

# Examining the Barriers to Adaptation of Quality Management Systems in Small to Medium Sized Businesses in Guyana and the Resultant Impact on Performance and Competitiveness

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## Abstract

*This research examined the adaptation of Quality Management Systems and their impact on the performance and competitiveness of Small and medium-sized businesses in Guyana. Small and Medium-sized enterprises are pivotal to the continued development of Guyana's economy. Irrespective of their importance to the economy, however, SMEs in Guyana face many challenges with adopting and implementing Quality Management Systems such as ISO 9001, which are crucial for advancing operational efficiency and market reach. Employing a quantitative, descriptive correlational approach the study found several significant hurdles to the adoption and implementation of Quality Management Systems, including, financial constraints, lack of support, limited awareness of the value of Quality Management Systems, and regulatory obstacles. It was found that these hurdles significantly impact SMEs capacity to perform optimally, which by extension affect their ability to be competitive in the various industries in which they are positioned. Equally, another significant finding from this study is the positive correlation between the implementation of Quality Management Systems, and business outcomes such as operational efficiency, customer service, and competitive performance. These outcomes provide the impetus for actionable recommendations for effective facilitation of Quality Management Systems adaptation in SMEs in Guyana.*

**Keywords:** *Quality Management Systems (QMS), Small and Medium Sized Businesses (SMEs), Sustainable Implementation, The International Organization for Standardization (ISO).*

## Introduction

In a global economy that's becoming increasingly competitive, Small and Medium-sized Enterprises (SMEs) in emerging economies, such as Guyana, are pressured to improve the quality of their operations, including providing products and associated customer service. For SMEs, Quality Management Systems (QMS), such as the International Standards Organization (ISO) 9000 family of standards, are recognized as pivotal for enhancing business processes, customer satisfaction, and market positioning. In Guyana, SMEs make up about 60 per cent of businesses. They operate across multiple sectors, including agriculture, education,

manufacturing, tourism, services, and retail, and even though their direct contributions to the economy are unclear, recent figures show that they contributed significantly to Guyana's '38.4 percent real GDP' in 2023 [24] and are poised to continue this trend in years to come [24]. The observation here is that SMEs in Guyana, like their counterparts in other emerging economies, are pivotal to the country's socio-economic development. However, studies on quality management in Guyanese SMEs remain unexplored. This is a significant gap, considering the rapid pace at which Guyana's economy is developing [24].

Equally, this gap in knowledge poses a significant challenge to understanding the value

of Quality Management Systems to Guyanese SMEs, particularly regarding how it can influence their performance and competitiveness, and the support mechanisms needed for effective adoption and sustainable implementation in Guyana's fast-paced economy. This study proposes to bridge this gap by examining and evaluating the barriers to adopting and implementing Quality Management Systems such as ISO 9001 on their performance and competitiveness.

Understanding the perspectives of the owners of SMEs is crucial. Particularly for those currently using Quality Management Systems (QMS) in their businesses or considering their implementation. Their insights are valuable because they are involved in the process and will be able to provide rich firsthand insights about the inherent challenges and benefits associated with.

Insight from business owners is invaluable because they are intimately involved in the process and can provide a firsthand account of the benefits and challenges associated with adopting Quality Management Systems (QMS).

By quantitative approach [9], this study will measure the correlation between Quality Management Systems certification and business performance while also examining the perceived challenges and benefits experienced by the owners of SMEs.

## **Literature Review**

### **Quality Management in Small and Medium Size Enterprises**

Quality Management Systems (QMS) are recognized globally as standards that derive continuous improvement efforts in organizations. When organizations, such as small and medium-sized businesses, adopt QMS in meaningful, sustainable ways, they are likely to experience significant improvements in organizational performance, including customer satisfaction and market reach. This

ensures a crucial competitive advantage in the industries in which they are located [19].

