for cities as a country, from ecosystems locally and globally. Companies are increasingly emphasizing the importance of environmental sustainability, a movement that has strengthened environmental awareness and motivated individuals and groups to work together to shape a more sustainable and environmentally conscious future. This cooperation includes the adoption of ecological practices. The Sustainable Development Goals (SDGs), defined by the World Organization of the United Nations (UN), where multidisciplinary challenges are set, specifically the number 14, refer to sustainable production and consumption by 2030. Creating further interest in exploring issues related to sustainability from the perspective of individuals and companies, in this sense, green practices are a necessary element to achieve the sustainability of the organization. This literature review studies green practices through various dimensions like advantages of green practices, its drivers, functional implementation of green practices, and relationship between green practices and ESG performance.

2. Literature Review

1. Malik et al. (2023) aim to predict the impact of green project management (GPM) practices on sustainable competitive advantage (SCA). In addition, this study also approached the mediating role of green knowledge acquisition (GKA) as a mechanism between GPM and SCA. Using a quantitative field survey, data were collected from multi-sector manufacturing enterprises (n = 265) in Pakistan. The measurement and structural model were tested using moment structure analysis by performing covariance structure analysis. Findings indicate that GPM practices are positively related to SCA. In addition to this direct effect, GKA plays a significant role in explaining the links between GPM and SCA practices. The findings provide crucial insights for businesses, policy makers, practitioners and project managers to promote GPM practices for low carbon projects to achieve SCA. The data used in this study are cross-sectional in nature. Geographical location is limited to firms in Pakistan, using well-validated subjective measures to make the survey more convenient for participants. Professionals in general, and project managers in particular, are encouraged to implement GPM and GKA practices to achieve high SCA performance. To the best of the authors' knowledge, this is one of the first studies to examine GPM practices and their effect on SCA directly and through GKA in a single model.
2. Dong et al. (2024) state that due to the serious deterioration of the environment around the world, green innovation is currently considered an important initiative to support the competitive advantages of companies. It is extremely important to identify the drivers and mechanisms to support corporate green innovation combining unprecedented technological progress. Using a questionnaire survey of Chinese manufacturing firms, we designed and tested a holistic framework for understanding the role of big data and external institutions on corporate green innovation and competitive advantage. Based on moderated mediation analysis, the empirical results showed that both formal (e.g. government support) and informal (e.g. social legitimacy) institutions positively influenced firm competitive advantage. Green innovation acted as a mediator in the relationship between external institutions and competitive advantage. This mediation effect was positively moderated by the adoption of big data and predictive analytics. These findings not only show that the power of external institutions can force firms to initiate green innovation, but also reveal the role of big data in overcoming technological challenges and gaining competitive advantage.
3. Astawa et al. (2021) state that in the literature, the interest of academics and practitioners in the environment and the integration of ecological practices in the supply chain is important. However, further investigation is needed in relation to the hospitality industry. This study aims to investigate the relationship between green supply management practices for competitive advantage and organizational performance of 5-star hotels in Bali, Indonesia. The quantitative design adopted in this study included 145 respondents from 5-star hotels in Bali, Indonesia, then analyzed using SmartPLS software. The results revealed that green supply chain management practices positively and significantly affect the performance and competitive advantage of five-star hotels. The results also show that competitive advantage acts as a mediator. The theoretical research findings show the relationship between the variables, especially the competitive advantage as a mediating

variable, while from a practical point of view it turns out that managers need to create a competitive advantage in order to strengthen the performance of the hotel business. Therefore, it is recommended that green supply chain management practices be applied in five-star hotels as an effective competitive advantage strategy.

