Developing Green Sustainable Entrepreneurship for Competitive Advantages through Green Management

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ABSTRACT
The research aims to unravel Green Competitive Advantage (GCA) management which has emerged as a crucial strategy in recent years for organizations seeking a competitive edge. The growing literature on GCA underscores its significance, highlighting its potential to enhance organizational sustainability and performance while also providing a competitive advantage. The adoption of green innovation and high environmental awareness has been shown to yield improved performance and a better competitive advantage. This contributes to sustainable business practices and positions the company favorably in the business landscape. Therefore, understanding the implications of GCA is essential for policymakers who need to define the best mechanism for developing green innovation. This, in turn, can help organizations achieve a competitive advantage and ensure business sustainability. The study emphasizes the importance of GCA literacy among practitioners and stakeholders. The novelty of the research results indicates that understanding encourages the selection of green changes within organizations, promoting GCA as a sustainable business framework. Summing up, GCA management not only offers a competitive edge for businesses but is also a step towards a sustainable future. Therefore, exploring the role of GCA in business management and its potential implications is of utmost importance in today's business world.

INTRODUCTION

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The increasing global environmental concerns and the subsequent demand for eco-friendly, sustainable practices have revolutionized the business landscape. As a result, the concept of Green Sustainable Entrepreneurship (GSE) is gaining significant traction. GSE combines the innovative, risk-taking characteristics of entrepreneurship with a commitment to environmental sustainability. It is a new and emerging field that seeks to combine the transformative power of entrepreneurship with a profound commitment to advancing environmental sustainability.

The integration of green management into this equation provides a competitive edge, contributing to the long-term viability and success of businesses. Green management encapsulates strategies that reduce environmental impact, enhance resource efficiency, and foster sustainable innovation. It is more than just a trend; it is a business philosophy that aligns economic performance with environmental responsibility.

This approach underscores the profitable compatibility of economic growth and environmental protection. It offers businesses an opportunity to evolve, using sustainability as a vehicle for innovation, value creation, and competitive differentiation. Through the implementation of green management, businesses can restructure and refine their practices to achieve both economic success and environmental conservation.

The development of GSE through green management is an essential component in tackling environmental challenges while also facilitating entrepreneurial innovations. It’s an approach that not only benefits the environment but also offers businesses a unique and compelling competitive advantage in the increasingly environmentally-conscious market. This intersection of sustainability, entrepreneurship, and competitive advantage is a crucial area for exploration and growth in current business environment.

The rapid industrial development witnessed globally has been fuelled by an intensive exploitation of natural resources. While this development has brought about significant economic growth, it has also led to substantial environmental damage. In essence, the ecological cost of this growth has seen a decrease in ecological quality while triggering a rise in global warming.

Environmental conventions have emerged as powerful tools in the global effort to combat this damage. Conventions such as the Montreal Convention and the Kyoto Protocol, along with specific restrictions on hazardous materials, have considerably altered the landscape of global industrial competition. By setting new standards and regulations, these conventions have forced industries worldwide to consider and incorporate environmental sustainability (Wang, Abbas, & Sial, 2022) into their operations.

However, the adoption of environmental management and green innovation by corporations has not been as widespread as desired. Many companies have dismissed these as being unimportant and ineffective investments. This dismissal often stems from an inadequate understanding of environmental management as a crucial mechanism for sustainable development.
Environmental reports have underscored that pollution is a direct result of the inefficient use of resources. In such a scenario, companies that adopt environmental management practices gain a significant advantage. These companies tend to reap more benefits and are better positioned to enhance their green image, thereby expediting their development and opening up new markets.

In light of these findings, environmental management has emerged as an essential domain for corporate administration in the 21st Century. So, it is high time corporations worldwide recognized the importance of adopting green innovation and environmental management practices. Not only will this decision contribute to environmental sustainability, but it will also allow these corporations to stay competitive in a rapidly evolving global industrial landscape.

A shift in perspective is necessary within the global industrial competition. Understanding environmental management as an essential development mechanism rather than an ineffective investment can significantly contribute to sustainable development. This would not only benefit ecological preservation but also consolidate the competitive advantage of companies in the long run (Hendratmoko, 2021).

