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ISO 9001: A Driver of Managerial Transformation or a Compliance Instrument? A Study of the First ISO Certification in Algeria.

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Abstract :

This study aims to explore how ISO 9001 certification has been appropriated within ENIEM and to understand its perceived influence on managerial practices and organizational performance over time. Based on a qualitative study (interviews, observations, document analysis), it highlights an advanced formalization of the quality system. However, this transformation remains essentially formal, without any real change in practices. Leadership appears limited to a logic of compliance, and human resource management remains largely ineffective. The results show a decline in

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performance, marked by an increase in complaints and a decrease in production. The study thus reveals a disconnect between normative requirements and actual practices. It concludes that the effectiveness of certification depends on the actual conditions of organizational adoption.

Keywords: ISO 9001 certification; Organizational performance; Formal adoption.

JEL classification codes: L15; L32; D23

1. INTRODUCTION

Quality has emerged in recent years as a key driver of competitiveness. This is driven by increased competition, market liberalization, and rising customer demands. Simultaneously, international standards, such as ISO 9001, have proposed quality-based management models to improve process control and enhance organizational performance. Within this normative framework, quality is no longer limited to a technical function focused on product control, but is now integrated into a comprehensive management approach involving all activities and stakeholders within the organization. However, the practical implementation of management principles remains a subject of considerable debate, particularly when implemented formally.

In the Algerian context, this issue is of particular importance. Public enterprises, characterized by centralized structures and bureaucratic processes, are now being called upon to improve their managerial efficiency to adapt to international quality standards. However, several studies suggest that ISO 9001 certification is often adopted more for compliance and institutional legitimation than for genuine transformation of management practices (Boiral, 2020; Heras-Saizarbitoria & Boiral, 2019; Fonseca et al., 2021). This issue is particularly pronounced in public enterprises, where factors such as centralization, silos, and limited autonomy can hinder the effective adoption of the management principles (Boyne, 2002; Andrews et al., 2011; Boiral, 2020) contained in the ISO 9001 standard. Indeed, How has ISO 9001 certification been appropriated within ENIEM, and to what extent do organizational actors perceive it as a driver of managerial transformation rather than a mechanism of formal compliance?

The objective of this research is to understand how ISO 9001 certification has been implemented and appropriated within ENIEM and to explore whether this process has resulted in genuine

managerial transformation or has primarily remained a mechanism of formal compliance. This study examines whether ISO 9001 certification has contributed to transforming the management system of ENIEM, the first ISO-certified company in Algeria, or whether this certification merely represents a formal appropriation without impacting managerial practices.

To this end, our research employs a qualitative methodology to explain the managerial transformations of a public company since its initial ISO certification in 1998, based on an in-depth, longitudinal case study. ENIEM was chosen because of the long history of its quality management approach and the paradox of the current difficulties it faces. Data collection relies on triangulation, combining direct observation, document analysis, and semi-structured interviews conducted with various departments within the company. This method allows us to identify the discrepancies between the formal measures implemented by the company and its actual practices since its certification.

2. LITERATURE REVIEW

2.1. From product quality to managerial quality

The concept of quality has undergone significant evolution. Initially defined as the conformity of products to technical specifications based on end-of-process control aimed at detecting and eliminating defects through corrective action, it is now understood as the ability to satisfy, or even anticipate, customer needs, involving all functions of the organization. As Garvin (1988, p. 40) and Reeves and Bednar (1994, p. 420) emphasize, quality is a multidimensional concept, integrating functional, perceived, and organizational dimensions. From this perspective, product quality first became process quality, and then a matter of management as a whole. Several quality experts have contributed to this evolution, such as Deming, Juran, and Crosby. They have stressed the role of management in continuous improvement, quality planning, and

defect prevention. Quality has thus become a fundamentally managerial issue, implying a transformation of coordination methods and organizational practices. As Oakland (2014, p. 23) and Goetsch and Davis (2021, p. 18) remind us, it now relies on a systemic approach integrating all processes and stakeholders. In this context, ISO 9001 certification attempts to formalize this broader approach involving all dimensions of management. However, this formalization does not guarantee an effective transformation of practices. In some contexts, it may be limited to formal compliance without any modification of the underlying managerial logic (Heras-Saizarbitoria & Boiral, 2019, p. 6; Fonseca et al., 2021, p. 9).

