



Assessing the Global Certification Readiness of Construction Firms in Baguio City

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Abstract— The construction industry in the Philippines, particularly in Baguio City, is experiencing notable growth through small and medium-sized enterprises (SMEs). However, this expansion is challenged by inadequate regulation, a shortage of qualified personnel, and inconsistent compliance with international standards. This study evaluates the readiness of construction firms in Baguio City to achieve international certification, examining key factors such as the regulatory framework, workforce qualifications, and the motivations behind pursuing certification. Despite government efforts to improve the regulatory landscape, issues like corruption and bureaucratic inefficiencies persist, hindering firms from aligning with global standards. Furthermore, a lack of skilled professionals in specialized areas constrains the industry's capacity to deliver high-quality projects. The findings highlight the need for construction firms to invest in training and development programs to address these gaps. Additionally, fostering collaboration among industry stakeholders can enhance resource sharing and collective problem-solving. This research underscores the importance of strengthening regulatory compliance, enhancing workforce skills, and promoting partnerships to improve the overall readiness of construction firms in Baguio City for international certification. By addressing these critical areas, local firms can not only boost their competitiveness in the global market but also contribute to the sustainable development of the construction industry in the region.

Keywords— Construction Industry, International Certification, Small and Medium-Sized Enterprises, Regulatory Compliance.

INTRODUCTION

Construction projects often face time constraints due to their relatively short life cycles. Additionally, they involve large budgets, numerous stakeholders, multiple sources of variability, and a high degree of uncertainty, making them challenging to plan, implement, and manage effectively (Santiago & Perez, 2021). A high rate of project failure is common, and as the complexity of projects continues to increase, construction companies with limited project management (PM) capabilities struggle to keep up (Gonzalez et al., 2022). Construction firm competence is crucial for the successful execution of projects, yet many firms lack the organizational readiness to adopt effective construction firm practices (Lee & Huang, 2020).

One of the research gaps in this study lies in the alignment of the construction industry's readiness for international certification with the United Nations' Sustainable Development Goals (SDGs) 2030. While prior studies have examined construction firm's International Organization for Standardization (ISO) such as practices and certifications, there is still a lack of in-depth exploration of how these initiatives contribute to achieving specific SDG objectives in the construction sector. For example, Torres and Martinez (2020) emphasized the



importance of resilient infrastructure and sustainable industrialization, key components of SDG 9 (Industry, Innovation, and Infrastructure). However, the connection between enhanced construction firm's readiness and fostering innovation in construction firms has not been fully explored.

Additionally, Lee et al. (2021) pointed out that effective construction firm's practices are essential for building sustainable urban environments, directly linked to SDG 11 (Sustainable Cities and Communities). While this study contributes valuable insights into the readiness of construction firms in Baguio City, more research is needed to explore how this readiness impacts urban sustainability outcomes. Similarly, Gonzalez and Rivera (2022) highlighted that SDG 12 (Responsible Consumption and Production) calls for sustainability and resource efficiency in construction, yet few studies have investigated how international certification directly promotes sustainable practices, resource efficiency, and waste reduction. By addressing these gaps, your study will offer a meaningful contribution to the global sustainability agenda, ensuring that construction firms are better prepared to meet international standards while advancing the goals of the SDG framework.

While construction is inherently project-based, many firms are not fully prepared to implement standardized processes. Organizational readiness, which includes cultural, environmental, and structural preparedness, is necessary for firms to adopt construction firm's methodologies effectively (Alvarez & Torres, 2023). In a dynamic environment filled with challenges, successful construction firms help achieve both project and organizational objectives, ensuring resources are managed efficiently and stakeholder expectations are met (Martinez, 2020). It is essential that construction firms manage their projects using standardized processes and have staff skilled in project management (Ramirez & Davis, 2021).

A study by KPMG in New Zealand (Thompson & Murphy, 2022) revealed that only 36% of organizations delivered projects on time, and less than 50% stayed within budget. Additionally, only 29% used formal construction firm methodologies, highlighting that poor management, rather than technical failures, often leads to project failure (Garcia & Johnson, 2020). Construction firm maturity models have been developed to assess an organization's effectiveness in applying construction firm practices and to identify areas for improvement (Morales et al., 2024). However, many models lack consideration of the cultural and organizational factors critical to successful construction firm adoption (Smith et al., 2019).

