

EFFECT OF SOCIAL ENTREPRENEURSHIP ON SUSTAINABILITY OF SMES MEDIATED BY GREEN INNOVATION IN KENYA

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ABSTRACT

Businesses and industries of all sizes are finding it difficult to sustain themselves as a result of COVID-19. On the other hand, some companies have seized this chance to carve out a niche, while others attempt adaptation to the shifting climate and adopt innovation. The study's goal was to determine how green innovation mediates the link between social entrepreneurship and the sustainability of SMEs in Kenya. 281 managers were chosen as the sample size out of a target population of 940 managers. Primary information gathered by questionnaires. Expert judgment and reliability analysis were used to determine validity and reliability. Using structural equation modeling and linear regression, hypotheses were evaluated. AMOS application was employed in data analysis that produced structural equation models. The results demonstrated that the

hypotheses had statistical significance. Indirect effects ($\beta=.203$) were less significant than the overall impact of social entrepreneurship ($\beta=.550$) in regard to small and medium-sized businesses sustainability. The sum of the direct and indirect impacts is ($\beta=.753$). Social entrepreneurship and SMEs' sustainability were positively correlated. The connection between social entrepreneurship and the sustainability of SMEs was somehow mediated by green innovation. The outcomes will offer appropriate strategies for Kenya's SMEs to survive. Results suggest an advantage over rival businesses and SMEs should provide distinctive goods and services.

Keywords: Green, Innovation, Social Entrepreneurship, Sustainability, SMES.

INTRODUCTION

The Covid-19 pandemic significantly altered the economic climate and made sustainability a top priority for the corporate sector. Risks started to increase for company activities that threaten environmental stability and necessitate any kind of physical presence. As a result, organizations have implemented technologically sophisticated and ecologically friendly strategies that provide sustainable performance as part of their social obligation (Herzig *et al.*, 2019). Therefore organizations have prioritized adapting various processes, by embracing green responsible activities, through leveraging technology advancements as their maintenance (Seuring & Gold, 2013). Technological advancements aid in battling the epidemic, maximizing resource utilization, and achieving sustainability objectives (Klewitz & Hansen, 2014). For sustainable processes and results, it is necessary for organizations to implement new environmentally friendly technology (Gallego-Ivarez *et al.*, 2011). Environmentally friendly organizational procedures can result from technological breakthroughs.

Innovative technologies with an environmental focus are needed in the pandemic for sustainable performance. In this situation, limited resources are utilized using technology advancements to gain an edge by remotely managing performance (Thakker, D. et al, 2018). This sort of innovation that impacts corporate operations and has an impact on certain resources is one of the most important elements (Sampson, 2007). Due to this circumstance, there will be a rise in competitive advantage and sustained performance (Chege & Wang, 2020a).

Therefore, discussions on green growth have been ongoing on a worldwide scale in an effort to reach agreement on the best methods to enable the current generation to fulfill resource demands without curtailing future generations' capacity to satisfy their needs (Rennings, & Rammer 2010). The topic of developing green goods that cater to client tastes and increase business profitability while simultaneously addressing environmental issues has been discussed (Tariyan, 2016). United Nations General Assembly in the year 2015, endorsed agenda for 2030 which included 169 objectives and 17 Sustainable Development Goals (SDGs). The aim was to abolish all forms of poverty and hunger while also advancing gender equality, health, education, and access to clean water and sanitary facilities.

Entrepreneurship is essential for any nation to achieve economic growth, job creation, and prosperity (Akter et al., 2020). Social entrepreneurship involves creating both economic and social values, by creating the social and environmental demands of society. However, scholars and practitioners have recognized the value of social entrepreneurship in earlier studies (Wu & Si, 2018). This importance highlighted the unresolved concerns at global level, which advances human development globally and improves life expectancy (Alarifi et al., 2019).

Achieving organizational sustainability has been regarded as the primary goal of social organizations (Hockerts, 2018). Sometimes a lack of cash forces an organization to engage in other commercial pursuits in order to generate vital resources (Lee & Kelly, 2019). Business sustainability and social entrepreneurship go hand in hand. According to Doherty et al. (2014), social enterprises must work hard to grow and expand their companies in order to compete with commercial organizations if they are to attain social and economic sustainability. Achieving company success in the modern industrial world without sacrificing the requirements of the present or the future is what is meant by organizational sustainability, which also includes social, environmental, and economic sustainability.

