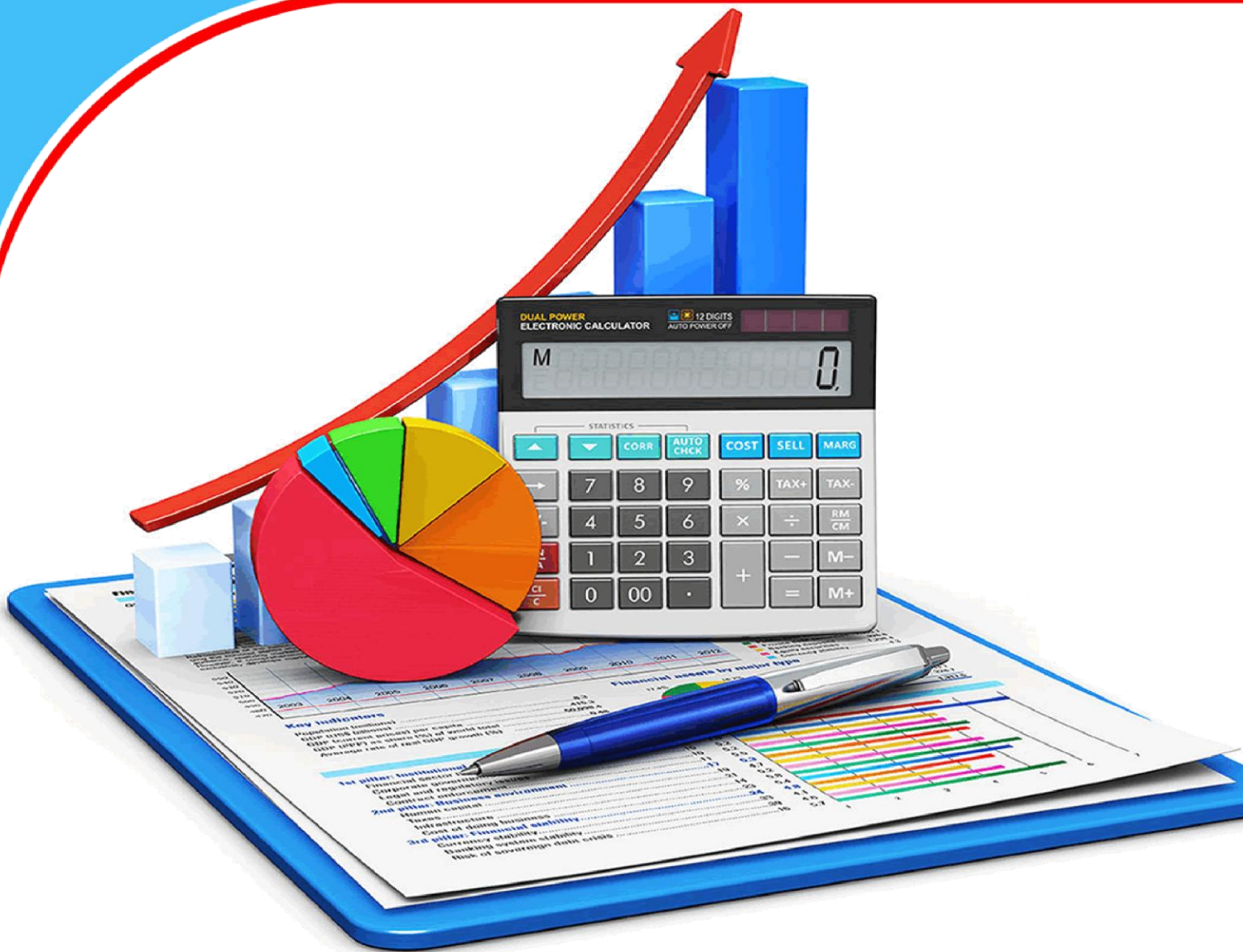


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Dynamic Nexus of Humane Entrepreneurship on Climate Change Initiative Outcomes

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Abstract

Purpose: In the battle against climate change, innovative approaches are vital. This paper explores the transformative potential of humane entrepreneurship in driving climate change initiatives. Humane entrepreneurship, which blends innovation with social responsibility, plays a crucial role in mitigating environmental degradation and fostering resilience.

Methodology: Using a systematic literature review, the study examines the dynamic nexus between humane entrepreneurship and climate change outcomes, drawing insights from academic publications, reports, and news articles.