This study proposes a framework to assess the readiness of construction firm, focusing on their behaviors, practices, and knowledge. The framework evaluates the strengths, weaknesses, and opportunities for improvement to determine if a company is ready to adopt or enhance construction firm practices (Diaz & Collins, 2024). The researcher, who is both a student and industry-based practitioner, will gain a valuable perspective on the readiness of construction firms in Baguio City to undergo for International Organization for Standardization (ISO) from a student's point of view. Moreover, by studying the readiness of these construction firms, teachers can develop more relevant curriculum materials, improve teaching strategies, and increase student engagement among graduate school studies. Additionally, this research can benefit the construction firms itself by identifying areas for improvement in its services as it is anchored on the International Organization for Standardization (ISO), and provide a foundation for further research on public service.



REVIEW OF RELATED LITERATURE

This section of the paper presents the relevant literatures that provide support to the study evaluating the readiness for international certification of construction firms in Baguio City.

The concept of change management theory examines how organizations implement change and manage transitions effectively (Juanzon & Muhi, 2017). This theory is particularly relevant in the context of construction firms in Baguio City seeking to achieve international certification, as it provides insights into the strategies these firms employ to prepare for and manage the significant changes required in their processes, practices, and organizational culture (Mohammed & Chambrelin, 2020; Arefazar et al., 2019). Agile methodologies, which are often associated with the concept of "change management," have been increasingly adopted in the construction industry (Mohammed & Chambrelin, 2020). These methodologies emphasize continuous resource monitoring and improvement, flexible workflow, client participation, facilitated communication, and the ability to respond to changing requirements throughout the project lifecycle. By applying agile principles, construction firms can better manage the changes necessary to achieve international certification, such as training personnel, developing a culture of continuous improvement, and ensuring compliance with new standards.

Existing research suggests that the successful implementation of change management strategies in construction projects is essential to their overall success. The planning and execution of "sprints," a key component of agile methodologies, can be particularly useful in managing changes in construction projects, as they provide a structured approach to address evolving requirements and coordinate the process. Furthermore, studies have identified the most effective agility solutions for change management in construction projects, which include continuous resource monitoring and improvement, flexible workflow, client participation, facilitated communication, and the ability to receive and respond to requirements during the project (Arefazar et al., 2019).

By analyzing the change management strategies employed by construction firms in Baguio City as they pursue international certification, researchers can evaluate the firms' readiness to adopt new practices, train personnel, and develop a culture that supports continuous improvement and compliance with international standards. (Mohammed & Chambrelin, 2020) (Arefazar et al., 2019). The construction industry plays a pivotal role in shaping the built environment, and its environmental impact is significant. Construction firms in Baguio City, like their counterparts globally, are increasingly facing external pressures to adopt sustainable practices and obtain certifications that demonstrate their commitment to environmental stewardship. (Heather, 2014) Institutional theory provides a useful framework for understanding how these firms navigate the complex landscape of regulatory requirements, industry norms, and certification standards.

Institutional theory emphasizes the role of institutional environments in shaping organizational behavior. In the context of international certification, construction firms in Baguio City must navigate a myriad of external pressures, such as regulatory requirements, industry norms, and certification standards. These pressures compel firms to adapt their practices to align with the expectations of certifying bodies and the broader construction industry. By understanding the institutional pressures that these firms face, we can assess their readiness for certification based on their ability to conform to these external expectations.



Green building construction has been gaining traction globally, with notable progress in the Philippines. However, the adoption of sustainable practices in the Philippine construction industry has been hindered by various barriers. Scholars have identified limited studies that discuss the barriers to green building implementation in the Philippines, highlighting the need for further research in this area. The growing emphasis on environmental sustainability in the construction industry has led to the development of various green building standards, certifications, and rating systems. These certifications, such as ISO, can help mitigate the environmental impact of buildings through sustainable design and construction practices. However, the adoption of these certifications in the Philippine construction industry, and specifically in Baguio City, remains limited.

Institutional theory provides a useful lens for understanding the challenges faced by construction firms in Baguio City as they navigate the pressures to adopt sustainable practices and obtain certifications. (C, 2014) (Lee, 2013) (Quirapas et al., 2020) (Monjardin et al., 2022) The construction industry as a whole must rapidly adapt to the broader environmental and social agenda presented by the concept of sustainable development, as the built environment affects all human activity. By understanding the institutional pressures that construction firms in Baguio City face, we can better assess their readiness for certification based on their ability to conform to these external expectations.