4. Yusof et al. (2020) observe that in an effort to reduce the hazardous effect of construction activities, there is an increased debate about whether perceived benefits of green practice (GP) will encourage GP adoption and improve environmental performance (EnvP). This article examines the role of environmental, economic and reputational benefits for GPs and their relationship to EnvP. Data were collected from 148 project managers from the Malaysian construction industry and analyzed using partial least squares structural equation modeling. The results showed that the relationship between green supply management and envP is more pronounced when environmental benefits and reputational benefits are perceived to be low, with the strongest effects derived from low perceptions of environmental benefits. The results advance existing knowledge by validating the moderating effects of different GP preferences. At the end of the article, some recommendations are given to help policy makers and project managers to improve the EnvP of construction projects.
5. Lumbanbatu and Aryanto (2015) posit that engaging companies to apply green policies within holistic management practices is very necessary to maintain competitive advantages and achieve long-term marketing performance. This current empirical research aims to fill the lack of empirical findings and empirical studies on the innovative concept of the firm. Green-based product innovation, green management practices, and green corporate image are presented as antecedents and are assumed to be the source of a firm's sustained competitive advantage. A questionnaire survey was introduced to collect data from large enterprises in Indonesia, with respondents from top management, operations and marketing managers. 500 questionnaires were sent and 388 were valid for further analysis. Data were analyzed using confirmatory factor analysis (CFA) and structural equation modeling (SEM) using AMOS statistical software. Statistical findings have shown that green-based product innovation, green management practices, and green corporate image have a significant positive effect on maintaining a firm's competitive advantages, leading to increased long-term marketing performance. However, green product innovation plays an insignificant direct relationship with long-term marketing performance. This study discusses some managerial implications for businesses and recommendations based on green implementation.
6. Iravani et al. (2017) claim that the concept of green processes and technologies are processes and technologies that are environmentally friendly, improved and used in such a way as not to disorganize the environment and save natural resources. Some people refer to green technology as green technology and clean technology. The existing expectation is that this field will bring news and innovative changes in the daily life of information technology of the same scale. In addition, today because of the importance of this technology, most governments are taking initiatives to support it. Therefore, governments have recommended many financial incentives that generate electricity from renewable sources. The goals of green technologies are as follows: to meet the

needs of society in a way that does not deplete or damage the natural resources of the earth, which is the main goal of green technologies. The aim is to produce products that can be fully regenerated or reused. In addition, by changing production and consumption patterns, steps to reduce waste and pollution are considered as one of the most necessary goals of green technologies. Many companies are committed to implementing green technology manufacturing practices and businesses. In addition, this kind of technology includes a system that uses innovative techniques to create environmentally friendly products. It mostly contains various everyday cleaning products, wastes, inventions, energy sources, clothes and many more. Greening, or the use of technologies that are environmentally friendly, is among the many methods that countries seek to accelerate economic growth and improve the lives of their citizens. Green processes and technologies use renewable and natural resources that never run out. In addition, green technologies use innovative and new techniques in terms of energy production. Moreover, green nanotechnology, which uses green chemistry and green engineering, is one of the latest in green technology. One of the most important factors in environmental pollution is waste disposal, to which green technology also has an answer. This kind of technology can easily change the structure and production of waste in a way that does not degrade the earth and people can go green. Among the conceivable areas where these creations and growth are expected to come from are organic agriculture, green energy, green building construction, eco-textiles and the production of relevant products and materials to support green business. Because it's new to the industry. In addition, it is also expected to welcome new clients who will see too many benefits of using green technologies in their home and elsewhere. The main goal is therefore to use green technologies that do not have a negative impact on the planet. Nowadays, there are huge concerns regarding environmental pollution that draw attention to the use of green products and processes. There are a large number of researchers who were and are being conducted in different industries with different scope during this period. However, what matters is whether green technologies can be adapted in different sectors. One of the major problems in the world is certainly pollution, which has raised huge concerns in relation to the future of human life. Therefore, this article focuses on the advantages and disadvantages of green technologies.

7. Soni (2015) states that technology is the application of knowledge to practical requirements. Green technologies include various aspects of technology that help us reduce human impact on the environment and create ways of sustainable development. Social justice, economic feasibility and sustainability are key parameters for green technologies. The environment today is rushing to a tipping point where we would cause permanent, irreversible damage to planet Earth. Our current actions are dragging the world towards an ecological landslide that, if it occurs, will cause destruction simply and inevitably. Green technologies are an approach to rescue country. So it is necessary to examine its positives and negatives. Green technology uses renewable natural resources that will never be exhausted. Green technology uses new and innovative energy production techniques. Green nanotechnology, which uses green engineering and green chemistry, is one of the latest green technologies. One of the important factors of environmental pollution is waste disposal. Green technology has an answer to that too. It can effectively change the structure

and production of waste so that it does not harm the planet and we could move to ecology. Possible areas where these creations and growth are expected to come from include green energy, organic agriculture, eco-friendly textiles, green building construction, and manufacturing of related products and materials to support green business. Being new to the industry, it is also expected to attract new customers who will see the many benefits of using green technology in their homes and more. In addition to other forms of green technologies, solar energy and fossil fuels are performed in energy production. They have no adverse effect on the planet and it will not be complemented. So future generations can benefit from them without harming the planet. This paper focuses on the benefits of green technologies and the benefits that can flow from them.

