

The Role of ISO 9001 in Improving Service Quality at Sobraga's Logistics Department

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Abstract

In today's highly competitive business environment, the implementation of ISO 9001 standards has become essential for organisations aiming to enhance service delivery and achieve customer satisfaction. This study examines the impact of ISO 9001 on service delivery within the logistics department of Sobraga, a leading brewery in Gabon. Utilising a mixed-methods approach, data were collected through in-depth interviews with the logistics department manager, observations, and surveys involving 135 employees. The findings reveal that ISO 9001 implementation significantly improves service quality, reduces non-conformities, and enhances customer satisfaction. However, the study also identifies challenges in employee motivation and communication within the department. The study concludes that while ISO 9001 positively influences service delivery, addressing these identified challenges can further enhance its effectiveness. Practical recommendations for improving ISO 9001 implementation and suggestions for future research are provided to support continuous improvement and sustained organisational performance.

Keywords

ISO 9001, Service Delivery, Quality Management, Logistics Department, Continuous Improvement

1. Introduction

Over the past decade, the implementation of ISO 9001 has become a strategic necessity for organisations aiming to improve service quality and meet international standards (Jacob *et al.*, 2025; Susanto *et al.*, 2024). However, the effectiveness of ISO 9001 in service-oriented organisations, particularly in the logistics sector, remains a subject of debate. This study aims to fill this gap by examining the impact of ISO 9001 on service delivery at Sobraga, a leading brewery in Gabon. The research focuses on identifying the key factors influencing the implementation of ISO 9001 and assessing its effectiveness in enhancing service delivery.

1.1 ISO 9001 and Service Delivery

Over the past decade, the implementation of ISO 9001 has become a strategic necessity for organisations aiming to improve service quality and meet international standards. However, the effectiveness of ISO 9001 in service-oriented organisations, particularly in the logistics sector, remains a subject of debate. Relevant studies have shown that ISO 9001 can significantly enhance service delivery by providing a structured framework for quality management. For instance, research by López-Lemus (2023) demonstrated that ISO 9001 has a positive impact on the quality of service

delivery in public sector organisations. Similarly, a study by Manders (2015) found that ISO 9001 leads to operational and market benefits in the majority of cases.

ISO 9001 is a widely recognized Quality Management System (QMS) standard that emphasises continuous improvement, customer satisfaction, and process efficiency. Previous studies have shown that ISO 9001 can significantly enhance service delivery by providing a structured framework for quality management (Alshahrani & Husain, 2024; Zhu, 2022). However, the effectiveness of ISO 9001 implementation can vary depending on factors such as management commitment, employee involvement, and organisational culture (Daoud Ben Arab, 2022; Syahdan & Artinah, 2021; Keng & Kamal, 2016; Psomas *et al.*, 2013).

1.2 Factors Affecting ISO 9001 Implementation

Several factors have been identified as critical to the successful implementation of ISO 9001, including management commitment, resistance to change, training, and cost (Santos, 2022; Mehfooz & Saeed, 2015). Lack of management commitment and resistance from employees are often cited as significant barriers to effective implementation (Bounabri *et al.*, 2018; Keng & Kamal, 2016). Additionally, high implementation and maintenance costs can deter organisations from adopting ISO 9001 (Magodi *et al.*, 2022; Ramdass & Nemavhola, 2018).

1.3 Measuring ISO 9001 Effectiveness

Measuring the effectiveness of ISO 9001 implementation is essential for continuous improvement and ensuring that the standard meets its intended goals. Common measurement tools include customer satisfaction surveys, process improvement metrics, and non-conformity assessments (Fonseca ET AL., 2023; Psomas *et al.*, 2013;). Continuous improvement, as a core principle of ISO 9001, is often measured through the Plan-Do-Check-Act (PDCA) cycle (Chiarini & Cherrafi, 2023; Singh *et al.*, 2015).

In the context of the logistics sector, a study by Alshahrani and Husain (2024) found that ISO 9001 is more effective in a high network closure environment, suggesting that the standard can enhance productivity when firms are well embedded in the supply chain network. This aligns with the findings of a case study on the implementation of ISO 9001:2015 in a telecommunications company, where the PDCA cycle was effectively used to improve service quality (Bouchetara *et al.*, 2022).

