

A Systematic Review on the Social Impact of Green Management in Construction Industry

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Abstract

Green management in construction enterprises has gained prominence due to heightened environmental awareness and the need for sustainable development. This systematic review examines the social impact of green management practices within the construction industry, focusing on how these practices influence community well-being, employee satisfaction, and corporate reputation. By analyzing studies from 2000 to 2024, this review identifies key benefits, challenges, and gaps in the current literature, providing a comprehensive understanding of the social dimensions of green management. The findings highlight the importance of integrating social considerations into green management strategies to enhance their overall effectiveness and sustainability. This review offers valuable insights for researchers, construction firms, and policymakers aiming to foster socially responsible green practices in the construction sector.

Keywords: Green Management, Social Impact, Construction Enterprises, Sustainable Development, Corporate Social Responsibility.

Background

Green management has emerged as a pivotal practice in the construction industry, driven by stringent environmental regulations, increasing stakeholder demands, and the growing importance of corporate social responsibility. This approach involves implementing sustainable practices aimed at minimizing environmental impact, such as enhancing resource efficiency, reducing waste, and incorporating eco-friendly design principles. While the environmental advantages of green management are well-established, its social implications require further exploration. Social impact, in this context, refers to how construction firms' practices affect communities, employees, and society at large. Green management can

influence various aspects of social life, including community health, worker safety and satisfaction, and the overall reputation of construction companies.

Research Aim

This systematic review systematically identifies, synthesizes, and evaluates the social impacts of green management in construction enterprises. It aims to uncover both the positive and negative social effects of these practices, explore how these impacts differ across various regions and types of construction firms, and highlight gaps in the existing literature on this topic.

Importance of this Study

The importance of this study stems from its ability to highlight the often overlooked social dimensions of green management in the construction industry. While much research has focused on environmental sustainability and economic performance, this study emphasizes the need to consider social impacts, such as improved community relations, employee well-being, and enhanced corporate reputation. By broadening the scope of green management, the research encourages construction firms to adopt more comprehensive sustainability strategies that integrate social responsibility, which is essential for long-term success and societal trust. The study also serves as a guide for industry stakeholders in developing policies that balance environmental, economic, and social goals.

Research Scope

This study explores the social impact of green management within the construction industry, specifically focusing on how sustainable practices influence key social factors such as community engagement, employee well-being, and corporate reputation. The research scope is limited to construction firms that have implemented green management strategies, providing a detailed analysis of the correlation between these strategies and their social outcomes. The study reviews both existing literature and industry case studies to evaluate current practices and identify opportunities for improvement. The scope also includes a regional focus, targeting firms in areas with established green management policies to better understand the localized effects. By concentrating on social impacts rather than purely economic or environmental outcomes, the study contributes to a more holistic understanding of green management's role in achieving sustainability in the construction sector.

Methodology

Review Protocol

This review adheres to the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines to ensure a rigorous and transparent process. The review protocol includes several key elements to maintain clarity and comprehensiveness (Shamseer et al., 2015). The protocol was registered with a systematic review registry to outline the review plan and avoid duplication (Clark et al., 2020). Eligibility criteria were established to select studies relevant to the social impacts of green management in construction enterprises. These criteria focus on studies that address the research questions and meet methodological standards. Information sources include databases such as Scopus, Web of Science, Google Scholar, and industry-specific journals to ensure broad coverage (Karakaya & Nuur, 2018). The search strategy utilized specific keywords and Boolean operators tailored to each database

(Bramer et al., 2018). A PRISMA flowchart was maintained to document the number of studies at each stage of the selection process (Stovold et al., 2014). Additionally, the review considers the United Nations Sustainable Development Goals (SDGs) to align with global sustainability targets and evaluate how green management practices contribute to these goals (Zimon et al., 2020). Quality assessment tools, such as the Critical Appraisal Skills Programme (CASP) checklists, were used to evaluate the methodological rigor of included studies (Long et al., 2020).