Findings: Key findings highlight the pivotal role of entrepreneurial innovation, socially responsible business practices, collaborative partnerships, policy support, and community engagement in addressing climate challenges. In Kenya, startups are developing renewable energy solutions and sustainable agriculture practices, contributing significantly to economic and environmental progress. Businesses are increasingly adopting environmentally friendly practices, reflecting a shift towards conscious consumerism.

Recommendations: Collaborative partnerships between businesses, governments, NGOs, and communities enhance the impact of climate initiatives. Policy support and access to funding are essential for fostering a conducive environment for humane entrepreneurship. Community engagement and empowerment are critical for building resilience and achieving sustainable climate outcomes.

Keywords: *Humane Entrepreneurship, Climate Change Initiatives, Entrepreneurial Innovation, Social Responsibility, Collaborative Partnerships, Policy Support*

INTRODUCTION

In the current battle against climate change, innovative approaches are crucial. As stakeholders confront the unexpected threats posed by climate change, the role of humane entrepreneurship becomes increasingly pivotal. At the intersection of innovation and social responsibility lies humane entrepreneurship, a paradigm that prioritizes sustainable solutions and positive societal impact. According to Parente et al. (2021), humane entrepreneurship refers to a business model that combines profit-driven objectives with social and environmental responsibility. This approach prioritizes human welfare, ethical business practices, and sustainability, ensuring that economic gains do not come at the expense of people or the planet. Rooted in empathy, humane entrepreneurship encourages innovation that addresses societal challenges like climate change while also fostering economic growth.

The Triple Bottom Line (TBL) Theory (Elkington, 1997) provides a strong theoretical foundation for understanding humane entrepreneurship's role in climate resilience. TBL posits that businesses should not solely focus on financial profitability but also consider social and environmental factors in their decision-making processes. The framework is built on three dimensions. First, humane entrepreneurship prioritizes social welfare, ethical business practices, and equitable economic benefits (Parente et al., 2021). By investing in community-led climate solutions, entrepreneurs can drive inclusive climate adaptation strategies. Similarly, entrepreneurs engaged in humane entrepreneurship actively integrate eco-friendly innovations, reduce carbon footprints, and promote sustainable practices (Landowska et al., 2020). Third, unlike traditional capitalist models, humane entrepreneurship seeks long-term profitability without exploiting natural or human resources (Schaltegger & Wagner, 2011). Therefore, by applying TBL theory, this study explores how humane entrepreneurship fosters sustainable climate solutions while maintaining economic growth and social well-being.

According to Landowska et al. (2020), this model empowers entrepreneurs to develop solutions that are not only innovative but also socially impactful, helping to address pressing global issues such as environmental degradation while creating long-term value for all stakeholders. Thus, through a combination of ingenuity, collaboration, and community engagement, entrepreneurs are pioneering solutions that mitigate environmental degradation and foster resilience. By marrying empathy with entrepreneurship, visionary individuals and organizations are pioneering transformative initiatives that address the pressing challenges of climate change. Therefore, this article seeks to explore the transformative potential of humane entrepreneurship in catalyzing meaningful change in our collective efforts to address climate change.

Several studies have examined entrepreneurship and sustainability. Schaltegger and Wagner (2011) analyzed the role of sustainable entrepreneurship in environmental conservation, emphasizing the importance of corporate sustainability initiatives. However, their study primarily focused on large multinational corporations, leaving out small-scale and emerging enterprises that play a crucial role in localized climate adaptation. Additionally, Landowska et al. (2020) explored eco-entrepreneurship and green innovation, finding that sustainable businesses are economically viable and profitable. Parente et al. (2021) discussed humane entrepreneurship's ethical and sustainability dimensions, but their research was primarily based on developed economies

Problem Statement

Despite the increasing global emphasis on sustainability and corporate responsibility, the role of humane entrepreneurship in addressing climate change remains underexplored. While traditional business models prioritize profit, they often do so at the expense of environmental sustainability and social welfare (Parente et al., 2021). The climate crisis demands innovative approaches that integrate economic viability with ethical and environmental considerations. While corporate social responsibility (CSR) and green entrepreneurship have been extensively studied (Schaltegger & Wagner, 2011), there is a lack of research on humane entrepreneurship's role in fostering climate resilience, particularly in developing countries like Kenya. The absence of empirical studies on how humane entrepreneurship drives sustainable climate solutions leaves a gap in understanding its potential impact on economic, social, and environmental outcomes.