Irrespective of these potential benefits, there are substantial challenges regarding the practical adaptation of quality management systems in small and medium-sized businesses, particularly in developing countries such as Guyana. Tam and Gray [20] noted that small and medium-sized enterprises are often limited by many challenges due to stringent resource demands, including a lack of capital investments, expertise, and training for setting up and maintaining a QMS. Equally, these challenges extend to maintaining the certification status quo after they are issued, and this often leads to a gap between the benefits delineated in the literature and the practical benefits that could be derived from implementation [16]. These challenges are made even more complex because they are enshrined within QMS standards such as ISO 9001, which are often inflexible to the structure, operations, and needs of SMEs [13].

The other side of this argument, however, is that the structured QMS standardized process provides a framework that ensures a high level of consistency in application across organizations, thereby enhancing organizational performance across several areas, including internal and external communications, transparency in operations, and trust [18].

For SMEs, adopting robust Quality Management Systems is about implementing and aligning the Quality Management System processes with the organizational culture and capabilities. The stringent requirements set out by QMS standards may need to be adjusted to fit SMEs' smaller scale and specific needs [22]. Indeed, recent studies have called for a more tailored approach to QMS in SMEs, suggesting that adopting these systems could mitigate the challenges and enhance the benefits [3].

Concerning SMEs in Guyana, these challenges are compounded by the unique economic and business culture environments.

Therefore, the practical adaptation of Quality Management Systems in this context would require significant efforts at national and regional levels to support SMEs through this process.

Overall, while the adaptation and implementation of QMS frameworks has significant value for SMEs, the discussion presented in this section underscores the need for these frameworks to be responsive to the environments in which SMEs operate and the challenges they face. Therefore, if SMEs in developing countries such as Guyana are encouraged to adopt and implement QMS fully, the frameworks must be redesigned to accommodate the flexible nature of these businesses [19].

### **Challenges to the Adoption and Implementation of QMS in SMEs**

While the literature points to several beneficial aspects of Quality Management Systems for SMEs, it also highlights significant challenges to adapting and implementing them. The most persistent challenges include financial constraints, lack of expertise, cultural resistance, and regulatory challenges [16].

Financial constraints are among the most significant barriers to adopting and implementing quality management systems in small- to medium-sized enterprises. This includes consultation fees, the cost associated with implementation, and the ongoing expenses related to ongoing training, monitoring, and maintenance, which are significant challenges for businesses operating on a limited budget. The impact of these financial constraints has been observed in emerging economies, such as Guyana, where SMEs have limited access to funding. Equally, many SMEs lack the personnel with relevant expertise and training related to implementing and managing QMS [4]. This lack of in-house expertise is also attributed to SMEs' inability to retain qualified persons who can navigate the complexities of QMS [11].

Organizational culture is another significant challenge that adds to the complexity of SMEs' adoption and implementation of QMS. As observed in these businesses in Guyana, organizational culture in SMEs is often characterized by flexibility and informality. This business culture may align differently with the more formal nature of Quality Management Systems [1]. Equally, as with the implementation of any organizational initiative, there is always the need to navigate the complexities associated with resistance to such change initiative. Appropriate interventions must be designed and implemented to overcome this cultural barrier. Finally, the regulatory frameworks in many emerging economies need to be more conducive to adapting Quality Management Systems [12]. More specifically, Guyana's regulatory framework to support SMEs adopting specific QMS frameworks is slowly evolving. In a broader context, however, several studies have highlighted the extent to which regulatory challenges have prevented SMEs from pursuing QMS due to their perceived complexity and burden.

### **Impact of QMS on SMEs' Performance and Competitiveness**

Research has established that adopting and implementing QMS in SMEs correlates to enhanced performance and competitiveness [5]. These positive correlations include quality improvements, innovation and continuous improvement, and market reach. Regarding investments, the literature points to a positive correlation between QMS certification and improved quality performance in SMEs. Research conducted by several researchers reports that manufacturing firms that employ QMS, such as ISO 9001, have fewer defects and lower levels of waste in their operations [15].

Another significant impact of QMS certifications is that they provide the impetus for access to local and international markets [5].