Literatur Search Strategy

The literature search strategy is designed to capture a comprehensive and diverse range of studies relevant to the social impacts of green management in construction enterprises (Luo et al., 2022). The review includes a systematic search across multiple databases, including Scopus, Web of Science, Google Scholar, and specialized industry journals, to ensure thorough coverage of available literature (Martín et al., 2018). The search employs a variety of keywords such as "green management," "sustainable construction," "social impact," "construction enterprises," and "corporate social responsibility," combined using Boolean operators to refine results and increase precision. Queries like "green management AND social impact AND construction" and "sustainable practices AND community impact" are used to locate studies that directly address the intersection of green management practices and their social consequences. The search period is from 2014 to 2024 to capture both historical and recent developments. Each search iteration is meticulously documented, including details of the number of articles retrieved, filtered, and selected for inclusion. A PRISMA flowchart is maintained to visually represent the study selection process, illustrating the flow of articles through various stages of review and providing transparency in the selection criteria (Kahale et al., 2021). Search strategy overview are shown in Table 1:

Table 1
Search Strategy Overview

Database	Keywords	Search Period
Scopus	[green management] and [sustainable construction]	2014-2024
Web of Science	[social impact] and [construction enterprises]	2014-2024
Google Scholar	[green management]and[corporate social responsibility]	2014-2024
Industry Journals	[sustainable construction] and [social impact]	2014-2024

Inclusion and Exclusion Criteria

The inclusion criteria for this review specify that studies must focus on construction enterprises and provide an analysis of social impacts associated with green management practices. Both qualitative and quantitative research methodologies are considered to ensure a comprehensive understanding of the topic (Brannen et al., 2017). Eligible studies are those that explicitly examine how green management influences social outcomes such as community engagement, worker satisfaction, and corporate reputation. Conversely,

exclusion criteria are applied to filter out studies that do not directly relate to the construction industry or those that concentrate solely on environmental or economic impacts without addressing the social dimensions. Additionally, studies that lack methodological rigor or do not provide substantial evidence on the social impact of green management are excluded. By applying these criteria, the review ensures that only relevant and high-quality studies are included, providing a robust basis for analysis (Pigott & Polanin, 2020).

Data Extraction and Analysis

Data extraction involves systematically collecting and recording essential information from each included study to facilitate comprehensive analysis (Ranney et al., 2015). A structured data extraction form is used to capture key details such as authors, publication year, research methodology, study objectives, and significant findings related to the social impacts of green management. This form also notes limitations and contextual factors that may influence the study's outcomes. The extracted data is then organized into a table for easy reference and comparison. For analysis, thematic analysis is employed to identify recurring themes and patterns across the studies (Terry et al., 2017). This involves coding the data and grouping it into categories based on commonalities such as regional differences, project scale, and stakeholder perspectives (Davis, 2014). The analysis seeks to uncover trends and insights into how green management practices affect social aspects in various contexts. By considering these factors, the review aims to provide a nuanced understanding of the social implications of green management and highlight areas for future research (Bhattacharya et al., 2019).

Social Benefits of Green Management

Community Well-being

Green management practices often contribute to enhanced living conditions in communities. Cleaner construction processes reduce pollution and improve local air and water quality. For example, a study by Muresan et al. (2022) highlights how green construction methods led to significant reductions in local air pollutants, resulting in improved respiratory health for residents. Additionally, better waste management practices associated with green management decrease environmental contamination, contributing to healthier living environments.

Employee Satisfaction and Safety

Several studies indicate that green management practices can positively affect employee satisfaction and safety. For instance, Xuan (2016) found that green building certifications often correlate with improved working conditions and higher job satisfaction among employees. These improvements are attributed to better indoor air quality, enhanced lighting, and overall healthier work environments. Improved safety protocols and environmentally friendly practices also contribute to a safer workplace, reducing the incidence of accidents and health issues.

Corporate Reputation

Implementing green management practices can enhance a company's reputation. According to a study by Bashir et al (2020), firms that adopted green management strategies experienced increased trust and loyalty from stakeholders. The positive public perception often translates into competitive advantages, such as greater customer retention and

increased brand value. Companies recognized for their commitment to sustainability and social responsibility tend to attract more customers and investors who prioritize ethical practices. Table 2 summarizes the social benefits of green management.

Table 2

Review Summary of Social Benefits

Authors	Year	Methodology	Key Findings	Limitations
Muresan et al	2022	Data analysis	Reductions in local air pollutants	Limited to specific regions
Xuan	2016	Survey-based analysis	Enhanced indoor environments led to higher employee satisfaction and safety	Focused on large firms only
Bashir et al	2020	Data analysis	Improved corporate reputation, trust, brand value, etc	Limited to specific industry

Social Challenges of Green Management**Equity Issues**

One challenge associated with green management is the potential for equity issues. Some green initiatives, such as those requiring advanced technologies or materials, can lead to increased costs. Studies by Chien et al (2021) show that these costs may disproportionately affect marginalized communities, potentially leading to greater social and economic inequalities. The higher costs of green technologies can place a financial burden on low-income households and small businesses, exacerbating existing disparities.