Methods and Data

A systematic literature review (SLR) was selected as the research design for this study to thoroughly examine the dynamic relationship between humane entrepreneurship and climate change initiatives. The SLR provides a structured approach for identifying, evaluating, and synthesizing relevant literature from diverse sources, offering a robust framework for a comprehensive analysis (Mohamed et al., 2021). A Systematic Literature Review (SLR) was selected over other methods, such as empirical case studies and qualitative interviews, because it allows for a comprehensive, structured, and objective analysis of existing research on humane entrepreneurship and climate change initiatives. Unlike case studies, which focus on specific instances, or qualitative interviews, which rely on participant insights, an SLR enables a broader synthesis of knowledge by aggregating findings from multiple sources (Mohamed et al., 2021).

Literature was selected based on its relevance to humane entrepreneurship, climate change solutions, and social responsibility, with a focus on peer-reviewed academic journals, reports from recognized institutions, case studies, and up-to-date news articles. Studies published between 2010 and 2024 were included to capture recent advancements in the field.

On the other hand, the databases used for literature collection included Scopus, Google Scholar, and ScienceDirect, targeting key terms such as "humane entrepreneurship," "climate change mitigation," "sustainable innovation," and "socially responsible business practices." Case studies of companies like M-KOPA in Kenya was analyzed to demonstrate real-time impacts of humane entrepreneurship on environmental sustainability. The review also considered the role of policy support, government funding, collaborative partnerships, and community engagement in driving climate-conscious entrepreneurship. Reports such as the UNEP Emissions Gap Report and World Bank studies on green entrepreneurship in Africa were used to provide broader contextual understanding.

The evaluation process followed a content analysis approach, where policies were systematically examined based on their objectives, implementation strategies, and impact on climate-conscious entrepreneurship. Specifically, key policies related to climate action, green entrepreneurship, and social responsibility (e.g., UNEP Emissions Gap Report, World Bank studies) were coded and categorized based on their alignment with humane entrepreneurship principles. Policies from

Kenya and other African nations were compared to global best practices, identifying gaps and opportunities for strengthening entrepreneurship-driven climate action. In addition, government funding initiatives, regulatory frameworks, and incentives for sustainable businesses were evaluated in terms of effectiveness, scalability, and real-world application. By combining SLR and policy content analysis, this study ensures a rigorous, multi-dimensional examination of how humane entrepreneurship interacts with climate change policies and sustainable business innovations.

Findings

Kenyan startups are becoming an increasingly vital force in addressing climate change, playing a significant role in fostering both environmental sustainability and economic growth. According to the World Bank (2023), Kenya's economy grew by 4.8% in 2022, a notable achievement given the global financial challenges and environmental adversities such as prolonged drought. This growth is attributed, in part, to the entrepreneurial sector, where startups are spearheading innovations in renewable energy, sustainable agriculture, and carbon capture technologies. These businesses not only contribute to reducing environmental degradation but also align with the nation's broader economic goals, such as fiscal consolidation and poverty reduction, while showcasing Kenya's potential as a leader in green technology (World Bank, 2023).

Furthermore, socially responsible practices are becoming a cornerstone of Kenyan entrepreneurship, reflecting a broader global trend. Kenyan businesses like Safaricom PLC and Equity Group Holdings demonstrate this commitment by incorporating sustainability and social impact into their operations. For instance, Safaricom supports local communities and promotes fair labor practices (Safaricom, 2023), while the Bank of Africa Kenya runs campaigns that address social issues like epilepsy (Bank of Africa, 2023). These examples highlight how Kenyan firms are integrating environmental responsibility with financial success, aligning with consumer demand for more conscious business practices.

Collaborative partnerships are equally essential in driving climate change initiatives, as seen in Kenya's leadership in global climate policies. Kenya has banned single-use plastics and set ambitious targets like achieving net-zero emissions by 2050 and 100% renewable energy by 2030 (Government of Kenya, 2023). These efforts are bolstered by partnerships with governments and international organizations, such as the UK-Kenya development partnership, which has enhanced progress towards Sustainable Development Goals (SDGs). Such collaborations have resulted in not only improved climate resilience but also significant social outcomes, such as poverty reduction and strengthened bilateral relations (UK-Kenya Partnership, 2023). Through these partnerships, Kenya has been able to leverage expertise and resources to address complex environmental challenges and foster systematic innovation in climate policy.