In the present pandemic situation, all organizations make technical investments to implement sustainable green practices, such as management of green supply chain, green innovation, and green marketing, to ensure sustainable performance. Developing nations have emphasized economic power driver to have come from the SMEs for more than ten years (Gbandi & Amisshah, 2014). However, because the SME sector has a low success rate, sustainability is still crucial. Particularly in developing nations, around half of SME starts fail within five years (Nikoli et al.,

2019; Dalberg, 2011). Good organizational procedures and strong leadership are only two examples of crucial contextual elements that must be present for a SME to be successful and sustainable. The right technology assistance and coordinated procedures must be in place for SMEs to accomplish the defined performance targets and sustain a competitive edge. Limitations of COVID-19 had a significant negative impact on the SME sector. Due of the need for a physical presence, This industry had difficulty adapting to the new environment and figuring out how to be sustainable due to of lack physical presence.

Yahya, Marwan, and Muna (2013) examined the impact of innovation on several company dimensions on performance, in Turkey. Findings provided proof that innovations have a favorable impact on business success. Indicated by 2 million SMEs operated in South Africa as of 2016 (Van-Scheers & Makhitha, 2016). SMEs make up over 61 percent of the South African population and generate between GDP 57 percent. According to an academic study by Fourie (2015), SMEs make up 91% of formal organizations in South Africa. Maziriri & Mapuranga (2017) state importance of SMEs private sector and GDP. According to Love and Roper (2015), SMEs play a crucial part in monetary advancement, making them the leading contributors to age and yield increase in both developing and established countries.

In Kenya, according to the Kenya National Bureau of Statistics (KNBS), 2016), the SMEs sector produced around 14.9 million employment and contributed KES 3,371.7 billion, or 33.8 percent, to the country's GDP. However, there is little information available on the sector's performance. Kenya's Vision 2030 highlights Big Four Agenda Blue print intended to make the nation an industrialized, middle-income country that offers a high standard of living. The goal of Kenya's "Big Four Agenda" is to address the country's social and economic problems while promoting sustainability. Due to the growing environmental effect of small and medium-sized firms' expansion and development, these concepts of sustainable development must be included into their operations (Mikuová, 2017).

The external environment's opportunities have an impact on how well a firm innovates. This suggests that SMEs become extremely competitive in a developing market when they prioritize creative activities that enhance their standing there (Weerasiri, Zhengang, & Perera, 2012). In essence, the primary desire of businesses is innovation which will improve company performance and competitive advantage (Kimandu, 2016). Roberts and Amit (2003) define innovation's significance as a strategy for achieving a higher profitability and competitive edge. According to Nurulhasanah *et al.* (2015), innovation is crucial for a nation's economic development and industrial competitiveness. Innovation is crucial for both huge corporations and small and medium-sized businesses (Jong & Vermeulen, 2006). One of the most crucial competitive advantages and typically regarded as a company's main competitive advantage is innovation. Due to the issue of resource constraints a business has, innovation is also regarded as an efficient strategy to increase productivity.

There is still a need for operations to be adopted in order to achieve long-term survival, with sustainability being one of the most important components in the current climate (Mustafa & Abbas, 2021). This circumstance puts pressure on SMEs to use technology to advance. According to Chege, Wang and Suntu, (2020), the typical percentage of businesses using technology is about two percent though it is now unavoidable that businesses will switch from conventional to green methods in order to operate sustainably because to the present COVID-19 pandemic.

LITERATURE REVIEW

Social entrepreneurship is a strategy used by people, groups, and start-up businesses to create, finance, and put into action solutions to problems in the fields of business, politics, society, culture, and the environment (Rawhouser et al., 2019). According to Saebi et al (2018) it is a social purpose employing ideas and resource fusion to achieve economic and social advantages. Based on previous research, it is obvious that social entrepreneurship has become an important subject of study in company growth (Rawhouser et al., 2019). A social economy organization is another name for social entrepreneurship (Lee & Jung, 2018). Governments and other organizations, however, have even stepped up in recent years to promote social businesses in order to manage social concerns from various risks and create jobs. Social enterprise integrates various entrepreneurship resources with the assistance of systemic transformation, as recommended by Steinerowski and Steinerowska-Streb (2012). It offers a cutting-edge structure that is more productive and respectable in society.