In the realm of sustainable development, corporate responsibility has shifted its focus from adhering solely to the Single Bottom Line (SBL), which only considers a company's value in economic terms, to prioritizing the Triple Bottom Line (TBL). The TBL approach posits that a company's value should be reflected in three interconnected domains: economic, social, and environmental. The shift towards this holistic perspective arises from the recognition that financial conditions alone cannot guarantee the sustainable development of a company's value.

The concept of the TBL was introduced in the seminal work, "Cannibals with Forks: The Triple Bottom Line of 21st Century Business" (Elkington, 1998). Elkington identified three critical components of sustainable development: economic growth, environmental protection, and social equity. These components have since been simplified and encapsulated by the 3Ps concept: Profit, Planet, and People.

In the context of the financial sector, the realization of the TBL, particularly about environmental matters, can only occur when all stakeholders – the market actors – play their roles appropriately and consistently in achieving sustainable development (Nugroho et al., 2017). Consequently, proper environmental management is essential for firms to gain a Green Competitive Advantage (GCA) and ensure their long-term viability (Chen, 2008).

Several environmental factors have been found to contribute to the development of competitive advantages, such as product innovation (Hendratmoko, 2021) and a green reputation (Afum & Li, 2022). These factors can be utilized by companies to meet their stakeholders' expectations concerning environmental issues (Benevene et al., 2021). Therefore, the corporate responsibility towards TBL is not just a responsibility towards the environment, but also towards the social and economic well-being of all stakeholders,
demonstrating a complex interplay between economic performance, social responsibility, and environmental stewardship.

The shift from SBL to TBL is a critical step in aligning corporate responsibility with sustainable development. The focus on profit, planet, and people ensures a holistic approach to corporate value, incorporating economic growth, social equity, and environmental protection. It is only through the consistent and concerted efforts of all stakeholders that the actualization of the TBL, particularly in the environmental domain, can be achieved.

Green Competitive Advantage (GCA) is a condition in which a firm holds several positions concerning environmental management or green innovation. This concept, as defined by Chen (2011), implies that the company's adversaries frequently find it challenging to copy the adopted environmental strategy, which enables the achievement of sustainable goals and benefits.

This notion asserts that GCA is integral for a company to reach by utilizing various resources at its disposal to enhance performance surpassing its competitors. In an empirical study conducted by Chen (2011), he examined Taiwanese Small and Medium Enterprises (SMEs) in the manufacturing sector. The study concluded that factors such as environmental parameters, organizational culture, and leadership, as well as the green organizational identity, contribute to enhancing GCA.

Further research investigates the connection between green intellectual capital and green competitive advantage. The emphasis is placed on the setup of green innovation and environmental protection. The outcomes demonstrated that green human capital, structure, and relational capital maintain worthwhile relationships with GCA as per the findings of Nivloeu and Khass (2014).

Nevertheless, there exist divergent results in research exploring the relationship between green human capital, eco-innovation, and GCA. For instance, Astuti and Datrini (2021); Nivloeu and Khass (2014); and Widiyati and Murwaningsari (2021) demonstrated that green human capital and eco-innovation augment GCA. Contrarily, Kuo et al. (2021) and (Lastanti & Augustine, 2022) found that these factors did not have significant or positive effects.

Such contradictions present intriguing opportunities for future analysis. This examination would contribute to the literature and provide further validation for the development of the GCA concept. It is crucial to understand the various aspects that influence GCA to implement effective strategies that boost a company's performance in the green sector.

In conclusion, achieving a Green Competitive Advantage is becoming increasingly important for companies to distinguish themselves in an environmentally conscious market. The exact factors that contribute to GCA and their respective impacts need further exploration, as studies have yielded varying results. Moving forward, a deeper understanding of these relationships will be paramount in enabling companies to effectively strategize and optimize their performance while promoting environmental sustainability.
Green entrepreneurship, also known as eco-entrepreneurship, refers to the process of starting new businesses with an emphasis on sustainability and a primary goal of contributing to the environmental health of the planet. It represents a new wave of innovative business practices that aim to create profit while also tackling environmental challenges and promoting sustainable development.