In public companies characterized by administrative and hierarchical structures, the quality approach is sometimes superimposed on existing practices without transforming them. Therefore, the challenge no longer lies solely in the adoption of standards, but in their ability to be integrated into a genuine dynamic of managerial change. Thus, the evolution of quality, shifting from product conformity to management quality, provides an important analytical framework for understanding the implications of ISO 9001 certification and explaining its conditions for effectiveness as a basis for organizational transformation.

2.2. Quality management: between transformational logic and formalistic drift

Quality management, found in the QMS of the ISO 9001 standard, particularly in its 2015 version, is a continuation of the evolution of quality towards a comprehensive and integrated approach to management. It is based on the idea that quality cannot be achieved through isolated actions or by simply monitoring results, but rather requires a profound transformation of managerial practices, founded on continuous improvement, customer focus, and the involvement of all stakeholders. According to Goetsch and Davis (2021, p. 20) and Oakland (2014, p. 25), this management

relies on a systemic approach in which performance results from the coherence between processes, management practices, and organizational behaviors. He emphasizes the central role of leadership, organizational culture, and collective learning in the success of quality initiatives (Abdallah et al., 2021, p. 1420).

Several empirical studies have identified the positive impact of quality management on organizational performance. For example, a study conducted in the Ethiopian industrial sector shows that TQM practices, particularly management commitment, process management, and training, have a significant effect on the operational performance of certified companies (Adem & Virdi, 2020, p. 412). Similarly, recent work in the Thai automotive industry highlights a positive relationship between the integration of TQM practices and improved overall performance, especially when combined with innovation and continuous improvement initiatives (Thunyachairat et al., 2024, p. 278).

However, these results should be interpreted with caution. Other empirical studies show that the effects of TQM are neither obvious nor uniform. A recent study conducted in the Iraqi context highlights that TQM practices only significantly improve performance when they are integrated into the organizational system and supported by ISO 9001 certification. In this case, the standard plays a mediating role by reinforcing the impact of TQM on innovation and organizational effectiveness (Alrawi et al., 2024, p. 14).

Furthermore, recent literature highlights the existence of two logics for adopting TQM, which strongly impact its effects on managerial practices. On the one hand, TQM can be a catalyst for transformation when it is coherently integrated into the management system. A study conducted in Tunisian industrial companies shows that TQM practices have a direct and significant effect on organizational performance and innovation, an effect reinforced by the mediating role of organizational learning (Khlif and Ghozzi, 2023, p. 214). Similarly, research conducted in the

Algerian context, particularly in the higher education sector, highlights a positive impact of TQM on the quality of results when its principles are effectively adopted by stakeholders (Bensalem et al., 2022, p. 9).

These results demonstrate that TQM can produce significant effects when it is part of a managerial transformation process based on stakeholder involvement, skills development, and the dissemination of an organizational culture oriented towards continuous improvement. In this context, the role of leadership appears crucial. Recent studies show that transformational leadership promotes the implementation of Total Quality Management (TQM) and indirectly improves organizational performance by strengthening employee engagement and the consistency of management practices (Abdallah et al., 2021, p. 1422). However, other empirical studies have highlighted the limitations of quality initiatives when implemented within a purely formal framework. A recent study of service companies shows that, despite the adoption of an ISO 9001 certified management system, the effects on managerial performance remain variable and depend heavily on the level of managerial commitment and the adoption of quality practices (El Moury et al., 2024, p. 65). Similarly, research conducted in Indonesia indicates that the impact of certification on performance is contingent upon factors such as managerial commitment, quality culture, and employee involvement (Bakhtiar et al., 2023, p. 8).

