Challenges and opportunities for implementing green management practices in Iranian industries: Perspectives from managers

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Abstract

This article investigated the application of green management (GM) in Iranian industries and the relevant challenges. The primary objective was to pinpoint the challenges and opportunities Iranian managers face in adopting GM practices. Findings from unstructured interviews with 73 managers in various sectors highlighted significant insights into GM and its hurdles in Iran. The central issue revolved around the intricate interplay of economic, technological, governmental, societal, and managerial factors influencing GM adoption. Analysis using NVivo software uncovered five key themes: economic concerns, technological limitations, government and legislation impacts, societal factors, and managerial considerations. While economic concerns take precedence, Iranian managers recognize the potential benefits of GM, i.e. cost reduction and financial incentives, though they also face obstacles like limited access to green technologies and international sanctions. Government policies play a vital role, with uneven enforcement of GM regulations and incentives for GM adoption. Societal pressure and awareness are driving GM adoption and influencing branding and production costs. Managerial decisions also indicated a willingness to embrace GM practices, provided barriers are addressed. In sum, Iranian managers exhibited a genuine interest in GM and its positive impacts, despite challenges like restricted technology access and sanctions. This study underscores the necessity of lifting sanctions, crafting clearer government policies, and offering support to promote GM in Iran, providing crucial insights for policymakers and businesses striving to foster sustainability in a complex environment.

Keywords: Government policies, green management, Iranian managers, sanctions, societal pressure, sustainability

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Introduction

The emergence of the environmental movement during the mid-1960s was a response to the alarming depletion of non-renewable resources and the significant surge in consumption rates, waste, and environmental pollution. As this movement gained momentum over the following decades, society began attributing many of the world's environmental problems to corporations, holding them responsible for finding solutions (Haden et al., 2009). During the 2000s, Green management (GM) gained global recognition as a

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popular catchphrase, with the understanding that the goals of businesses and the environment should be aligned (Banerjee, 2001).

To evade economic expenses and political pressures, companies frequently adopt ecologically sustainable practices and innovative approaches (Menguc et al., 2010). The objective is to adhere to social and moral norms to fulfill diverse stakeholders' expectations (Ortiz-de-Mandojana et al., 2019) while surpassing the imitative influence of competitors (Suk et al., 2013). Firms came to acknowledge that proficient GM possesses the potential to fulfill the trio of sustainability principles encompassing economic prosperity, environmental soundness, and social equity (Berry and Rondinelli, 1998). GM practices aim to enhance a company's sustainable performance through optimization of inputs and the production of outputs, emphasizing a harmonious balance of economic, social, and environmental benefits(Raharjo, 2019). Incorporating environmentally conscious strategies allows organizations to fulfill their social responsibility and act ethically toward the environment (Nattrass and Altomare, 1999)while also maintaining competitiveness, enhancing financial performance, and fostering innovation (Li et al., 2020). GM, also known as sustainable management, refers to implementing practices and policies that aim to minimize the negative impact of business operations on the environment and society while maximizing positive outcomes and integrating environmental, social, and economic considerations into all aspects of a company's decision-making processes and operations (Elkington and Rowlands, 1999).

The concept of green management has seen increased attention in recent decades, reflecting the growing global awareness of environmental sustainability and corporate responsibility (Mehling, 2023). In this evolving landscape, Iranian managers are confronted with a unique set of challenges and opportunities as they navigate the complex interplay between economic goals, environmental preservation, and societal well-being.

While GM has gained global recognition and importance in recent years, its implementation and success are influenced by a myriad of factors. In this article, we will delve into the results of a research study that focused on the state of GM in Iran, shedding light on the key issues and challenges faced by managers and organizations in the region. This analysis aims to provide insights that can inform managerial decision-making, policy development, and the pursuit of a more sustainable future in a region where the economic, technological, governmental, societal, and managerial landscapes play crucial roles in shaping the path towards green management.