Green entrepreneurs are individuals or groups who recognize and pursue opportunities to create environmental value through innovative and sustainable business models. They are catalysts for change who are not only concerned with economic performance but also possess strong ecological and societal awareness. Their ventures often involve introducing new eco-friendly products (Chen & Lee, 2022) or services or significantly enhancing the environmental performance of existing ones.

Green entrepreneurship is a unique blend of both entrepreneurship and environmental stewardship. It bridges conservation and business, combining a business’s economic objectives to reduce the human impact (Sancho & Martinez-Martinez, 2018) on the environment. It manifests through various forms including green startups (Bergset, 2017), eco-innovation in existing companies (Bartlett & Trifilova, 2010), and social enterprises with environmental missions.

The green entrepreneurial process is complex and multifaceted, featuring numerous challenges and opportunities. It requires the acquisition and allocation of resources in a manner that mitigates environmental impact, a task that often entails high costs and risks. It also involves navigating the regulatory environment, which can be complex and uncertain due to the evolving nature of environmental policy and legislation (Lumpkin & Pidduck, 2021).

Despite these challenges, green entrepreneurship offers substantial rewards. Besides financial success, green entrepreneurs can derive satisfaction from knowing that their ventures contribute to the broader societal goal of environmental sustainability. Moreover, with growing public awareness and concern over environmental issues, green products and services are increasingly in demand, offering significant growth opportunities.

Entrepreneurship has been recognized as a major driver of economic growth and job creation. Green entrepreneurship can further enhance these benefits by promoting sustainable economic development that not only generates wealth but also preserves the environment for future generations. It is therefore integral to achieving the United Nations Sustainable Development Goals.

To further foster green entrepreneurship, it is crucial to create an enabling environment that encourages and supports such ventures. This includes favorable policy and regulatory frameworks, access to finance, and entrepreneurship education and training with a focus on sustainability. Creating a culture of green entrepreneurship can spur innovation, promote sustainable consumption and production, and ultimately contribute to a greener and more sustainable economy.

In conclusion, green entrepreneurship represents an innovative and dynamic approach to doing business that combines profit-making with environmental stewardship. It not only offers substantial economic,
environmental, and societal benefits but also provides a tangible way for businesses to partake in sustainable development efforts. With the appropriate support and incentives, green entrepreneurship can play a pivotal role in driving the transition towards a green economy.

**Green Management**

Green management, a concept that has gained significant momentum in recent years, serves as a roadmap for achieving sustainability and clean production goals. Green management is a revolutionary approach to organizational management that encourages companies to incorporate environmental sustainability initiatives into their business operations. It is the key to countering the negative effects of industrial development on the earth's ecology. This approach focuses on making production and management processes more efficient to decrease their environmental footprint (Nawas & Koc, 2017); (Neutzling, Land, Seuring, & Nascimento, 2017). This developmental strategy calls for a paradigm shift, requiring businesses to embrace innovative practices that align profitability with sustainability objectives (Alberti & Garrido, 2017).

The research underscores the potential of green management to create substantial economic, social, and environmental value. A pertinent example of this lies in the creation of waste recycling strategies. Through the conscientious redesign of production methods and operations to meet environmental requirements, businesses can optimize resource utilization, leading to sustainable development (Guler & Crowther, 2008); (Schaltegger & Wagner, 2011).

A cornerstone of the green management strategy is the incorporation of green technologies. These technologies are designed to leverage scientific knowledge and expertise to facilitate green manufacturing (Simon, Bernardo, Karapetrovic, & Casadesius, 2011). The implementation of green technologies can amplify economic and environmental sustainability (Ahi & Searcy, 2013). As a form of managerial innovation, the use of green technologies has the potential to enhance production processes and reduce their environmental impact (Ahi & Searcy, 2013); (Li, Zhao, Zhang, Chen, & Cao, 2018).