Sustainable business is one that creates, innovates and enhance corporate success to satisfy the needs of stakeholders both in the present and future (Danubianu & Teodorescu, 2017). To achieve sustained corporate success, every firm, however, chooses the optimal approach. Schaltegger and Burritt (2018) describe sustainable enterprise growth as an organization's capacity to satisfy stakeholders' present demands without jeopardizing the fulfillment of their future requirements. According to earlier studies, sustainable company growth is a process to increase shareholders' value via environmental, social and economic excellence (Bansal et al., 2019). Because it prioritizes social, economic, and environmental sustainability in addition to productivity and economic sustainability, sustainable company development is often known as the triple bottom line (Funk et al, 2015).

Member happiness can be increased by social sustainability that support abilities of current and future generations' healthy society (Woodcraft, 2015). Businesses are held accountable to their stakeholders and employees when it comes to social sustainability (Morrison, 2003). According to several studies, corporate social issues and concerns, are connected to social sustainability (Woodcraft, 2015).

Methods for fostering long-term economic growth can be examined through economic sustainability without compromising the community's environmental, economic and social, conditions (Spangenberg, 2005). Financial sustainability, as described by Common and Perrings (1992), is the capacity to generate income necessary for ongoing survival. However, internal economic stability and business productivity are also taken into account when determining economic viability (Shyle, 2018). This is also linked with preserving the environment where businesses source their inputs and deliver their output (Kandaurova et al., 2015). Eco-effectiveness is related to the adherence to environmental criteria that businesses undertake to preserve their sustainability. In contrast to businesses that pollute the environment, companies with sustainable environmental practices have a greater economic edge.

Innovation is essential for finding creative solutions to social issues that provide socially beneficial outcomes (Sharma, 2017). Social innovation assists businesses in addressing their economic, social, and environmental difficulties as well as addressing the urgent needs of the community during emergencies (Betts et al., 2018). Innovation affects the growth of sustainable businesses and satisfies social demands without compromising the environment (Baker & Mehmood, 2015). In order to produce economic and social values, businesses with a social innovation focus are more likely to succeed.

According to Dangelico and Pontrandolfo (2010), the global landscape is significantly impacted by green technologies phases, a multi-factorial process incorporating pollution, materials, and energy as three major environmental core nexuses. For SMEs, taking into account green innovation entails improving new, more environmentally friendly materials and altering processes for generating methods (Brindley & Oxborrow, 2014). Two categories of green innovations are green process and green product innovations (Chan, 2011; Rennings & Rammer 2009). According to Kurapatskie & Darnall's (2013) research, businesses that innovate to create new green products are more valuable than those who only make little tweaks to their current offerings. There is little empirical data on how adopting green practices sustainability in the SME sector might improve sustainability performance (Chege & Wang, 2020a).

Chege et al (2020) state that, typical percentage of businesses using technology is two percent. This is now unavoidable that businesses will switch from conventional to green methods in order to operate sustainably because of the COVID-19 pandemic. The research on SMEs that is currently available addresses the factors that influence the adoption of environmental and social practices and green innovation. They don't address how technology innovation affects sustainable behaviors and how that affects the sustainability of SMEs. Many social entrepreneurship elements are highlighted by various scholars (Bandyopadhyay & Ray, 2019; Jenner, 2016). Social purpose, innovation and financial success have favourable influence on the growth of firms, according to Javed et al. (2019). Prior study on social entrepreneurship, generally overlooked the consequences

a unique label and distinct manner companies were managed as well as their impact (Rawhouser et al., 2019).

Hypotheses Development

Covid-19 pandemic has made businesses and industries of all sizes difficult to sustain themselves. Many are acquainting this new climate, while some enterprises have used this chance to carve out a new niche for themselves (Bretas & Alon, 2020). SMEs may be especially susceptible to global crises because of their low resources, and COVID19 is particularly detrimental to them (Utomo et al., 2021). There is still a need for operations to be adopted in order to achieve long-term survival, with sustainability being one of the most important components in the current climate (Mustafa & Abbas, 2021). This circumstance puts pressure on SMEs to use technology to advance and run sustainably (Winarsih et al., 2021). Thus it was hypothesized that:

H0₁: There is no significant effect of social entrepreneurship on sustainability of SMEs in Kenya

H0₂: There is no significant effect of social entrepreneurship on green innovation of SMEs in Kenya