Policy support plays a critical role in nurturing humane entrepreneurship in Kenya. Neema (2023) highlights the establishment of the National Innovation Agency in 2013, which promotes innovation by safeguarding intellectual property and helping local businesses file patent applications. Such policy frameworks are vital in encouraging sustainable practices, as they offer entrepreneurs the regulatory environment and financial incentives needed to innovate in climateconscious ways. The Kenyan government's efforts to strengthen the entrepreneurial

ecosystem— through improved access to markets, financial products, and infrastructure—have created an enabling environment where businesses can thrive and contribute to sustainable development (State Department for Industrialization, 2023).

Access to funding remains a pivotal factor in scaling climate-focused ventures. For instance, the Youth ADAPT initiative has provided over \$5 million to young African entrepreneurs, including those in Kenya, through grants and mentorship (African Development Bank, 2023). However, USAID (2020) notes that Kenya received only \$2.4 billion in climate-related investments in 2018, a figure far below the annual funding required to meet the country's climate targets. This gap underscores the need for continued investment to help entrepreneurs create sustainable solutions at a larger scale. Institutions like KCIC also offer critical support by providing training and mentorship, equipping entrepreneurs with the skills and resources necessary to navigate the challenges of climate entrepreneurship (KCIC, 2023).

Community engagement is another crucial element of humane entrepreneurship, as evidenced by local projects that foster resilience and innovation at the grassroots level. For example, the UNDP Accelerator Lab has collaborated with herder-farmer communities in Tana River County to collect and manage water usage data, empowering these communities to improve their climate resilience (UNDP, 2024). Similarly, the Geothermal Development Company (GDC) works with local cooperatives in Baringo County to enhance livelihoods through renewable energy initiatives (Waking'a, 2023). Through partnerships like these, communities are not only benefiting from sustainable energy projects like the Turkana Wind Farm and Menengai Geothermal Power Station but are also actively participating in the country's transition to renewable energy, supported by the African Development Bank (African Development Bank, 2023).

Thus, these findings collectively illustrate that the success of humane entrepreneurship in addressing climate change in Kenya is not the result of isolated efforts. Rather, it is the product of a synergistic relationship between entrepreneurial innovation, socially responsible practices, collaborative partnerships, policy frameworks, access to funding, and grassroots community engagement. These factors, when integrated, create a robust ecosystem that fosters both environmental sustainability and socio-economic growth.

Key Contributions

1. Advancement of Entrepreneurial Innovation in Climate Solutions

This study highlights how entrepreneurial innovation is a driving force in addressing climate change challenges in Kenya. By showcasing startups that develop renewable energy solutions, sustainable agriculture practices, and carbon capture technologies, the study underscores the pivotal role of entrepreneurs in propelling environmental progress. This contribution is particularly valuable to policymakers and development agencies, as it provides empirical evidence supporting the formulation of policies and programs that foster entrepreneurial ecosystems. Stakeholders can enhance Kenya's capacity to meet its climate targets and promote sustainable economic growth by prioritising innovation and providing the necessary support infrastructure.

2. Promotion of Socially Responsible Business Practices

The study demonstrates a growing trend among entrepreneurs toward socially responsible business practices. This contribution is significant for business leaders and corporate strategists, emphasising the importance of integrating environmental stewardship and social impact into business operations. Companies like Safaricom PLC and Equity Group Holdings exemplify how businesses can balance financial success with ecological and social responsibilities. Other businesses can contribute to positive climate outcomes by adopting similar practices while building resilient and socially responsible enterprises. This trend also appeals to conscious consumers, who increasingly prioritise sustainability in their purchasing decisions, thus driving market demand for responsible business practices.

3. Emphasis on Collaborative Partnerships

Collaborative partnerships are a critical driver of effective climate change initiatives. The research illustrates how collective expertise and resources can address complex environmental challenges by examining successful partnerships between businesses, governments, NGOs, and communities. In Kenya, multi-stakeholder platforms that bring together businesses, government, NGOs, and communities will be resourceful in addressing environmental challenges more effectively. For example, Kenya's *Menengai Geothermal Power Project* demonstrates the success of public-private partnerships (PPPs) in renewable energy (African Development Bank, 2021). As a result, expanding such initiatives to include joint ventures in precision agriculture, where companies like *Safaricom* collaborate with local farming cooperatives, can promote sustainable farming practices and enhance community livelihoods (Waking'a, 2023). Additionally, enhancing partnerships with global organizations like the UNDP or the World Bank will secure funding for climate resilience projects, amplifying the impact of local initiatives while promoting sustainable development (World Bank, 2021).