Promoting green management is paramount for businesses seeking to demonstrate corporate responsibility, ensure future sustainability, and gain a competitive advantage in the market. Green management involves strategies and practices that reduce an organization's environmental footprint. These include efficient energy use, water conservation, waste reduction, pollution control, and encouraging environmentally friendly habits among employees. Adopting these strategies results in benefits not only for the environment but also for the company's financial bottom-line.

Furthermore, green management practices help in reducing costs through decreased energy use, improved resource management, and regulatory compliance. In addition to cost savings, companies that adopt green management practices often experience enhanced corporate reputation, excellent stakeholder relationships, and increased customer loyalty. The promotion of green
management necessitates the re-assessment of all business operations to ensure they align with the principles of sustainable development. This involves an examination of supply chains, production processes, and waste management protocols. To achieve this, organizations need to implement green policies and practices and encourage employees to adopt sustainable behaviors.

Businesses should also consider investing in green technologies that maximize energy efficiency, reduce waste, and minimize environmental impact. These technologies often provide a significant return on investment over time due to decreased operating costs and increased productivity.

Education and training are crucial in promoting green management. Employees must understand the environmental impact of their actions and how they can contribute to the company's green initiatives. This can be achieved through regular training sessions, workshops, and seminars. In summary, promoting green management involves implementing environmentally friendly practices and technologies, instigating changes in employee behavior, and demonstrating a commitment to sustainable development. It offers significant benefits for businesses, including cost savings, improved reputation, and increased customer loyalty. As such, it is a vital strategy for modern organizations seeking to thrive in a world increasingly concerned with sustainability.

Green management represents a strategic response to the pressing environmental challenges of our time. By adopting this approach, businesses can contribute to the creation of a sustainable future, while realizing significant economic benefits. The use of green technologies, in particular, holds considerable promise for driving progress in this area. Further research and investment in these technologies could pave the way for unprecedented advancements in green manufacturing and sustainable development.

**Advantages of Going Green in Business**

The benefits of adopting eco-friendly business practices are numerous. Going green, not only contributes to a better and healthier environment but also enjoys financial savings. Going green means reducing energy and water consumption, which translates to lower utility bills. Additionally, adopting sustainable practices can improve the brand image and increase customer loyalty. Showing that care about the environment attracts eco-conscious customers who are willing to pay more for products and services that align with their values. Overall, going green is a smart business decision that benefits both the planet and your bottom line.

In the contemporary business environment, sustainability has become a fundamental part of corporate strategy. Businesses increasingly realize the value of integrating environmentally friendly practices into their operational processes, which is often referred to as "going green". This shift towards sustainable business practices is driven not only by regulatory requirements but also by consumer demands and the understanding of the intrinsic benefits that green practices can offer. These advantages can be broadly categorized into three areas: cost savings, enhanced reputation, and risk management.
Firstly, going green often results in significant cost savings for businesses. According to the Natural Resources Defense Council (2015), businesses can significantly reduce their energy expenses by implementing green practices. For instance, investment in energy-efficient appliances, renewable energy sources, and waste reduction can lead to long-term savings. Additionally, reducing material consumption can also contribute to cost savings. Companies can achieve this by implementing strategies such as recycling, reusing, and reducing waste. This approach not only minimizes the costs associated with waste disposal but also reduces the need to purchase new materials.

Secondly, adopting green practices can enhance a company's reputation. The modern consumer is increasingly environmentally conscious and prefers to support businesses that display a commitment to sustainability (Bhattacharya & Sen, 2004). Therefore, going green can increase a business's competitiveness by attracting and retaining customers who value environmental responsibility. Furthermore, a strong environmental reputation can also lead to improved relationships with other stakeholders, including investors, employees, and the local community. For instance, a study found that companies with strong corporate social responsibility performance, including environmental performance, have a lower cost of equity capital (Flammer, 2012).

Finally, going green can assist businesses in managing environmental risks. As regulatory bodies worldwide impose increasingly strict environmental regulations, companies that have already incorporated green practices into their operations will be better equipped to meet these requirements. Therefore, going green can help businesses avoid the costs associated with non-compliance, such as fines and penalties. Furthermore, by proactively addressing potential environmental impacts, companies can also avoid litigation and reputational damage that can result from environmental incidents.