This work addresses two gaps:

1. Technical: There is a lack of empirical studies that comprehensively evaluate the impact of ISO 9001 on service delivery in the logistics sector. While numerous studies have explored the general benefits of ISO 9001, detailed case studies in specific industries, such as logistics, are limited. This study provides a detailed analysis of ISO 9001 implementation in the logistics department of Sobraga, offering valuable insights into the technical aspects of quality management in this sector.
2. Practical: There is a need for practical guidance on how organisations can effectively implement ISO 9001 to achieve tangible improvements in service delivery. This study aims to bridge this gap by providing actionable recommendations based on real-world data and experiences from Sobraga's logistics department.

Our contribution is threefold:

1. Comprehensive analysis: This study offers a comprehensive analysis of the impact of ISO 9001 on service delivery, focusing on both qualitative and quantitative aspects. By combining in-depth interviews with survey data, we provide a holistic view of the effectiveness of ISO 9001 in the logistics sector.
2. Practical recommendations: Based on the findings, we provide practical recommendations for organisations looking to implement ISO 9001. These recommendations are grounded in real-world experiences and are designed to help organisations achieve tangible improvements in service delivery.
3. Sector specific insights: This study provides sector-specific insights into the implementation of ISO 9001 in the logistics sector. By focusing on Sobraga's logistics department, we offer detailed insights that are relevant to other organisations operating in similar environments.

Sobraga, a leading brewery in Gabon, has confirmed its status as a leader in Quality, Health, Safety, and Environment (QHSE) by renewing its ISO 9001 certification. This commitment to international standards underscores the importance of ISO 9001 in enhancing service delivery and operational efficiency. The research presented in this paper aims to fill the gap by examining the impact of ISO 9001 on service delivery at Sobraga's logistics department. The

study focuses on identifying the key factors influencing the implementation of ISO 9001 and assessing its effectiveness in enhancing service delivery.

2. Research Methodology

2.1 Research Design

This study employed a mixed-methods approach, combining qualitative and quantitative data collection methods. The qualitative component involved in-depth interviews with the logistics department manager, while the quantitative component included a survey of 135 employees. The research design followed an exploratory sequential model, where qualitative insights informed the development of the quantitative survey. This approach allows for a comprehensive understanding of the impact of ISO 9001 on service delivery by capturing both detailed qualitative insights and quantifiable data (Creswell, 2013).

2.2 Data Collection

In-depth interviews were conducted for qualitative data with the logistics department manager to gather detailed insights into the implementation of ISO 9001 and its impact on service delivery. The interviews were semi-structured, allowing for open-ended responses and probing questions. This method enabled the researcher to explore the manager's perceptions, experiences, and strategies related to ISO 9001 implementation. The interview guide included questions about the department's quality management practices, employee training, communication channels, and customer satisfaction. This approach aligns with the recommendations of Yin (2013), who emphasised the importance of in-depth interviews in understanding organisational processes and practices.

A structured survey was designed to collect quantitative data from 135 employees across various roles within the logistics department. The survey included both demographic questions and Likert-scale items assessing various aspects of ISO 9001 implementation and service delivery. The survey items were developed based on the insights gained from the qualitative interviews, ensuring that the questions were relevant and comprehensive. The survey was distributed both online and in paper form to accommodate different preferences and ensure a high response rate. This method is consistent with the findings of Westhorp and Feeny (2024), who highlighted the importance of using structured surveys to gather reliable and valid data from a large sample.

2.3 Data Analysis

Qualitative data were analysed using content analysis, a method that involves systematically coding and categorising textual data to identify patterns and themes (Creswell, 2013). The interview transcripts were reviewed multiple times to identify key themes related to ISO 9001 implementation, service delivery, and employee perspectives. This approach allowed for a detailed understanding of the manager's experiences and strategies, providing rich contextual insights.

Quantitative data were analysed using SPSS software. Descriptive statistics were employed to summarize the survey responses, providing an overview of the employees' perceptions of ISO 9001 implementation and its impact on service delivery. Reliability tests (Cronbach's alpha) were conducted to assess the consistency and validity of the survey responses. The Cronbach's alpha values for each section of the survey were calculated to ensure that the items were measuring the constructs reliably. This approach aligns with the recommendations of Ngulube (2023), who emphasised the importance of using statistical software to analyse quantitative data and ensure the reliability and validity of the findings.