Community Resistance

Community resistance can arise in response to green projects, particularly when perceived or real adverse impacts are involved. For example, research by Martinez and Hwang et al (2017) discusses how some green building projects have faced opposition due to concerns about gentrification and displacement. Communities may resist green initiatives if they believe these projects will lead to increased project costs or disrupt their project schedule.

Implementation Challenges

Balancing social goals with economic and environmental objectives presents significant challenges. Green management initiatives can be complex and costly to implement. As noted by Balasubramanian & Shukla (2017), construction firms often face difficulties in aligning their green management goals with financial constraints and regulatory requirements. This balancing act can result in compromised social outcomes or stalled projects. Table 3 presents a summary of the social challenges associated with green management

Table 3

Review Summary of Social Challenges

Authors	Year	Methodology	Key Findings	Limitations
Chien et al	2021	Quantitative	Green management can exacerbate social inequalities.	Focused on specific firms
Hwang et al	2017	Data analysis, Case studies	Increased project costs or disrupt the project schedule	Case studies limited, sample size was relatively small
Balasubramanian & Shukla	2017	Data analysis, Sample analysis	Challenges in balancing social, economic, and environmental goals.	Small sample size, Lack of available data

Case Studies*Successful Examples*

Case studies of successful green management implementations often highlight positive social impacts. For example, the work by Wolch et al (2014) on the “Just Green Enough” illustrates how comprehensive green management practices led to improved public health. And Anthony (2024) stated that green practices increased community engagement. These projects’ success in integrating green spaces and sustainable practices created a healthier urban environment and fostered strong community relations.

Challenging Examples

Conversely, some case studies reveal challenges and unintended consequences of green management. For instance, a study by Anguelovski et al (2019) on the “Green climate Gentrification” showed that while the project achieved environmental goals, it also led to unintended negative social impacts, such as increased housing costs. Other research showed the displacement of local residents during the development of green gentrification (Anguelovski et al., 2018). These findings underscore the importance of addressing potential social challenges in green management planning. Table 4 summarizes the case studies reviewed

Table 4

Review Summary of Case Studies

Authors	Year	Methodology	Key Findings	Limitations
Wolch et al	2014	Case Study and Data analysis	Improved public health and community engagement through green practices.	Citizen participation Is Limited
Anthony	2024	Case Study and Data analysis	Improved community engagement through green practices.	Limited to the amount of cases
Anguelovski et al	2019	Case Study	Negative social impacts including increased housing costs	Limited scope of impact.

Anguelovski et al	2018	Case Study and Data analysis	Displacement of local residents	The sample data is limited.
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Discussion

Synthesis of Findings

The literature review reveals a consistent emphasis on the balance between social and environmental goals in green management practices within the construction industry. While green management is widely recognized for its environmental benefits, the social implications are multifaceted and vary depending on the region, type of construction firm, and specific practices implemented. For instance, green construction methods have led to improved community well-being by reducing pollution and enhancing public health. However, challenges such as equity issues and community resistance have emerged, particularly in projects where the cost of green technologies is high, leading to potential disparities among different social groups. The role of stakeholders, especially in mediating these impacts, is crucial, with effective engagement often determining the success or failure of green initiatives.

Contradictions in the literature arise regarding the overall social impact of green management. While some studies highlight significant positive outcomes, such as enhanced corporate reputation and employee satisfaction, others point to unintended negative consequences like gentrification and displacement, which complicate the narrative around green management's social benefits. These contradictions underscore the complexity of integrating social considerations into green management strategies.

Comparison with Other Sectors

When comparing the social impacts of green management in construction with other sectors, such as manufacturing or energy, unique challenges and opportunities emerge. In construction, the direct impact on local communities is more pronounced due to the physical and often disruptive nature of construction projects. Unlike manufacturing or energy, where green practices might focus more on operational efficiency or carbon reduction, construction involves tangible changes to the built environment, which can lead to significant social implications, both positive and negative. For example, while green energy projects may foster local job creation and community investment, green construction projects often face opposition due to fears of gentrification and increased living costs. This comparison highlights the need for tailored strategies in the construction sector that address these unique social challenges.