This is because QMS certifications are seen by crucial stakeholders such as partners and customers as an assurance and validation of the quality of a business's operations and, by extension, the products and services it produces and sells [5]. For SMEs operating in Guyana, QMS certification serves as a catalyst to compete at both global and international levels, thereby diversifying their customer bases and taking advantage of the economic growth in the economy.

Improving SMEs' capacities for continuous improvements and innovation is also recognized as another important outcome of implementing Quality Management Systems [11]. Quality Management Systems, when employed with intentionality, facilitate continuous organizational learning and development [21]. Therefore, the adaptation and implementation of Quality Management Systems provide the platform for SMEs to position themselves better to navigate the changing internal and external business dynamics.

In summary, the multi-faceted nature of QMS and SMEs' organizational performance and market reach is well documented in the literature. These studies suggest that irrespective of the inherent challenges, SMEs, especially those operating in developing countries such as Guyana, are better positioned to reap long-term benefits when they adopt and implement Quality Management Systems with clear intentionality.

## **Methodology**

This study examined the barriers to adapting quality management systems in small- to medium-sized (SME) enterprises in Guyana and the impact of these on performance and competitiveness. A descriptive correlational research design [9] was employed. Descriptive correlational research is associated with quantitative study that aims to document and describe a phenomenon in tandem with exploring the relationship between quantitative

variables related to that phenomenon [9]. In this regard, the research design aligns with the positivist paradigm, which dictates that the knowledge is concrete and objective [9].

Therefore, the researcher must be neutral when interpreting data [9]. Overall, a quantitative research design was used to discuss objectively small and medium-sized enterprise owners' perspectives and to explain the correlative relationship between the implementation of Quality Management Systems and business success through the collection and analysis of quantitative data drawn from a sample [23] of persons who are owners of small- to medium-sized businesses in Georgetown, Guyana.

The following objectives guided the research:

1. Explore the perspectives of small and medium-sized business owners through interviews to gather and understand their insights about the specific barriers to adaptation and sustainable implementation of Quality Management Systems.
2. Examine the impact of identified barriers on the competitiveness and performance of Guyana's small- and medium-sized businesses.
3. Propose actionable strategic recommendations for promoting and accelerating the adoption and effective implementation of quality management systems in Guyana's small- and medium-sized businesses.

To achieve these objectives, the following research questions were formulated:

1. What are the perceived barriers to the adaptation and sustainable implementation of Quality Management Systems in SMEs in Guyana?
2. To what extent do the barriers to adaptation and sustainable implementation of Quality Management Systems in SMEs in Guyana impact the performance of small- and medium-sized businesses in Guyana?

3. To what extent do the barriers to adaptation and sustainable implementation of Quality Management Systems in SMEs in Guyana impact the competitiveness of small- and medium-sized businesses in Guyana?
4. Is there a correlation between quality management system implementation and the operational performance and competitiveness of small- and medium-sized businesses in Guyana?
5. How can adopting and implementing Quality Management Systems be effectively implemented and sustained in Guyana's small- and medium-sized businesses?

The population for this study included the owners of small and medium-sized businesses in Georgetown, Guyana, operating across the major economic sectors, including manufacturing, agriculture, tourism, healthcare, and oil and gas. The enterprises in these sectors were identified using the Guyana Manufacturer's Association membership directory. The Guyana Manufacturers Association membership directory was used to target the businesses for this study because it has the most representative list of registered SMEs in Guyana. At the time this research was conducted, one hundred and three businesses located in Georgetown were registered with the Guyana Manufacturers' Association.

Focusing on SMEs located in Georgetown was strategic because of their economic significance to Guyana's economy and the diversity of businesses representing various sectors located in the capital city. These characteristics allowed for data collection from a diverse range of SMEs, thereby making the findings from this study more generalizable. Equally, a focus on the owners of SMEs provided the opportunity to collect data directly from the key decision-makers in these SMEs, thereby ensuring that the insights gathered are relevant and applicable to the challenges faced in the adaptation and implementation of Quality Management Systems. By concentrating on

SME owners, the research directly targeted the decision-makers within these businesses, ensuring that the insights gained were relevant and applicable to the challenges they face concerning the adaptation and implementation of robust Quality Management Systems.