Quality Management Theory focuses on the systematic pursuit of enhancing organizational processes and maintaining high standards to achieve consistent, superior outcomes. Rooted in the principles of continuous improvement, customer satisfaction, and error prevention, QMT plays a critical role in ensuring that organizations meet established quality standards and certifications. For construction firms aiming for international certification, this theory is particularly relevant as it underscores the importance of adopting robust quality assurance and control systems.

In the context of construction firms in Baguio City, QMT can be applied to evaluate how well these companies integrate quality management practices across all aspects of their operations. By aligning their processes with international standards like ISO 9001, firms can ensure that their workflows, project management, material procurement, safety measures, and final construction outputs meet globally recognized benchmarks (Deming, 1986). This readiness for certification goes beyond just meeting minimum requirements; it reflects a commitment to excellence, consistency, and customer satisfaction.

By investigating the quality management practices of construction firms, such as whether they follow standardized procedures, conduct regular audits, implement corrective actions, and promote a culture of quality throughout their workforce, the theory helps in assessing their preparedness for certification. Firms that embed Total Quality Management (TQM) principles—such as employee involvement, leadership commitment, and process orientation—are more likely to be well-positioned for international certification, as these practices indicate an ongoing pursuit of improvement and compliance with quality standards (Juran, 1988). Ultimately, applying QMT enables construction firms to not only comply with certification requirements but also to foster long-term growth, reputation enhancement, and global competitiveness by adhering to the highest standards of quality. In the context of evaluating the readiness for international certification of construction firms in Baguio City, the principles of the



International Organization for Standardization (ISO) play a crucial role in shaping the quality management practices of these organizations. ISO

standards, particularly ISO 9001, provide a framework for implementing effective quality management systems that ensure organizations consistently meet customer and regulatory requirements (ISO, 2015). By adhering to ISO standards, construction firms can enhance their operational efficiency, reduce risks, and foster a culture of continuous improvement (Deming, 1986). This aligns with the goals of international certification, which demands compliance with recognized quality benchmarks.

Moreover, obtaining ISO certification not only signals to clients and stakeholders that a firm is committed to maintaining high standards of quality and safety, but it also opens up access to broader markets, reinforcing the firm's competitiveness in the global construction industry (Juran, 1988). Thus, the integration of ISO standards into the operational framework of construction firms in Baguio City is essential for assessing their readiness for international certification, as it directly impacts their ability to comply with quality requirements and implement best practices in project management and delivery.

the evaluation of the readiness for international certification of construction firms in Baguio City is fundamentally anchored in several key theoretical frameworks and concepts. Institutional Theory highlights the importance of external pressures and norms that drive organizations to conform to established standards, illustrating how construction firms adapt to meet the expectations of certifying bodies. The Resource-Based View emphasizes the critical role of internal resources and capabilities, underscoring that firms equipped with skilled labor, technology, and quality management systems are better positioned for successful certification. Change Management Theory further elucidates the need for organizations to effectively manage transitions and cultivate a culture that embraces continuous improvement.

Additionally, the principles of Quality Management Theory, particularly those articulated by ISO, provide a comprehensive framework for ensuring that construction firms meet global quality standards, thereby enhancing operational efficiency and fostering competitiveness. Together, these theories and concepts not only elucidate the multifaceted nature of readiness for international certification but also underscore the strategic imperative for construction firms in Baguio City to integrate these practices into their operations to thrive in a globalized market.

DISCUSSIONS

The construction industry in the Philippines has witnessed a significant surge in the number of small and medium-sized enterprises (SMEs) in recent years. However, this growth has been accompanied by persistent challenges, including inadequate regulation, lack of qualified personnel, and poor compliance with stipulated standards (Omollo, 2019). Given these factors, the readiness of construction firms in Baguio City to achieve international certification has become a critical area of concern.

Regulatory Framework

The regulatory landscape for the construction industry in the Philippines has been a subject of ongoing debate. While the government has implemented various regulations to ensure quality and safety standards, challenges



such as corruption, bureaucratic red tape, and inconsistent enforcement have hindered their effectiveness (Acosta et al., 2021). In Baguio City, the local government has made efforts to improve the regulatory environment, but the specific impact of these initiatives on the readiness of construction firms for international certification remains unclear.

Availability of Qualified Personnel

The shortage of qualified personnel in the construction industry is a global challenge, and the Philippines is no exception. The lack of skilled workers, particularly in specialized areas like project management, engineering, and construction technology, has limited the industry's capacity to deliver high-quality projects (Cruz & Reyes, 2022). In Baguio City, the availability of qualified personnel may be further constrained by the city's relatively small size and limited educational institutions.