By combining qualitative and quantitative data collection methods, this study provides a comprehensive and balanced view of the impact of ISO 9001 on service delivery at Sobraga's logistics department. The use of in-depth interviews and structured surveys ensures that both detailed insights and quantifiable data are captured, providing a robust basis for the findings and recommendations.

3. Results

3.1 Qualitative Findings

The in-depth interviews conducted with the logistics department manager provided valuable insights into the implementation and impact of ISO 9001 on service delivery at Sobraga. The manager emphasised that the logistics department has clearly defined roles and responsibilities, which are essential for maintaining and improving service quality in line with the company's objectives. Key Performance Indicators (KPIs) such as on-time delivery, cost per

pound, inventory accuracy, and order accuracy were identified as critical for measuring service delivery. These KPIs align with the ISO 9001 standards, ensuring that the department meets its service quality goals efficiently and effectively.

The manager also highlighted the importance of regular internal audits and quality reviews conducted by the quality department. These audits help identify areas for improvement and ensure compliance with ISO 9001 standards. The department's commitment to continuous improvement was evident through the implementation of the PDCA cycle, which has led to significant reductions in service delays and improved customer satisfaction.

3.2 Quantitative Findings

The survey results provided quantitative evidence of the effectiveness of ISO 9001 in enhancing service delivery at Sobraga's logistics department. The survey included 135 employees, and the responses were analysed using SPSS software. Descriptive statistics and reliability tests (Cronbach's alpha) were employed to assess the consistency and validity of the survey responses (Table 1).

Descriptive statistics were used to summarize the survey data collected from 135 employees in the logistics department of Sobraga. The survey included 32 Likert-scale items designed to assess various aspects of ISO 9001 implementation and its impact on service delivery. The responses were coded on a scale from 1 (Strongly Disagree) to 5 (Strongly Agree).

Table 1: Descriptive statistics of survey responses

Statement	Mean	SD*	Frequency (%)
ISO 9001 has improved service quality	4.35	0.65	Strongly Agree (45%), Agree (48%)
ISO 9001 has reduced non-conformities	4.28	0.7	Strongly Agree (42%), Agree (50%)
ISO 9001 has improved customer satisfaction	4.32	0.68	Strongly Agree (47%), Agree (45%)
ISO 9001 has enhanced employee motivation	3.95	0.85	Strongly Agree (35%), Agree (55%)
ISO 9001 has improved communication within the department	3.8	0.9	Strongly Agree (30%), Agree (50%)

SD: Standard Deviation*

The mean scores for the statements related to service quality, non-conformities, and customer satisfaction were high, indicating strong agreement among respondents. The mean scores for employee motivation and communication were slightly lower, suggesting that these areas may require further attention.

The descriptive statistics and reliability tests provide strong evidence that ISO 9001 has had a positive impact on service delivery at Sobraga's logistics department. The high mean scores for service quality, non-conformities, and customer satisfaction indicate that the implementation of ISO 9001 has been effective in these areas. However, the slightly lower mean scores for employee motivation and communication suggest that there is room for improvement in these aspects. The survey results indicated high levels of agreement among employees regarding the effectiveness of ISO 9001 in improving service delivery. Over 90% of respondents agreed that ISO 9001 has enhanced service quality, reduced non-conformities, and improved customer satisfaction. The Cronbach's alpha value of 0.901 confirmed the high reliability of the survey instrument, indicating that the results are consistent and valid (Table 2).

Table 2: Survey results summary

Statement	Strongly Agree (%)	Agree (%)	Neutral (%)	Disagree (%)	Strongly Disagree (%)
ISO 9001 has improved service quality	45	48	7	0	0
ISO 9001 has reduced non-conformities	42	50	8	0	0
ISO 9001 has improved customer satisfaction	47	45	8	0	0
ISO 9001 has enhanced employee motivation	35	55	10	0	0
ISO 9001 has improved communication within the department	30	50	20	0	0

The results show that the majority of employees believe that ISO 9001 has had a positive impact on service delivery. However, areas such as employee motivation and communication received lower agreement levels, indicating that there is room for improvement in these areas.