4. Support for Policy and Institutional Frameworks

Policy support and institutional frameworks play a pivotal role in fostering humane entrepreneurship and advancing climate solutions. This study highlights the necessity of robust tax incentives, regulatory reforms, public-private partnerships, and climate-specific financing in scaling climate-focused businesses in Kenya. By identifying key challenges such as complex regulatory processes and limited access to green finance, the study contributes to the broader understanding of how policy and institutional interventions can drive entrepreneurial innovation in sustainable business practices.

One of the study's key findings is that Kenyan startups in climate-related sectors face financial and regulatory barriers that slow their ability to scale. To address this, the Kenyan government should expand tax relief programs under the Green Energy Tax Initiative to provide startups with credits for R&D in green technologies and reduced import duties for climate-friendly equipment, such as solar panels and energy-efficient machinery. These measures align with international best practices, where countries like Germany and the United States offer targeted tax breaks for clean energy startups (World Bank, 2023). By providing tailored incentives for entrepreneurs, Kenya can accelerate the adoption of renewable energy, water conservation, and sustainable agriculture while driving economic growth.

This study also advances knowledge on entrepreneurial innovation by demonstrating how simplified regulatory processes enhance business success in the climate sector. Many green businesses in Kenya struggle with complicated licensing requirements and environmental compliance procedures, leading to delays and increased costs. Drawing from Kenya Climate Innovation Center's (KCIC) success, the government should introduce a "fast-track" regulatory process specifically for green startups. Clearer compliance guidelines and reduced bureaucratic hurdles will allow entrepreneurs to scale their operations faster and more efficiently.

Additionally, the study underscores the importance of public-private partnerships (PPPs) in accelerating climate-focused entrepreneurship. For example, the Kenya Off-Grid Solar Access Project (KOSAP) has successfully brought together government agencies, private sector firms, and international donors to expand solar energy access in remote regions (KCIC, 2023). Similar partnerships can be implemented in sustainable agriculture, eco-friendly housing, and water conservation, enabling entrepreneurs to access critical infrastructure and resources that would otherwise be financially out of reach.

Expanding green finance initiatives is another crucial recommendation stemming from this study's findings. While Kenya has introduced climate-specific financing programs, such as the Kenya Green Bond Program and Youth Adapt Initiative, many SMEs and startups still struggle to secure capital for climate-related ventures. Establishing a dedicated institution to provide low-interest loans and grants for businesses that demonstrate strong climate benefits—such as renewable energy companies, eco-friendly construction firms, and sustainable agricultural enterprises—would significantly enhance Kenya's green entrepreneurship ecosystem (Government of Kenya, 2023).

Finally, this study provides evidence of growing consumer preference for responsible businesses, reinforcing the need for companies to integrate sustainability into their operations. Research from Kenya's Consumer Insights Report (2023) indicates that over 65% of Kenyan consumers prefer purchasing from environmentally responsible businesses, particularly in sectors like energy, agriculture, and retail. Companies such as Safaricom and Equity Group, which prioritize sustainability, continue to enjoy strong consumer trust and market competitiveness, further highlighting the economic viability of humane entrepreneurship.

Conclusion

Humane entrepreneurship is a pivotal force in addressing climate change by integrating innovation, social responsibility, and community engagement. This study underscores the critical role of entrepreneurial innovation, highlighting Kenyan startups' contributions to renewable energy, sustainable agriculture, and carbon capture technologies. The trend towards socially responsible business practices, exemplified by companies like Safaricom PLC and Equity Group Holdings, demonstrates how businesses can balance financial success with environmental stewardship. Collaborative partnerships between businesses, governments, NGOs, and communities amplify the impact of climate initiatives, as evidenced by Kenya's leadership in banning single-use plastic bags and committing to net-zero emissions. Supportive policies and institutional frameworks, such as those from the National Innovation Agencies, are essential for fostering an enabling environment

for sustainable entrepreneurship. Additionally, access to funding, resources, and capacity-building programs empowers entrepreneurs to scale their impact. Community engagement and grassroots initiatives further enhance resilience and sustainable climate outcomes, reinforcing the transformative potential of humane entrepreneurship in combating climate change.

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