Motivations for International Certification

The motivations of construction firms to pursue international certification vary widely. While some firms may be driven by a desire to improve their reputation and credibility, others may see it as a necessary requirement for securing larger projects or entering international markets. Additionally, certification can provide firms with a competitive advantage by demonstrating their commitment to quality and professionalism (Al-Omari & Al-Khalili, 2018).

Challenges and Opportunities

Construction firms in Baguio City face several challenges in their quest for international certification. These include the high costs associated with certification processes, the need for significant organizational changes, and the potential difficulties in maintaining compliance with certification standards over time. However, the opportunities for growth and development are also substantial. Successful certification can enhance a firm's reputation, improve its access to international markets, and attract more clients.

Case Studies

To gain a deeper understanding of the challenges and opportunities faced by construction firms in Baguio City, it is helpful to examine specific case studies. These case studies can provide valuable insights into the factors that contribute to successful certification and the strategies that firms can adopt to overcome obstacles.

The construction industry in the Philippines has seen rapid growth, particularly among small and medium-sized enterprises (SMEs). This expansion is promising, but it also brings numerous challenges, including inadequate regulation, a shortage of skilled professionals, and inconsistent compliance with quality standards (Omollo, 2019). These issues are particularly pressing in Baguio City, where the readiness of local construction firms to obtain international certification is under scrutiny. As these firms seek to meet global standards, the need for robust frameworks and strategies becomes paramount, setting the stage for both challenges and opportunities in their path toward international recognition.



One of the key factors influencing a firm's readiness for international certification is the regulatory framework that governs the construction industry. Despite efforts by the Philippine government to implement regulations that ensure safety and quality, issues such as corruption, bureaucratic inefficiencies, and weak enforcement persist (Acosta et al., 2021). Baguio City, though making strides to improve local regulatory oversight, still faces obstacles in aligning its construction firms with international standards. Without a strong, consistently applied regulatory framework, firms may struggle to achieve the certification necessary for competing in global markets.

A shortage of qualified personnel also poses a major hurdle. Across the country, and globally, there is a demand for specialized workers in project management, engineering, and construction technology (Cruz & Reyes, 2022). Baguio City, with its limited access to large educational institutions and training programs, faces unique challenges in this regard. Firms must address the gap in skilled labor to meet the high standards required for international certification, while simultaneously tackling the rising costs and internal changes that the certification process demands. However, with proper investment in training and collaboration with educational institutions, these challenges can be turned into opportunities for sustainable growth.

CONCLUSIONS AND RECOMMENDATIONS

The readiness of construction firms in Baguio City for international certification is a complex issue influenced by a variety of factors. While the industry has made progress in recent years, significant challenges remain in terms of regulation, personnel, and motivation. To address these challenges and capitalize on the opportunities presented by international certification, construction firms in Baguio City will need to invest in training and development, adopt effective quality management systems, and actively engage with regulatory authorities. The growing emphasis on sustainable construction practices presents both challenges and opportunities for construction firms in Baguio City. Achieving international certification can demonstrate a firm's commitment to sustainability and enhance its competitiveness in the market. The adoption of digital technologies, such as Building Information Modeling (BIM), can improve efficiency, reduce costs, and enhance the quality of construction projects. Construction firms that embrace digital transformation will be better positioned to meet the requirements of international certification. Collaborating with other stakeholders, including government agencies, educational institutions, and industry associations, can help construction firms address the challenges of international certification and improve their overall performance.

The local government should enhance its regulatory framework by streamlining processes, reducing bureaucratic red tape, and ensuring consistent enforcement of construction standards. Establishing a dedicated task force to oversee compliance can help identify firms needing assistance and provide guidance on meeting international certification requirements. Additionally, regular workshops and seminars on regulatory changes and best practices can empower firms with the knowledge needed to navigate certification processes more effectively.

Construction firms should prioritize investment in training and development for their workforce to address the skills gap. Collaborating with local educational institutions to create specialized training programs in project management, engineering, and construction technology can build a skilled labor pool tailored to industry needs.



Firms can also explore partnerships with international certification bodies to provide their employees with direct training on global standards, enhancing their expertise and boosting the firm's credibility in the process.

Construction firms should form collaborative networks with other businesses, government agencies, and industry associations to share resources and knowledge. Establishing a local construction consortium can facilitate joint training sessions, pooled resources for certification costs, and mentorship programs where experienced firms guide newer entrants. By fostering a collaborative environment, firms can collectively address challenges, enhance their capabilities, and strengthen their competitiveness in pursuing international certification.

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