Materials and Methods

In order to investigate the application of Green Management (GM) in various industries in the country, a qualitative research approach was employed to collect and analyze qualitative data. The two phases of the study, i.e. data collection and data analysis, are detailed in the following.

Data collection

For the initial phase of data collection, unstructured interviews were conducted following the guidelines outlined by Bahangu and coworkers (Bhangu et al., 2023). Participants of the study were 73 Iranian managers from diverse industries and various hierarchical positions, adhering to the seven-stage interview process as outlined by Bahangu and coworkers (Bhangu et al., 2023).

Unstructured interviews, are a qualitative research technique used to gather information and insights from participants in a more open-ended and flexible manner. In contrast to structured interviews, unstructured interviews do not follow a fixed set of questions or a predefined format. Instead, they allow for a more conversational and exploratory approach to data collection (Creswell and Creswell, 2017). The decision to employ interviews as the data collection method stemmed from a dearth of prior empirical research on GM in Iran. Prior studies predominantly focused on theoretical discussions about GM on a global scale, necessitating further field research to validate these theoretical foundations. Therefore, an exploratory approach to the interviews was adopted. The non-

structured interview does not imply a lack of focus or direction. In fact, the scope of our research topic was meticulously defined to ensure consistency throughout the data collection process. To maintain data integrity and ethics, explicit consent was obtained from all interviewees to record the interviews. Subsequently, all audio recordings were transcribed. The original audio files were deleted after validating the accuracy of the transcriptions.

Data Analysis

In the second phase, focusing on data analysis, the thematic analysis method was adopted following the framework presented by Braun and Clarke (Braun and Clarke, 2006). To enhance the accuracy and efficiency of the thematic data analysis, NVivo was used, the qualitative data analysis software developed by QSR International.

Thematic analysis framework

Data analysis process unfolded across six distinct stages, as illustrated in Figure (I), adopted from the thematic analysis framework of (Braun and Clarke, 2006). The six stage of thematic data analysis method are summarized as follows.

Familiarizing yourself with the data: In this initial stage, researchers immersed themselves in the data. This involves reading and re-reading the data (extracted from unstructured interviews) to gain a deep understanding of its content.

Generating initial codes: The second stage involved identifying and generating initial codes or labels for the data. Segments of text that appeared interesting, relevant, or meaningful were coded.

Searching for themes: At this point, researchers started to group codes into potential themes. Themes are overarching patterns or concepts that emerge from the coded data. This is an inductive process, meaning themes are allowed to emerge naturally from the data rather than being imposed beforehand.

Reviewing themes: In this stage, researchers reviewed and refined the identified themes. Also, they assessed whether the themes accurately represented the data and the coded segments.

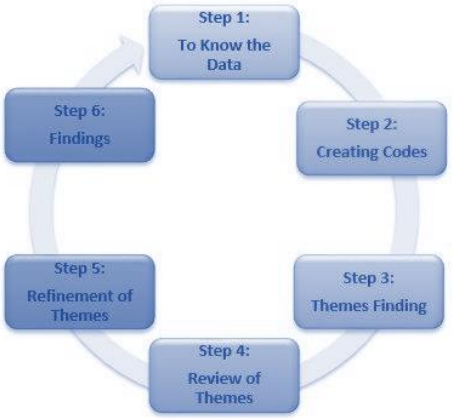

Fig I. Six-phase framework of thematic analysis adopted from Braun and Clarke (2006)

Themes might be combined, split, or modified to best capture the essence of the data.

Defining and naming themes: Once the themes were reviewed and refined, researchers defined and clearly named each theme. It is important to provide a clear and concise description of what each theme represents and ensure that it accurately reflects the data.

Writing the report or presenting findings: The final stage involved reporting the findings or presenting the results. Researchers created a narrative or report that explained the identified themes and their relevance to the research question or objective. This is where the analysis is communicated to the audience (Braun and Clarke, 2006).

The insights derived from thematic analysis as detailed above serves as the basis for the results and discussions presented in the subsequent sections, shedding light on the application of Green Management in various industries and the challenges faced by managers in this regard.