The opposition between the transformational and formalist logics of TQM is observed much more in the context of public organizations, where institutional constraints, the centralization of decisions, and administrative logics can limit the effective appropriation of the principles of total quality. Therefore, the quality approach risks being limited to mere compliance. Indeed, ISO 9001 certification appears to be an ambivalent tool. On the one hand, it can facilitate the structuring of quality processes and promote the integration of TQM principles. On the other hand,

when adopted with a focus on compliance, it can lead to excessive formalization of practices, to the detriment of organizational learning and continuous improvement. As Heras-Saizarbitoria and Boiral (2019, p. 6) point out, this situation can lead to a disconnect between prescribed and actual practices. Thus, TQM only produces positive and lasting effects when it is accompanied by a genuine transformation of the management system. Otherwise, it tends to be limited to a formalization of practices without substantial impact.

Recent research has further reinforced the idea that quality management generates sustainable performance improvements only when it is embedded in broader organizational change processes. The emergence of the Quality 4.0 paradigm highlights the need to combine traditional quality management principles with organizational learning, innovation, employee engagement, and continuous adaptation capabilities (Liu et al., 2023). In this perspective, quality management is no longer viewed merely as a set of procedures or control mechanisms, but as a strategic system fostering organizational resilience, knowledge creation, and long-term competitiveness (Al Balushi, 2024). Several studies emphasize that the success of quality initiatives depends on enabling factors such as leadership commitment, organizational culture, process integration, and organizational learning capabilities (Tajouri et al., 2024; Limón-Romero et al., 2024). Conversely, organizations that focus primarily on compliance, documentation, and audit requirements often fail to realize the expected benefits of quality management systems and struggle to achieve substantial improvements in performance (Liu et al., 2023). These findings reinforce the distinction between a transformational logic, where quality becomes a driver of organizational development, and a formalistic logic, where it remains limited to administrative conformity and symbolic adoption (Tajouri et al., 2024; Al Balushi, 2024).

2.3. ISO 9001 certification: between managerial performance and compliance

ISO 9001 certification aims to provide a structured framework enabling organizations to formalize their processes, ensure the traceability of their activities, and adopt a continuous improvement approach. It is often presented as a tool capable of strengthening organizational performance and supporting the implementation of total quality management principles. However, in reality, the results obtained by certified companies are mixed. Several studies confirm the existence of positive effects on performance, as shown by the study conducted on a sample of European companies (Fonseca & Domingues, 2018, p. 1515). This study found that ISO 9001 certification can effectively contribute to improving operational performance, particularly in terms of process control and reducing nonconformities. Furthermore, another study indicates that certified companies exhibit better organizational performance, provided that the quality management system is effectively integrated into daily practices (Sfreddo et al., 2021, p. 8). Other studies have highlighted the limitations of certification when adopted solely for compliance. As a comparative study conducted in several countries demonstrates, certification can produce primarily symbolic effects, reinforcing the organization's external legitimacy without significantly impacting its internal performance (Heras-Saizarbitoria & Boiral, 2019, p. 7). Therefore, ISO 9001 certification can be viewed as an instrument of institutional legitimation, rather than a lever for organizational effectiveness. Indeed, companies may adopt the standard to respond to external pressures, partner requirements, regulatory constraints, or the pursuit of credibility, without necessarily undertaking a fundamental transformation of their management system. This logic leads to a disconnect between the practices prescribed by the standard and the practices actually implemented (Boiral, 2020, p. 113).

Several recent studies show that the relationship between ISO 9001 and performance is strengthened by variables such as leadership, organizational culture, employee involvement, and the level of process integration. For example, a study conducted in the service sector highlights that certification only improves performance when it is accompanied by genuine management commitment and effective ownership by stakeholders (El Moury et al., 2024, p. 66). Similarly, other research shows that the effect of certification on innovation and performance depends heavily on the organization's ability to integrate the standard's requirements into its daily practices (Bakhtiar et al., 2023, p. 9).