This approach to identifying the population aligns with researchers such as Creswell and Plano Clark, who assert that focusing research on a business sector within a well-identified geographic location enhances the validity of descriptive correlational studies because similar external factors influence the variables related to the study. This allows for meaningful identification of clear observable patterns and relationships in the data. As a result, the findings are more inferential to the study population.

For this study, the data analysis included a robust and systematic examination of the data collected from participants, thereby deriving insights to make inferences, conclusions, and recommendations. The data analysis approach included both descriptive and inferential statistics. The data collected from Survey Monkey was stored in a Microsoft Excel file and then exported to SPSS for descriptive and inferential analysis.

The initial phase of analysis employed descriptive statistics. The study summarized the data, including measures such as frequencies, mean, median, mode, and standard deviation analyses. The outcomes from these analyses provided an overview of the variabilities within the data while providing a preliminary understanding of trends and patterns in the responses garnered from participants [23].

## Results

A summary of the results from this study are from a 25-item Likert-scale questionnaire focused specifically on SMEs operating in the capital city, Georgetown, but the results are representative and can be generalized to SMEs across Guyana. As a result, indicating a national consensus amongst SMEs regarding the

adoption of Quality Management Systems. The findings are categorized as follows:

- 1. Financial and Knowledge Barriers:** Financial constraints and limited staff knowledge are significant barriers to QMS adoption among SMEs. About 16% of respondents strongly agree, and 46% agree that financial constraints hinder QMS adoption, while 30% strongly agree and 52% agree on the lack of QMS knowledge [25]. Addressing these would require enhanced financial planning and staff training, along with fostering a knowledge-sharing culture [10].
- 2. Support and Culture:** External support and internal culture alignment with QMS are additional challenges. A lack of guidance from government and industry associations was an issue for 42% of respondents, while 44% agreed on the need for cultural alignment [26]. Addressing this requires more engaged support from external bodies and internal cultural adjustments [7].
- 3. Operational Impact:** QMS challenges adversely affect operational efficiency, innovation, quality competitiveness, and market share. A significant portion of respondents highlighted operational inefficiencies, limited innovation, and competitiveness issues due to QMS difficulties [16].
- 4. Cost and Customer Satisfaction:** Increased costs and decreased customer satisfaction were linked to QMS barriers, with 64% agreeing on increased operational costs and 34% agreeing that customer satisfaction was negatively impacted by these barriers [14].
- 5. Competitive Edge:** There's a strong consensus (50% strongly agree, 38% agree) that effective QMS implementation is essential for a competitive edge. QMS is seen as pivotal for quality assurance and customer satisfaction, providing a significant market advantage [2].

- 6. Leadership and Training:** Strong leadership and regular training are critical for successful QMS implementation, with 90% of respondents agreeing on leadership importance and 55% on training necessity [8].

- 7. Resources and Continuous Improvement:** Adequate financial and human resources, along with continuous process improvement, are seen as crucial for successful QMS adoption [8].

- 8. The Role of Government:** Incentives and external consultancy are essential for QMS adoption, with 40% agreeing on the significance of government support. This suggests a need for policymakers and consultants to provide targeted support to SMEs [14].

These findings highlight the need for a multifaceted approach to address the financial, knowledge, cultural, and resource-based challenges in QMS implementation across SMEs in Guyana.

The data revealed that financial constraints and lack of QMS knowledge are major barriers to QMS adoption among SMEs in Guyana. With 16% strongly agreeing and 46% agreeing on financial challenges, and 30% strongly agreeing and 52% agreeing on knowledge limitations, it is clear that many SMEs face prohibitive costs and lack essential expertise for QMS implementation. These barriers limit SMEs' growth potential and competitiveness, indicating a need for targeted support mechanisms, such as grants or subsidies, and enhanced training initiatives [6]. From a policy perspective, fostering an enabling environment, including external support and collaboration among SMEs, could mitigate these challenges. The involvement of international organizations and NGOs could also provide necessary technical assistance and capacity building. Equally, barriers to QMS are affecting SME operational performance, with 64% of respondents agreeing that adopting QMS increases operational costs and 34% noting a

negative impact on customer satisfaction. These issues emphasize the financial strain on SMEs and how inadequate QMS affects product or service quality, impacting customer satisfaction and overall business performance.