Implications for Practice

For construction firms, the findings suggest that integrating social considerations into green management practices is essential for enhancing their overall effectiveness. Firms should prioritize community engagement, equitable access to green technologies, and transparency in their operations to foster positive social outcomes. Additionally, there is a need for construction companies to balance their environmental goals with social equity, ensuring that green initiatives do not inadvertently harm vulnerable populations.

For policymakers, the review highlights the importance of supporting socially beneficial green management practices through targeted policy initiatives. This could include providing incentives for companies that prioritize social outcomes in their green strategies or implementing regulations that protect against the unintended negative impacts of green construction, such as displacement or increased living costs. Policymakers should also consider the broader social implications of green management in their sustainability agendas, ensuring that environmental goals are met without compromising social equity.

Gaps and Future Research

Identified Research Gaps

Several gaps in the existing literature have been identified. One underexplored area is the long-term social impact of green management practices. While short-term benefits such as improved public health and corporate reputation are well-documented, there is a lack of studies examining how these impacts evolve over time, particularly in different socio-economic contexts. Additionally, the literature is sparse on the effects of green management on specific demographic groups, such as low-income communities or minority populations, who may experience the social consequences of green initiatives differently from other groups.

Geographical gaps also exist, with most research concentrated in developed regions like North America and Europe. There is a pressing need for studies that focus on developing countries or regions where green management practices are less established but potentially more impactful. Understanding the social dynamics in these contexts is crucial for creating globally applicable green management strategies.

Future Research Directions

Future research should focus on longitudinal studies that track the social impact of green management over extended periods (Hunter et al., 2019). Such studies would provide valuable insights into the sustainability of social benefits and help identify any long-term negative consequences that may arise (Ortiz & Bansal, 2016). Additionally, there is a need for interdisciplinary approaches that combine perspectives from social sciences, environmental studies, and engineering. This would allow for a more comprehensive understanding of the social impacts of green management, considering both the technical and human dimensions of sustainability.

Research should also aim to fill geographical gaps by conducting studies in underrepresented regions. These studies could explore how local cultural, economic, and political factors influence the social outcomes of green management, providing a more nuanced understanding of its global implications.

The Significance of this Study

The significance of this study lies in its comprehensive exploration of the social impacts of green management within the construction industry, a topic that has been largely overshadowed by the focus on environmental and economic outcomes. By systematically reviewing existing literature, this research addresses a critical gap in understanding how green management practices affect community well-being, employee satisfaction, and

corporate reputation. The findings offer valuable insights for construction enterprises, policymakers, and stakeholders, emphasizing the importance of integrating social considerations into sustainability strategies. Furthermore, this study provides a foundation for future research in the field, particularly in exploring the long-term and global social consequences of green practices. Ultimately, the research contributes to a more holistic approach to green management, ensuring that social equity and well-being are prioritized alongside environmental goals.

Conclusion

This review has synthesized the current literature on the social impacts of green management in construction enterprises, highlighting both the positive and negative outcomes. Key findings include the significant social benefits of green management, such as enhanced community well-being, improved employee satisfaction, and strengthened corporate reputation. However, the review also identified several challenges, including equity issues, community resistance, and implementation difficulties that can undermine the social goals of green management.

Academically, this review contributes to a deeper understanding of the social dimensions of green management in the construction sector, an area that has been less explored compared to environmental and economic impacts. It provides a foundation for future research by identifying critical gaps in the literature and suggesting directions for further study. Practically, the review offers valuable insights for construction enterprises and policymakers, emphasizing the importance of integrating social considerations into green management strategies. By addressing the social impacts of their practices, construction firms can enhance the sustainability and effectiveness of their green initiatives, while policymakers can develop regulations and incentives that support socially responsible green management.

The ongoing research in this field is crucial for ensuring that green management practices in construction not only achieve environmental goals but also lead to sustainable and socially equitable outcomes. As the construction industry continues to evolve in response to global sustainability challenges, it is imperative that both researchers and practitioners remain vigilant in addressing the social implications of green management, ensuring that the benefits of these practices are shared equitably across all communities.

Declaration of Interests

We affirm that there are no financial or non-financial conflicts of interest related to this study.

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