Results

The present study examined motivations, obstacles, and evolving strategies amongst the managers in terms of GM in the context of various industries in Iran. Results highlighted the pressing nature of challenges and the evolving strategies employed by Iranian managers to address them

Through rigorous analysis, a total of 294 codes were identified which were subsequently categorized into five overarching themes. The frequencies of these themes are presented in Figure (II). The analysis of each of the five identified themes was then continued to characterize them by specific keywords, which were visually represented as word clouds. The size of each word in the interviews indicated the level of emphasis placed on that word by the participants of the study, i.e. managers of industries. The five central themes that emerged from the participants' responses emphasized the economic, technological, governmental, societal, and managerial dimensions of GM in Iran while the themes mainly revolved around the codes related to economy.

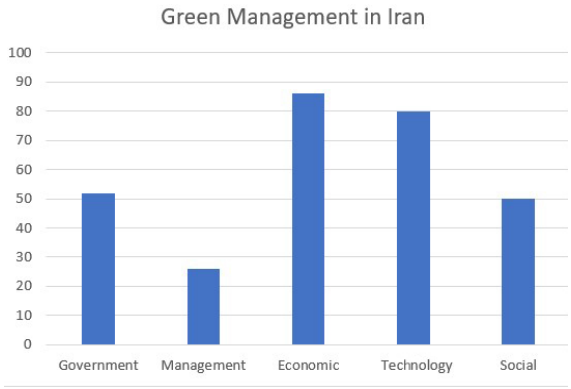

Fig. II. The five themes and their frequencies

Fig. III. Word cloud of economic theme

Fig. IV. Word cloud of technology theme

Economic issues seem to be the most critical factor in GM in Iran. Iranian managers view *financial* theme as both the primary drive and obstacle to GM (Fig. III). While managers understand the importance of environmental protection and GM, companies ultimately prioritize maximizing profits and minimizing production costs. They try to avoid significant changes in the direction of GM. However, interviews indicated that some financial incentives companies provide for implementing GM practices are attractive. Additionally, some GM initiatives can increase product sales and reduce production and packaging costs, creating incentives for managers. Nevertheless, the most critical issue for managers regarding GM was economic concerns, which is not surprising since the primary goal in any economic enterprise is undoubtedly making a profit and obtaining financial gains.

The second most prevalent theme in GM in Iran was *technology* (Fig. IV). Iranian managers consider technology the second most influential factor in GM. The absence of green technologies in Iran and the difficulty of accessing these technologies, mainly due to the U.S. sanctions, are the second significant factor regarding GM in Iran. Managers believe that currently the most effective action is to use new technologies in industries. These technologies include using modern equipment in the industrial production system, which reduces waste and increases efficiency. Additionally, due to the lack of high-performance machinery and equipment in the country, it is challenging for managers to implement GM in their corresponding industries. Many of these managers have established their industries in the desert and sunny areas and use solar energy for hot water or electricity for at least administrative units, which is one of the most straightforward steps in this field. However, the current U.S. sanctions have made it difficult to replace these systems with new high-performance

ones. Furthermore, the problems inflicted other organization sectors have practically reduced the priority of these issues.

The third most prevalent theme in the field of GM in Iran was the *government* and legislation (Fig. V) Managers believed that the government and ruling authorities do not pay enough attention to the issue of GM, which can be analyzed from various perspectives. Firstly, the government's failure to enforce strict laws allows industries to violate GM regulations, making Iran an attractive realm to industries that are not environmentally friendly and cannot operate in developed countries.

On the other hand, the government has provided some incentives for implementing GM in the local industries, from reducing taxes and increasing government support to encourage industries to focus on GM. For example, many factories have reusable waste, but currently, these wastes are either disposed of, stored somewhere, or ultimately sold to other countries, which causes significant environmental damage.