The advantages of going green in business are manifold and extend beyond mere compliance with environmental regulations. By adopting green practices, businesses can achieve significant cost savings, enhance their reputation, and manage environmental risks effectively. Therefore, going green is not only beneficial for the environment but also for the bottom line of businesses.

METHODOLOGY

The qualitative research method is a highly relevant approach to answer the research question of how to develop sustainable green entrepreneurship for competitive advantage through green management. This method helps to understand the context, perceptions, and experiences of research subjects (SAGE Publication, 2004), in this case, green entrepreneurs, in integrating the principles of green entrepreneurship in business operations and strategies.

Qualitative research methods that can be used include case studies, ethnographic research (Tenny, Brannan, & Brannan, 2022), and participatory action research. Case studies can involve in-depth studies of green management practices in successful green companies, to gain a better understanding of the factors that contribute to the success of an enterprise. Ethnographic research can involve participant observation and in-depth interviews with green entrepreneurs, to understand how they make sustainable business decisions and
how they deal with challenges (Tenny, Brannan, & Brannan, 2022). Participatory action research can involve working with communities (Cleland, 2017) of green entrepreneurs to identify and overcome obstacles in the development of sustainable green entrepreneurship.

Data analysis in qualitative research usually involves a process of codification and themes, to identify patterns and themes that emerge from the data. The results of this research can provide valuable insights for green entrepreneurs on how to grow their businesses sustainably and increase their competitive advantage through green management.

So, this qualitative research method allows researchers to gain deep (O'Brien, Harris, Beckman, Reed, & Cook, 2014) and a rich understanding of how to develop sustainable green entrepreneurship for competitive advantage through green management. This process involves close collaboration with research subjects and requires researchers to be open, flexible, and responsive to findings and insights that emerge during research (Moser & Korstjens, 2018).

RESULTS
Below are some methods that green entrepreneurs can employ to help them successfully establish their eco-friendly businesses:

1. Market Research: Understand the market, the demand for green products and services, the existing competition, and the potential gaps that your business can fill. This knowledge will inform your decisions regarding what eco-friendly products or services to offer.

2. Innovation: Green entrepreneurs should strive for innovation in their products, services, and processes. This could mean developing a unique eco-friendly product, finding new ways to reduce waste in production processes, or creating a more efficient way to deliver services that minimize the carbon footprint.

3. Collaboration: Engaging with other entities can provide mutual benefits. Partnerships can lead to shared resources, joint innovation, and expanded influence. Collaborating with other businesses, non-profit organizations, government agencies, and academic institutions can all be beneficial.

4. Sustainability Metrics: Green entrepreneurs should not only implement eco-friendly practices but also measure their success or impact. Develop ways to track and quantify your business's environmental impact. This could be through measuring carbon emissions, waste reduction, water conservation, or other relevant metrics.

5. Education and Advocacy: Green entrepreneurs have a unique position to influence both public opinion and policy. By educating consumers and advocating for environmentally friendly policies, green entrepreneurs can help create a more conducive environment for green businesses.

6. Social Responsibility: Green entrepreneurship is not just about the environment, but also about creating social value. Green entrepreneurs can do this by ensuring fair labor practices, creating jobs, improving communities, and ensuring that their businesses have a positive impact on society.
7. Financing: Securing funding to start and expand a business is a challenge for any entrepreneur, and it may be even more challenging for green entrepreneurs as they often require significant upfront investment to develop and market eco-friendly products or services. Therefore, exploring various funding options, including grants, loans, crowd-funding, and venture capital, is crucial.

8. Customer Engagement: Green entrepreneurs should take advantage of the growing consumer interest in eco-friendly products and services. This includes marketing strategies that highlight the environmental benefits of their products or services and actively engaging with customers through various channels to understand their needs and preferences.