These results highlight a crucial distinction between a substantive and a formal approach to certification. In the first case, the standard is used as a structuring framework to transform management practices and improve performance. In the second, it is limited to a compliance logic, focused on document production and successful audits, without any real impact on the organization's operations. Thus, the literature converges on an important conclusion: ISO 9001 certification is not, in itself, a performance driver, but rather a mechanism whose effects depend closely on the conditions of its implementation. Depending on the context, it can either support a genuine transformation of management or be reduced to a formalization of practices without substantial impact.

Recent literature confirms that the effects of ISO 9001 certification remain contingent upon the conditions under which the quality management system is implemented and internalized within the organization. A recent systematic literature review covering ninety-four studies conducted between 2000 and 2023 concludes that certification does not automatically improve organizational performance and that its outcomes depend largely on managerial motivations, organizational commitment, and the extent to which quality principles are integrated into everyday practices (Ayyadi & Oulhadj, 2024). Similarly, recent research on ISO 9001 implementation highlights the critical role of enabling factors such

as leadership, process integration, employee involvement, and continuous improvement in determining the effectiveness of certified quality management systems (Limón-Romero et al., 2024). These findings reinforce the idea that ISO 9001 certification should not be viewed as a performance driver per se, but rather as a managerial framework whose effectiveness depends on the organization's capacity to move beyond compliance and develop a genuine culture of quality and continuous improvement (Ayyadi & Oulhadj, 2024; El Moury et al., 2024).

2.4. ISO 9001 Certification in the Algerian Context

Over the last two decades, ISO 9001 certification has progressively expanded in Algeria across both industrial and service sectors. This development reflects the growing awareness among Algerian organizations of the importance of quality management systems for improving competitiveness, enhancing organizational performance, and facilitating access to international markets. Existing studies generally report positive effects associated with the implementation of quality management principles, particularly in terms of process formalization, documentation practices, and the development of a quality-oriented culture (Bensalem et al., 2022). However, several studies also highlight persistent difficulties related to leadership commitment, employee involvement, resistance to change, and the effective integration of continuous improvement practices into daily organizational activities (Arab et al., 2024). These findings suggest that the adoption of ISO 9001 does not automatically result in substantial managerial transformation and that the effectiveness of certification largely depends on the organizational context in which it is implemented.

Despite the growing number of certified organizations in Algeria, research remains relatively limited, particularly regarding the long-term managerial effects of ISO 9001 certification within public enterprises. Most existing studies focus on implementation

processes, perceived benefits, or short-term performance outcomes. Yet, public enterprises constitute a particularly relevant field of investigation because they operate within institutional environments characterized by centralized decision-making, bureaucratic structures, and limited managerial autonomy. These characteristics may influence the way quality management systems are adopted and integrated into organizational practices. In this regard, ENIEM represents a unique and highly significant case. As the first Algerian company certified according to ISO 9001, and after more than twenty-five years of certification experience, it provides a valuable opportunity to examine whether certification has generated a genuine managerial transformation or whether it has primarily resulted in formal compliance with standard requirements.

3. EMPIRICAL STUDY

3.1. Methodological Framework of the Research

This research adopts a qualitative approach within an interpretivist paradigm, as the objective is to understand how ISO 9001 certification has been appropriated over time and how it has influenced managerial practices within a public enterprise. Rather than measuring causal relationships between certification and organizational performance, the study seeks to explain the mechanisms underlying the implementation of the quality management system, the perceptions of organizational actors, and the discrepancies between prescribed and actual practices. Given the complexity and context-dependent nature of these issues, a qualitative case study provides the most appropriate methodological framework (Yin, 2003).

An in-depth longitudinal case study was conducted covering the period from the company's first ISO 9001 certification in 1998 until

2025. ENIEM (National Company of Household Appliance Industries) was selected because it represents a unique case within the Algerian context. As the first Algerian public enterprise certified according to ISO 9001, it offers an exceptional opportunity to analyse the long-term effects of certification. Moreover, despite maintaining certification through successive revisions of the standard and establishing a highly formalized quality management system, ENIEM continues to experience significant operational and financial difficulties. This paradox makes the company particularly relevant for examining whether ISO 9001 certification has generated genuine managerial transformation or has mainly resulted in formal compliance with standard requirements.