## Discussion

The barriers in QMS adoption also hinder competitiveness, with 40% agreeing and 10% strongly agreeing that QMS challenges make it hard to compete on quality. Additionally, market share loss (34% agreed, 10% strongly agreed) and entry barriers to new markets highlight external impacts of internal QMS issues, limiting SMEs' market reach and competitiveness. Addressing these barriers could enable SMEs to improve their competitive position, quality standards, and market reputation. There is also strong link between effective QMS and operational performance was noted, with 50% strongly agreeing and 38% agreeing that QMS is essential for a competitive edge. The data indicate that well-implemented QMS enhances operational efficiency and customer satisfaction, positioning businesses favorably in the market. This underlines the importance of leadership commitment, training, and adequate resources for successful QMS adoption. To sustain QMS, addressing financial and knowledge barriers is essential. Financial support and government incentives are key, as 40% agreed and 35% strongly agreed on the need for these. Regular training (55% strongly agreed) and leadership commitment (90% agreement) are crucial to embedding QMS within SMEs. Continuous improvement processes are also vital, as indicated by 90% of respondents, for adapting QMS to evolving market demands.

Overall, the findings highlight a strong appreciation within the SME sector for QMS's role in performance and competitiveness but underscore the need for a supportive ecosystem with financial support, educational resources, leadership commitment, and policy

interventions. Establishing this foundation would help Guyanese SMEs overcome barriers to QMS and leverage it as a tool for growth and market resilience.

## Implications

There are several implications to be derived from this study. First, for SME owners and their representatives, the study shed light on the critical importance of adopting robust Quality Management Systems for improving the efficacy of their businesses. They can draw insights from this study to make quality management a strategic priority, thereby instituting the practice as part of their organizational cultures.

Second by identifying the barriers to effective adaptation and implementation of Quality Management Systems this research provide clarification on the specific barriers SME are likely to face and the strategies they can adopt to mitigate or overcome those barriers, thereby, facilitating easier implementation.

Third, the findings can inform the development of policies and programs, for example, training and financial support, to address current and future barriers to Quality Management Systems adaptation and implementation. It also provides the impetus for further studies, curriculum considerations at institutions of higher learning, and the advancement of a culture of quality in SMEs, thereby strengthening the business sector in Guyana through stronger competitive advantage, and potential for access to new domestic and international markets.

Overall, the implication of this study extends beyond the immediate findings. And offers a pathway to promoting and improving quality management practices in Guyanese SMEs and can also extend to quality management practices of larger businesses.

## Conclusion

This study examined perspectives of owners of SMEs in Guyana regarding the challenges the face with respect to the adaptation and implementation of Quality Management Systems in their businesses. Through a quantitative – descriptive correlational approach, specific barriers to Quality Management Systems were identified and analysed, underscoring the critical importance of Quality Management Systems to the performance and competitive postures of SMEs, and the need for targeted strategies to support SMEs to overcome the identified challenges. Equally, the positive correlation between the implementation of Quality Management Systems, and the success of SMEs provides incentives for the adaptation and implementation of sustainable quality management.

Finally, the recommendations outlined in this study provide practical guidelines for SME owners, policy makers, and other relevant stakeholders to facilitate an environment which

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is conducive to the implementation of Quality Management Systems.

Overall, this study makes a significant contribution the academic and discourse on quality management, within the context of SMEs, and other businesses operating in the various economic sectors across Guyana. The study posits that quality management is not a one-off engagement, its continuous, and as a result there is the need for extended research beyond this study to explore key areas conducive to promoting quality management practices in organizations.

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## Conflict of Interest

The author has no conflict of interest with regard to the research, and publishing of this article.

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