**DISCUSSION**

Sustainable entrepreneurship, particularly in the context of green management, has the potential to confer significant competitive advantages to businesses. The quest for sustainability is driving a global paradigm shift that is redefining the concept of business success. Businesses that succeed in implementing green strategies can tap into new markets, enhance their brand reputation, realize cost savings through greater operational efficiencies, and secure longevity by aligning their operations with the imperatives of environmental stewardship.

Developing green sustainable entrepreneurship starts by embedding sustainability into the core of business models and strategies. This involves a shift from linear business models to circular ones that prioritize the reduction, recycling, and reuse of resources. Also, it is necessary to foster a culture of innovation that continuously seeks out more sustainable materials, processes, and practices. For instance, companies can invest in research and development to create products or services that use less energy, generate less waste, or are made from renewable or recyclable materials.

Green management plays a pivotal role by integrating environmental considerations into every aspect of the business, from procurement and production to marketing and customer relations. It can drive sustainability by setting and pursuing aggressive environmental goals, tracking and reducing greenhouse gas emissions, promoting energy efficiency, and ensuring compliance with all relevant environmental regulations. It also involves engaging stakeholders - employees, customers, suppliers, investors, and the broader community - to support and participate in the company's sustainability initiatives.

By doing so, companies not only reduce their environmental footprint but also build a more resilient and future-proof business. This can give them a competitive edge in a marketplace that is increasingly favoring sustainable and responsible businesses.

**CONCLUSIONS AND RECOMMENDATIONS**

Green entrepreneurship or eco-entrepreneurship involves the development and application of business strategies and innovations that contribute to sustainability. Green entrepreneurs seek to transform markets and societies towards more environmentally friendly and sustainable practices.
Developing green sustainable entrepreneurship entails integrating environmental consciousness within the business model, thus creating competitive advantages through green management. This strategy not only promotes environmental sustainability but also allows organizations to position themselves favorably within the market. Companies that adopt green practices are likely to experience increased customer loyalty, strengthened brand image, and improved overall business performance.

Green sustainable entrepreneurship plays a pivotal role in driving innovation, fostering economic growth, and creating viable solutions to environmental challenges. Through green management, businesses can efficiently use resources, minimize waste, and reduce their carbon footprint, thereby contributing to environmental conservation. Furthermore, these practices enable companies to adhere to environmental regulations, thereby avoiding penalties and enhancing their reputation.

The adoption of green practices in entrepreneurship is not just a trend or a compliance requirement, but a strategic element for achieving competitive advantage. It is a transformative approach that can redefine business operations, stimulate economic prosperity, and ensure environmental sustainability. Therefore, organizations should embrace green sustainable entrepreneurship as a core part of their business strategy to achieve long-term success and sustainability.

FURTHER STUDY

The concept of green sustainable entrepreneurship focuses on the development of business practices that not only ensure economic prosperity but also maintain environmental integrity. This is achieved by integrating sustainable processes, environmentally friendly technologies and products, and adopting business strategies that preserve natural resources. For businesses to gain a competitive edge in today's market, it is crucial to apply green management principles in their operations.

Green management refers to the strategic decision-making process that integrates environmental and sustainability concerns into a company's business model. This includes resource-efficient production processes, waste management, energy efficiency, and promotion of clean technologies, among others. The goal of green management is to minimize the environmental impact of business operations while maximizing economic gains.

Successful implementation of green sustainable entrepreneurship, businesses need to recognize the importance of adaptive management, continuous learning, innovation, and risk-taking. They need to be proactive in identifying new opportunities for green products and services while adapting to changing market trends and consumer preferences.

Incorporating green management practices into business operations can offer companies numerous competitive advantages. It can help businesses differentiate themselves from competitors, enhance their brand image, attract green consumers, and create new market opportunities. Also, it can enable businesses to reduce operational costs, increase efficiency, meet regulatory requirements, and improve stakeholder relationships.
While the concept of green sustainable entrepreneurship is promising, further research is needed to understand its implementation challenges and success factors. Studies could focus on examining the role of entrepreneurship education in promoting green entrepreneurship, the influence of institutional and policy support on the adoption of green business practices, the effectiveness of green innovation and technology in improving business performance, and the impact of green entrepreneurship on economic growth and environmental sustainability.

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