H0₃: There is no significant effect of green innovation on sustainability of SMEs in Kenya

THEORETICAL FRAMEWORK

According to Schumpeter's Theory of Innovation, which was put forward in 1934, enterprises might create the possibility of fresh returns through their inventions and therefore businesses can open up new profit opportunities with their inventions. The result would be a flood of competitors due to groups of copycats drawn by super-profits. The inventions were constant winds of creative destruction that were crucial factors in a capitalist system's development rates (Malerba & McKelvey, 2020). In order to distinguish between entrepreneurship or innovation, the theory focused on the importance of entrepreneurship and the pursuit of chances for new value-generating activities that would increase and change the cyclical flow of revenue.

Previous research has also used the idea to demonstrate the connection between innovation and SME performance. The theory was also used by Jabeen, et al. (2019) to examine the factors that influence innovation choices made by Emirati SMEs controlled by women. The relevance of theory to the study is important since it has been shown that persistent innovations of different investments in tangible and intangible assets in SMEs may result in improved performance. The relevance of innovations in forecasting the overall performance of entrepreneurial ventures is acknowledged by Schumpeter's innovation theory. This idea is relevant to the study since it has been shown that persistent innovations of different investments in tangible and intangible assets in SMEs may result in improved performance. The relevance of innovations in forecasting the overall performance of entrepreneurial ventures is acknowledged by Schumpeter's innovation theory. Theoretical underpinnings are also found in the resource based view (RBV). The RBV is useful in

this situation for a number of reasons. First, as SMEs may achieve sustainability and competitive advantage by recognizing the best use of limited and unique organizational resources, the theory has been frequently applied to studies of SMEs (Kraaijenbrink et al, 2010). Second, internal resources that emphasize how they may be used to develop methods for accomplishing goals like sustainability (Madhani, 2009). If these resources proved to be unique and unreplaceable, the organization would create a competitive advantage, such as digitalization, which would result in higher long-term success (Kraaijenbrink et al, 2010). Thirdly, according to Chege & Wang, 2020, using the Technology Organization Environment (TOE) framework flexibility allows incorporation of many factors.

Framework

The link between social enterprise in small and medium-sized businesses and sustainability mediated by green innovation is indicated in the figure. Independent variables are new opportunities, acting bravely, and the societal values. The conceptual framework that has been suggested illustrates the significance of green innovation as well as the link between social entrepreneurship and the SMEs sustainability in Kenya.

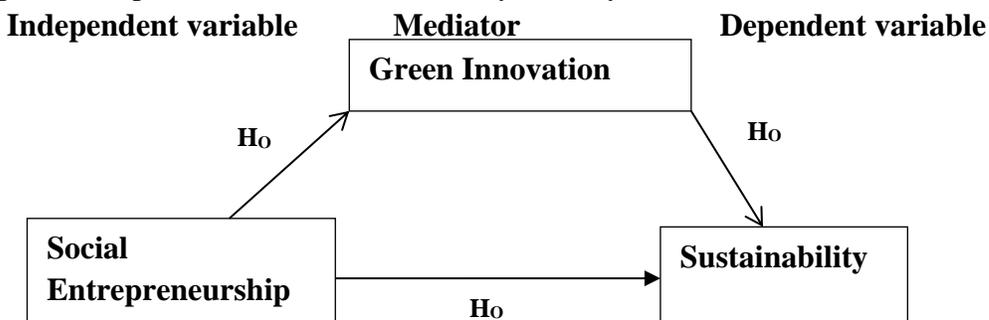


Fig.1 Conceptual Framework

RESEARCH METHODOLOGY

An explanatory survey method was used to gather data on the sustainability of women-owned businesses. To understand the research population and the factors examined, an explanatory design was used. It also permitted the use of regressions to determine the correlations between variables in univariate, bivariate, and multivariate analyses. This made it possible to test hypotheses by using inferential statistics to determine the significance of correlations variables (Hair, 2010). The 940 managers of small and medium-sized businesses were the target demographic. A sample size of 281 managers was selected via random sampling. The sample size of 281 respondents was established using Yamane's (1967) formula. Utilizing questionnaires created from earlier research, primary data was gathered. The social entrepreneurship measures were taken from Wiedmann et al. (2011) and Tarkiainen & Sundqvist (2009). Rousseau & Venter's 1992 paper, "Green Innovation Measures," and "Sustainability Measures" (Newbert, 2008).