To enhance the credibility and trustworthiness of the findings, data were collected through methodological triangulation by combining three complementary sources of evidence: direct observations, documentary analysis, and semi-structured interviews (Lincoln & Guba, 1985). Direct observations were conducted during several field visits to ENIEM between June 2025 and February 2026. These observations focused on production activities, interactions between managers and employees, quality control practices, documentation procedures, and the implementation of continuous improvement mechanisms. Systematic field notes were recorded after each visit to complement and contextualize the interview data. Documentary analysis was carried out using a wide range of internal documents, including quality manuals, ISO 9001 procedures, internal audit reports, management review reports, quality indicators, organizational charts, training reports, quality records, and internal performance reports covering different stages of the certification process. These

documents provided valuable insights into the evolution and formalization of the company's quality management system. Finally, semi-structured interviews were conducted with organizational actors directly involved in the implementation and operation of ISO 9001. To strengthen the credibility of the analysis, information obtained from interviews was systematically compared with documentary evidence and field observations in order to verify the consistency of participants' statements and to obtain a comprehensive understanding of the phenomenon under investigation. This triangulation strategy reinforced the robustness, credibility, and trustworthiness of the qualitative findings (Lincoln & Guba, 1985).

3.1.1. Selection of Participants

Participants were selected using purposive sampling, a strategy commonly employed in qualitative research to identify information-rich cases capable of providing detailed insights into the phenomenon under investigation. The selection focused on individuals who had direct responsibilities or extensive experience regarding the implementation, management, or daily application of the ISO 9001 quality management system. A total of sixteen participants were interviewed between June 2025 and February 2026, including six managers occupying key positions in quality management, production, human resources, marketing and operational management, and ten employees working within the Refrigeration Unit. The managers had between 18 and 32 years of service within ENIEM, while employees' tenure ranged from 10 to 28 years. Such extensive organizational experience enabled participants to describe the evolution of the quality management system across several versions of ISO 9001 and to provide

retrospective assessments of managerial changes over more than two decades. The inclusion of both managerial and operational profiles also allowed the collection of complementary viewpoints, thereby strengthening the richness and credibility of the empirical evidence.

The Refrigeration Unit was intentionally selected because it represents one of ENIEM's core production activities and has historically played a strategic role in the company's industrial development. In addition, this unit has experienced numerous quality-related challenges over the years, making it particularly relevant for analysing the practical implementation of ISO 9001 principles and their impact on managerial practices.

3.1.2. Data Collection and Theoretical Saturation

Semi-structured interviews were conducted using an interview guide designed to encourage participants to discuss their experiences while ensuring comparability across interviews. The discussions focused on three main themes: (1) organizational transformations following ISO 9001 certification, (2) the evolution of the company's management system, and (3) the impact of certification on organizational performance.

The number of interviews was determined according to the principle of theoretical saturation rather than statistical representativeness. Interviews were conducted progressively until no substantially new themes emerged from the empirical material. In the present study, saturation was reached after the fourteenth interview, as participants increasingly repeated similar explanations concerning leadership practices, organizational change, human resource management and quality performance. Two additional interviews were subsequently conducted to confirm the stability and consistency of the findings. This procedure follows the

recommendations of Guest, Bunce and Johnson (2006), who demonstrated that thematic saturation is generally achieved within relatively homogeneous samples after approximately twelve interviews, while additional interviews mainly serve to validate previously identified categories.

3.1.3. Development of the Interview Guide and Data Analysis

The interview guide was developed deductively from the research objectives and the theoretical framework presented in the literature review. Following the methodological recommendations of Kallio et al. (2016), the guide was structured around four analytical dimensions identified in previous research as critical for understanding the effectiveness of ISO 9001 implementation: organizational transformation, leadership, human resource management, and organizational performance. This design ensured coherence between the research questions, the theoretical framework and the empirical investigation while allowing participants sufficient flexibility to discuss issues that emerged during the interviews.