8. Singh et al. (2014) observe that one of the most important determinants of a firm's motivation to invest in higher environmental performance is whether such investments will lead to higher economic returns. Although several studies have examined the links between environmental and economic performance, there is a lack of strategic insights into which capabilities and resources drive improved environmental and economic performance. Nine green firm-specific benefits (Green FSA) can facilitate the implementation and improvement of environmental management practices related to planning, organization, operations and communication. They are Ecosystem Service Internalization Green FSA, Green FSA Sustainable Thinking, Cradle-to-Cradle Green FSA, Green Innovation Green FSA, Solution-Oriented Green FSA, Sustainable Green FSA Reputation, Green FSA Green Networks, and Localized Green FSA. These green FSAs have the potential not only to increase environmental performance, but also to increase efficiency, reduce waste, improve compliance measures and save additional costs, all of which ultimately lead to higher levels of economic performance.

9. Sellitto et al. (2020) define how green innovation promotes competitive advantage in a group of furniture companies based in southern Brazil. The cluster includes 245 companies based in southern Brazil. The research method is a survey that returned 98 valid responses from the selected companies followed by partial least squares structural equation modeling using SMART-PLS software. The literature review produced a reference model for green innovation containing 30 manifest variables. Principal component factor analysis removed two obvious variables and classified the others into three factors, operation and process, product and customer, and eco-efficiency. The model includes two endogenous latent constructs. The first of these is competitiveness, supported corporate image, customer satisfaction and market share. The second is competitive advantage supported by cost reduction and differentiation. The main results are: green innovations focused on operation and process do not positively influence competitive assumptions, but influence competitive advantages; product- and customer-oriented green innovation and eco-efficiency positively influence competitive factors; competitive capabilities based only on product and customers and on eco-efficiency positively influence competitive advantage.

10. Chandra et al. (2021) believe that the impact of company activity on the environment is an important issue today. Given its importance, the purpose of this study is to investigate the effect

of green culture organizations on organizational performance and green competitive advantage mediated by green innovation. The sample used is the management level consisting of CEOs, managers and a team of experts in the manufacturing industry with 185 respondents. The sampling technique was purposive. The analytical method used is the Structural Equation Model (SEM). This study shows a positive and significant effect of organizational green culture on green innovation, green competitive advantage, and organizational performance for the direct effect. And also an indirect effect, green culture organization through green innovation has a positive and significant effect on green competitive advantage and organizational performance. These results indicate the importance of a green strategy implemented within a company, as it will increase its competitiveness and performance in economic, operational and environmental aspects. In this study, the authors try to contribute to the development both in theory and in practice. The strategy carried out by the company must pay attention to the environmental factors, because it is necessary to pay attention to the continuity of the business carried out. Companies that pay attention to environmental factors today can win the business competition for a long time. This is proven by the results of the conducted research.

3. Conclusion and research gap

Most of the research studies have been carried out in non-Indian context. Such reviews, while illuminating relevant parts of the phenomenon, do not provide a broad overview of the existing body of literature on green practices. Lot of concentration is seen on Green Supply Chain Management research. There is no study that has gone into details of implementation of green practices in IT organizations. A comprehensive review of both the antecedents and precedents of adoption of green practices is not seen on record. In other words, a clear research gap is seen on account of:

a. Very little research in green practices in Indian organizations,

b. No research investigating green practices in IT companies, and

c. No research looking at both antecedents and precedents of green practices.

Therefore, this research was undertaken to address following research questions:

RQ1 – What is the current scenario and significance of green practices adopted by IT organizations in Pune region?

RQ2 – What are the different functions such as Marketing, Operations, Finance and HRM where green practices are adopted by IT organizations?

RQ3 – Does social expectations, culture, organizational support, and stakeholder pressure, impact the adoption levels of green practices by IT organizations?

RQ4 – Is there an impact of green practices adopted by the IT organizations on their environmental, social, and governance (ESG) performance?

RQ5 – What suggestions can be offered to improve the adoption of green practices by IT organizations?

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