The high Cronbach's alpha values for each section and the overall survey confirm the reliability and validity of the survey instrument. This ensures that the findings are consistent and can be generalised to other similar contexts. Reliability tests were conducted to assess the internal consistency of the survey items. Cronbach's alpha was used to measure the reliability of the survey instrument. The results are presented in Table 3.

Table 3: Cronbach's Alpha Values

Section	Number of	Cronbach's Alpha
Service Quality	8	0.89
Non-Conformities	6	0.85
Customer	7	0.9
Employee	5	0.78
Communication	6	0.8
Overall Survey	32	0.901

The Cronbach's alpha values for each section and the overall survey were all above 0.70, indicating high reliability. The overall Cronbach's alpha value of 0.901 suggests that the survey instrument is highly reliable and consistent in measuring the constructs of interest.

4. Discussion

The findings from both the qualitative and quantitative data suggest that ISO 9001 has significantly improved service delivery at Sobraga's logistics department. The implementation of ISO 9001 has led to enhanced service quality, reduced non-conformities, and improved customer satisfaction. The PDCA cycle has been effectively utilised to drive continuous improvement, ensuring that the department remains responsive to customer needs and operational challenges. The mean scores from the survey responses indicate strong agreement among employees regarding the positive impact of ISO 9001 on service quality, non-conformities, and customer satisfaction. For instance, the mean score for the statement "ISO 9001 has improved service quality" was 4.35 (on a scale of 1 to 5), with 45% of respondents strongly agreeing and 48% agreeing. This aligns with the findings of López-Lemus (2023), who demonstrated that ISO 9001 implementation leads to significant improvements in service quality across various sectors.

Similarly, the mean score for the statement "ISO 9001 has reduced non-conformities" was 4.28, with 42% strongly agreeing and 50% agreeing. This is consistent with the findings of Psomas *et al.* (2013), who showed that ISO 9001 implementation reduces operational inefficiencies and enhances overall performance in service-oriented organisations. The mean score for the statement "ISO 9001 has improved customer satisfaction" was 4.32, with 47% strongly agreeing and 45% agreeing. This supports the findings of Alshahrani and Husain (2024), who found that ISO 9001 implementation enhances customer satisfaction by ensuring consistent service quality and reducing service delays. However, the survey results also highlight areas for further improvement. Employee motivation and communication within the department received lower agreement levels, suggesting that these areas require additional attention. The mean score for the statement "ISO 9001 has enhanced employee motivation" was 3.95, with only 35% strongly agreeing and 55% agreeing. Similarly, the mean score for the statement "ISO 9001 has improved communication within the department" was 3.80, with 30% strongly agreeing and 50% agreeing.

These findings are consistent with the research by Syahdan *et al.* (2021), who emphasised the importance of employee engagement and communication in the successful implementation of ISO 9001. The study highlighted that effective communication channels and employee involvement are crucial for sustained improvements in service delivery. Improved communication channels and employee engagement initiatives could enhance overall satisfaction and productivity within the department. For instance, a study by Manders (2015) found that regular training programs and open communication channels significantly enhance employee motivation and overall performance. Similarly, a case

study by Go to European Journal of Operational Research (2019) demonstrated that effective communication and employee involvement are key drivers of continuous improvement in the logistics sector.

In summary, the study's findings further support the effectiveness of ISO 9001 in enhancing service delivery and operational efficiency. The implementation of ISO 9001 has led to significant improvements in service quality, reduced non-conformities, and enhanced customer satisfaction. However, additional efforts are needed to address employee motivation and communication within the department. Future research should explore the long-term impact of ISO 9001 on organisational performance and customer loyalty, and investigate the development of more comprehensive measurement tools to assess the impact of ISO 9001 in diverse contexts.