To evaluate questionnaire validity and reliability, a pilot study was conducted and the judgment of specialist used to assess validity. Cronbach's alpha coefficient, which measures dependability, has

an acknowledged value of 0.7. (Fraenkel & Wallen,2000). Data was then coded and processed in preparation for analysis. AMOS (Version 25.0) statistical program was used to evaluate the hypotheses. A route diagram was utilized to determine the mediation effect using structural equation modeling (SEM).

Analysis

Different descriptive fit statistics were used by the researcher to evaluate the overall model for the data. Results from Table 1 provide a summary of the goodness fit of the model of 0.004, and significant. As indicated in table 1, the CMIN/DF was .002, with CMIN being .004; df = 2), indicating a there was significant model fit.

Table 1

Model	NPAR	CMIN	DF	P	CMIN/DF
Default	12	.004	2	.000	.002
Saturated	14	.000	0		
Independence	8	179.231	6	.000	29.872

GFI found was 0.92 compared to the advised value of over 0.90, however AGFI coefficient was 0.91 compared to recommended value of > 0.9. The coefficients were 0.95, 0.94, 0.98, and 0.98 respectively. RMR is .006, significantly less than 0.02 guidelines, while the RMSEA was 0.02—much below the suggested limit of 0.05. Because of this, the model works well in general.

Table 2

Statistic	Fit	Result
χ^2	-	.004
df	-	2
χ^2 significance	$p \leq .05$.000
χ^2/df	< 5.0	.002
GFI	> .90	0.92
AGFI	> .90	0.91
NFI	> .90	0.95
RFI	> .90	0.94
CFI	> .90	0.98
TLI	> .90	0.98
RMSEA	< .05	0.000
RMR	< .02	0.006

Maximum Likelihood Estimates

The study's hypotheses were examined by looking at the connections between latent variables. Hypotheses test results are shown in table 3 below. The impact of SE on the sustainability of SMEs was considerable ($c = .550, p .001$). The **H0₁** was turned down. The sustainability of SMEs in Kenya was significantly impacted by social entrepreneurship.

A green invention is positively impacted by social entrepreneurship. The findings revealed a positive influence with a coefficient 0.684 and 0.000 P- value. H0₂ was turned down This demonstrated the statistical necessity of this proposition. The green innovation of SMEs was positively and significantly impacted by social entrepreneurship.

Table 3 Maximum Likelihood

H0			Approximate	S.E.	C.R.	P	Determination
Green innovation	<---	Social entrepreneurship	.684	.04	14.117	***	Supported & Significant
Sustainability	<---	Social entrepreneurship	.550	.056	9.739	***	Supported & Significant
Sustainability	<---	Green innovation	.297	.056	5.256	***	Supported & Significant

Controlling for the firm's GI, there was a considerable direct impact of SE on the sustainability of SMEs. Green innovation has a strong correlation with SMEs' sustainability ($c' = .297, p .000$). The H0₃ was therefore rejected. Green innovation significantly impacted Kenyan SMEs' capacity to remain viable. When social entrepreneurship was taken into account, the green innovation strongly predicted the sustainability of SME.

Innovation in environmentally friendly products benefits long-term competitive advantage. With .297 coefficients and 0.000 P-value, green innovation impacts favourably and considerably on sustainable competitive advantage. Consequently, the finding suggests that the hypothesis is correct; yet, the significance level is high. This conclusion is well supported by other empirical research studies, including one by Chen (2008) who discovered a favorable correlation between green product developments and competitive advantage of enterprises.

Results of prior studies and analyzed together with these findings show SMEs performance was enhanced by SME adoption of innovation. The study's findings corroborate those Jones and Linderman (2014) which stated that new products or services development may be significant source of competitive advantage that boosts productivity.

SEM Total Effects

The direct impact of social entrepreneurship is .550 when it comes to SMEs' sustainability. According to Table 4, the indirect effect due to green innovation is (.684*.297=.203). The total effect become the sum of direct and indirect (.550 +.203 =.753). According to the study, social entrepreneurship had a total indirect impact (.203) on the sustainability of SMEs, while its direct effect was (.550).