The fourth theme extracted from interviews was related to *society* as managers of various industries considered society and community the fourth influential factor on GM (Fig. VI). This factor can be examined and analyzed from several perspectives. Public opinion pressure and involving communities in the discourse of GM are some of the factors managers addressed during semi-structured interviews.

The last theme emerged from the analysis of the data collected from the participants of the study was GM management and planning (Fig. VII). This element, which received less attention from Iranian industrial managers, indicted that management decisions regarding GM are not considered a significant obstacle in discussing GM. Most managers and planners believed in GM and were willing to take steps provided that the issues addressed earlier were resolved. In fact, Iranian managers generally believed that industries should focus on GM in future planning discussions and considered the government the most influential factor.

Discussion

The emergence of the environmental movement

Fig. V. Word cloud of the *government* theme

Fig. VI. Word cloud of *society* theme

Fig. VII. Word cloud of the *management and planning* theme

in the mid-1960s brought attention to the depletion of non-renewable resources, rising consumption, waste, and environmental pollution. This movement gradually shifted responsibility for environmental problems towards corporations. The concept of Green Management (GM) gained prominence in the 2000s, emphasizing the alignment of business

goals with environmental concerns. Companies adopted ecologically sustainable practices to meet stakeholder expectations, outperform competitors, and achieve economic, social, and environmental sustainability. GM seeks to optimize inputs and outputs, striving for a harmonious balance between economic, social, and environmental benefits. These strategies enable organizations to act ethically towards the environment, maintain competitiveness, enhance financial performance, and foster innovation.

The implementation and success of GM are influenced by various factors. This study focused on the state of GM in Iran, uncovering five central themes that highlighted economic, technological, governmental, societal, and managerial aspects of GM.

Economic factors emerge as the most critical factor for GM in Iran. Managers who prioritize profit maximization and cost minimization are often hesitant to make significant changes towards GM. However, financial incentives and cost-saving opportunities can motivate them.

Technology was the second-most influential factor. The lack of new green technologies in Iran, coupled with difficulties in accessing them due to the U.S. sanctions, poses challenges. Managers considered using modern machinery and equipment as well as renewable energy sources as important factors in implementing GM in their business, while the U.S. sanctions were claimed to hinder progress.

Government and legislation play a pivotal role in developing GM in the country. While lax enforcement of GM regulations attracts non-environmentally-friendly industries, government incentives like tax reductions to support GM implementation were considered as important measures. Importing, establishing, and developing new GM-oriented technologies, e.g. recycling technologies, require cooperation at both national and international level. Updated legislations, policies, and actions by the national legislative body and the government at national as well as international level where the country is under the U.S. sanctions are deemed necessary.

Society and community awareness were the fourth influential theme surfaced in the study. Public pressure and increased demand for environmentally friendly products can improve branding and reduce production costs, benefiting both industries and the environment. When individuals and communities become aware of the environmental concerns, their demands for protecting the environment increase, and environmental support groups seriously pursue their demands in the media as well as their communications with industries and the government. On the other hand, an awareness of the preservation of the environment and adopting environmentally friendly measures can improve the company's reputation and branding, positively impacting their profits from multiple perspectives. Firstly, people who support environmental activities tend to buy products from more environmentally friendly industries. Secondly, observing GM can reduce production costs in many cases. Thirdly, industries can benefit from government incentives. This focus on GM can also increase global interactions in these industries. Furthermore, preserving the health of society positively affects industries. A healthy society not only leads to a vibrant community, workforce, and better economic performance, but also highlights the importance of GM from a human perspective.

Management and planning represented the fifth theme in the study, with Iranian managers generally willing to adopt GM practices. This positive attitude holds promise for GM's future in the country.

Conclusion

GM in Iran faces multifaceted challenges, with economic considerations, technology limitations, government policies, societal awareness, and managerial commitment all playing crucial roles. Overcoming these challenges requires a holistic approach that balances economic interests with environmental and social responsibility. As the country grapples with its unique set of circumstances, the development of green technologies and stronger government support could catalyze progress in the realm of green management.

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