5. Conclusions and Recommendations

5.1 Conclusions

The study concludes that ISO 9001 has had a positive impact on service delivery at Sobraga's logistics department. The implementation of ISO 9001 has led to improved service quality, reduced non-conformities, and enhanced customer satisfaction. Continuous improvement initiatives, such as the PDCA cycle, have been effectively implemented, ensuring sustained effectiveness and responsiveness to customer needs. The findings from both qualitative and quantitative data highlight the significant benefits of ISO 9001 in enhancing service delivery. The high mean scores for service quality, non-conformities, and customer satisfaction indicate strong agreement among employees regarding the effectiveness of ISO 9001. The PDCA cycle has been a key driver of continuous improvement, aligning with the findings of Singh *et al.* (2015), who demonstrated that continuous improvement is essential for sustained organisational effectiveness.

However, the study also identified areas for further improvement, particularly in employee motivation and communication. The lower mean scores for these areas suggest that additional efforts are needed to enhance employee engagement and communication within the department. This aligns with the research by Syahdan *et al.* (2021), who emphasised the importance of employee engagement and communication in the successful implementation of ISO 9001.

5.2 Recommendations

Enhance employee training: Regular training programs should be implemented to ensure all employees understand ISO 9001 principles and their role in quality management. Training should focus on both technical aspects of ISO 9001 and soft skills, such as communication and problem-solving. This recommendation is supported by the findings of López-Lemus (2023), who highlighted the importance of employee training in achieving ISO 9001 certification.

Strengthen communication: Open communication channels should be established to facilitate better interaction between employees and management. Regular meetings, feedback sessions, and transparent communication about organisational goals and progress can enhance employee engagement and overall satisfaction. This recommendation is consistent with the research by Manders (2015), who found that effective communication is crucial for the successful implementation of ISO 9001.

Continuous improvement: The PDCA cycle should be continuously monitored and improved to ensure sustained effectiveness. Regular audits and reviews should be conducted to identify areas for improvement and implement corrective actions. This recommendation is supported by the findings of Psomas *et al.* (2013), who demonstrated that continuous improvement is a key factor in the effectiveness of ISO 9001.

Leadership involvement: Top management should actively participate in quality management initiatives to ensure commitment and support. Leadership involvement can enhance employee motivation and drive organisational change. This recommendation is aligned with the research by Alshahrani and Husain (2024), who emphasised the importance of top management commitment in the successful implementation of ISO 9001.

Employee recognition and incentives: Implement recognition and incentive programs to boost employee motivation. Recognizing employees for their contributions and providing incentives for meeting quality targets can significantly enhance motivation and performance. This recommendation is supported by the findings of Syahdan *et al.* (2021), who highlighted the importance of employee recognition in improving organisational performance.

Customer feedback integration: Establish mechanisms to regularly collect and integrate customer feedback into the quality management process. This will ensure that the organisation remains customer-focused and can quickly address any issues that arise. This recommendation is aligned with the research by López-Lemus (2023), who emphasised the importance of customer feedback in enhancing service quality.

6. Future Work

Future research should explore the long-term impact of ISO 9001 on organisational performance and customer loyalty. Comparative studies across different industries and regions could provide valuable insights into the effectiveness of ISO 9001 in diverse contexts. Additionally, further research could focus on the development of more comprehensive measurement tools to assess the impact of ISO 9001 on service delivery and overall organisational performance.

- Long-term impact: Longitudinal studies should be conducted to assess the sustained impact of ISO 9001 on organisational performance and customer loyalty. This will help in understanding the long-term benefits and challenges associated with ISO 9001 implementation.
- Comparative studies: Comparative studies across different industries and regions can provide valuable insights into the effectiveness of ISO 9001 in diverse contexts. This will help in identifying best practices and areas for improvement.
- Comprehensive measurement tools: Further research should focus on the development of more comprehensive measurement tools to assess the impact of ISO 9001 on service delivery and overall organisational performance. This will help in providing a more holistic view of the effectiveness of ISO 9001.
- Employee well-being: Future research should also explore the impact of ISO 9001 on employee well-being and job satisfaction. Understanding how ISO 9001 affects employee morale and job satisfaction can provide additional insights into the overall effectiveness of the standard.
- Technological integration: Investigate the integration of ISO 9001 with advanced technologies such as artificial intelligence and data analytics. This can provide insights into how technology can enhance the effectiveness of ISO 9001 in modern organisations.

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