Table 4 Mediation

	Total Effects		Direct Effects		Indirect Effects	
	Green innovation	Social Sustainability	Green innovation	Social Sustainability	Green innovation	Social Sustainability
Green innovation	0.000	0,684	0.000	0.684	0.000	0.000
Sustainability	0.297	0.753	0.297	0.550	0.000	0.203

Findings showed connection between social entrepreneurship and the sustainability of SMEs is somewhat mediated by green innovation. The sustainability of SMEs rose with social entrepreneurship when green innovation was introduced. The results showed that there is a relationship between social entrepreneurship and the sustainability of SMEs. through green innovation to some extent. Figure 1 depicts the path model diagram produced using path coefficients. The social entrepreneurship effects on SMEs' sustainability positively. By combining ecological, social, and economic qualities, profit is often regarded to be inclusive of economies and economies. Social business has improved sustainability for small and medium-sized businesses.

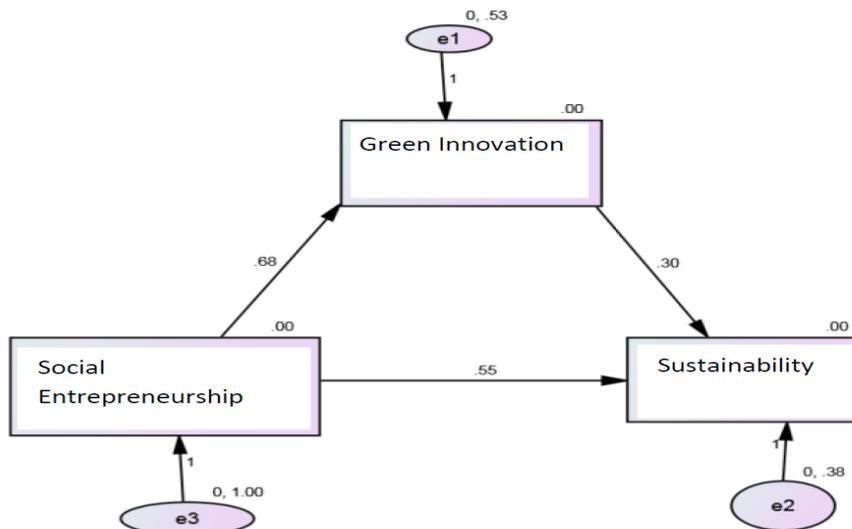


Figure 1: Path Diagram

Conclusion

The findings show that social entrepreneurship significantly impacted SMEs' sustainability, which in turn had an impact on green innovation. Therefore, green innovation of SMEs in Kenya should

be credited with the sustainability of any social business. The study further concluded that through most recent innovation in product manufacturing, process improvement and marketing strategies SMEs sustainability was distinguished from the competition. The improvements have a big impact on lowering costs and increasing efficiency, which raises customer satisfaction and, as a result, increases return on investments. Small and medium-sized firms (SMEs) are required to adopt management views and strategies that would enable for company growth in light of the difficulty of reaching Kenya's 2030 vision and the fact that they represent the most potential sectors for employment creation in Kenya.

Recommendations

In order to maintain sustainability, SME managers should embrace social entrepreneurship and green innovation. In order to lower transactions costs and inventory related expenses, SME managers should spend more in e-commerce. Sustainable SMEs are essential to the country's economic health. In order to improve their performances, the business owners of SMEs should use accounting software, mass SMS marketing, and cutting-edge consumer information data storage systems. Further, this study suggests that to be advantageous over rival businesses, SMEs should provide distinctive goods and services.

Study Implications

Study findings have important application for managers. In other words, the management should be dedicated to green innovation as a desirable strategy in order to acquire a lasting competitive edge in cutthroat sector to improve business performance within dynamic marketing environment. Additionally, findings will assist managers and owners of SMEs in identifying the required green innovation strategies that will provide them a long-term competitive edge and improve their company performance. When SMEs create new and improved goods and services using environmental inputs, increase their profitability and have a competitive edge over competitors that don't care about the environment.

The components of green innovation were relevant to the different actions that small and medium-sized businesses must do to be sustainable. The current study has major significance for societal demands because it is focused on green innovation. Most firms have developed ways to change people's worries as society grows more concerned about the environment. As a result, the idea of "green innovation" may deal with concerns about environmental deterioration and sustainable development in society. Green innovation encourages and takes into consideration pollution reduction in business, and may have a positive impact on society.

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