The empirical material was analysed through thematic analysis. Following an inductive-deductive approach, initial themes were allowed to emerge directly from the interview transcripts before being interpreted through the theoretical concepts developed in the literature review. Particular attention was paid to the distinction between transformational and formalistic approaches to ISO 9001 implementation, as well as to the influence of leadership, organizational culture and human resource management on the effectiveness of the quality management system. The triangulation of interviews, documentary evidence and direct observations further enhanced the credibility and robustness of the findings.

3.2. Research results

3.2.1. A Primarily formal organizational transformation

As we have shown above, one of the objectives of ISO 9001 certification is to transform the organization by adopting a process-based approach to ensure better coordination of activities, a reduction in malfunctions, and a customer-centric approach. Similarly, implementing a quality management system allows for a move beyond traditional functional structures in favor of a more cross-functional and integrated organization.

In the case of ENIEM, the survey results show organizational transformations, particularly regarding the positioning of the quality function. This function has gradually evolved from a simple control activity to a strategic department, directly reporting to senior management and with support at the level of the company's various units. This evolution is confirmed both by the analysis of internal organizational charts and by comments gathered during interviews, particularly with the quality director, who emphasizes that "*the quality department has become strategic because it works closely with all the company's structures*" (interview with the quality director, February 2026).

Furthermore, the company has formalized its activities through the identification and documentation of its processes. Document analysis shows that 37 main processes have been defined and assigned to process owners at the level of the company's various units. This structuring demonstrates a genuine effort to comply with the requirements of the ISO 9001 standard, particularly regarding the process approach. However, beyond these apparent transformations, the analysis of the organization's actual operations reveals significant limitations regarding the effective scope of these changes. Indeed, field observations and interviews conducted with employees of the Refrigeration Unit (December 2025) reveal an overlap of formalized processes with an already highly hierarchical organizational structure. This situation results in a dual line of authority, both hierarchical and functional, generating tension and

ambiguity in the distribution of responsibilities. As one employee interviewed put it, "*We no longer know who to obey, the line manager or the process owner*" (interview with an employee, Refrigeration Unit, December 2025).

This increased complexity of coordination mechanisms seems to contradict the initial objective of the process approach, which aims precisely to streamline interactions and strengthen cross-functional collaboration. In our case, it appears more as an additional layer of formalization, added to an already cumbersome bureaucracy without altering its underlying structure. This observation is supported by direct observations within the company, which highlight the persistence of multiple hierarchical levels and the absence of genuine organizational integration. Furthermore, one of the fundamental principles of quality management, namely customer focus, appears to be poorly integrated into the company's practices. Interviews conducted with sales managers reveal the marginalization of the sales function in the decision-making process. In this regard, a marketing manager stated that "*customer complaints, despite their frequency, are not actually addressed by management*" (interview with a marketing manager, January 2026). This observation highlights a weak coordination between the processes formalized within the quality system and customer expectations.

All these findings indicate that the organizational transformations brought about by ISO 9001 certification seem to be primarily driven by a formalistic approach. While process structuring and the strengthening of the quality function reflect effective compliance with regulatory requirements, they are not accompanied by a fundamental reassessment of the underlying organizational structures. The lack of cross-functional collaboration, the persistence of a rigid hierarchy, and the weak integration of a customer-centric approach limit the quality management system's ability to bring about genuine transformation.

3.2.2. Formal leadership without transformational dynamics

Leadership is one of the key determinants of the success of a quality initiative. As we presented in the literature review, the role of management in driving change, disseminating a quality culture, and involving stakeholders is essential (Goetsch & Davis, 2021; Oakland, 2014; Abdallah et al., 2021). Indeed, ISO 9001 certification can only have a significant impact on management practices if it is supported by transformational leadership, capable of moving beyond mere compliance to initiate a dynamic of continuous improvement. In the case of ENIEM, the survey results confirm the existence of a formal commitment from management regarding quality. Document analysis, particularly through management reviews and internal documents, shows that senior management assumes a number of responsibilities in line with the standard's requirements, such as providing the necessary resources, chairing the quality committee, and overseeing the overall quality management system (see Table 1).

Table 1: **The missions of the CEO and Unit Directors in terms of quality**

Responsibilities	**Missions**
The Chairman and Chief Executive Officer (CEO)	- Ensures the proper functioning of quality management, - Chairs the quality committee, - Supports, through their authority, the corrective actions necessary for the continuous improvement of the quality management system, - Provides the resources necessary for achieving quality.

The Unit Director	- Ensures the proper functioning of quality management at the unit level, - Establishes and updates a standard organizational chart, - Provides the necessary resources for the training and qualification of staff.

Source: Compiled from ENIEM data, 2026.

These elements reflect a desire to comply with regulatory requirements and maintain certification over time. However, beyond this apparent conformity, the analysis of management practices reveals the limitations of this commitment. Observations made in the field, as well as interviews conducted with various stakeholders, highlight a purely formal involvement with little focus on real-world transformation of practices. In this regard, several respondents stated that: "*Management's commitment is primarily manifested through symbolic actions, such as displaying the quality policy in workshops and offices, without translating into concrete support for change*." As observed during field visits, these materials are indeed displayed, but their adoption by employees remains limited (direct observations, February 2026).

These findings suggest that top management's commitment remained largely procedural rather than transformational. Although quality policy was formally communicated and management reviews were regularly conducted, these practices were not accompanied by strategic initiatives capable of fostering employee engagement or organizational learning. Consequently, ISO 9001 requirements appear to have been implemented primarily to preserve certification rather than to drive managerial transformation. This result supports the distinction between formal compliance and genuine organizational change developed throughout this study.

This situation at ENIEM is confirmed by the comments gathered during the interviews, which revealed a gap between stated intentions and actual practices. Management's commitment appears to be limited to meeting the minimum requirements for obtaining and maintaining certification, particularly regarding documentation, audits, and the provision of financial resources. Conversely, the more qualitative dimensions of leadership, such as team mobilization, the promotion of organizational learning, and the encouragement of initiative, appear underdeveloped.

Furthermore, the analysis of interviews with unit directors reveals that, although formally involved in the quality management system, they have limited room for maneuver to drive significant changes. This situation is partly explained by the institutional constraints inherent to public companies, characterized by highly centralized decision-making and low managerial autonomy. In this context, the role of managers tends to be focused on maintaining the status quo rather than driving transformation, as also suggested by some studies on public enterprises.

Thus, the results obtained show only a formal commitment from management, whose sole aim is to comply with the requirements of the ISO 9001 standard, and the absence of leadership capable of driving a genuine transformation of the management system. This situation illustrates the limitations of a certification approach centered on compliance, in which management plays an essentially administrative role, without engaging in a process of learning and continuous improvement.

3.2.3. Human resource management decoupled from performance issues

As we have shown in the literature, the success of quality management systems largely depends on employee involvement, skills development, and the dissemination of an organizational culture geared towards continuous improvement. From this

perspective, employee training, motivation, and engagement are essential elements for translating quality principles into practice.

In the case of ENIEM, the survey results show a significant evolution in the role of HR following ISO 9001 certification. Analysis of internal documents, particularly those from the Human Resources department, shows that this function has progressively integrated quality requirements, paying particular attention to skills management, training, and activity traceability (**see Table 2**).

Table 2: Evolution of HR roles at ENIEM after certification

HR Role Before Certification	**HR Role After Certification**
- Meeting the company's human resources needs, - Establishing positive social relations, - Streamlining staffing levels, - Defining and adapting the compensation and job qualification system, - Defining and implementing training plans.	- Identify the skills that impact quality; - Provide training in the field of quality; - Evaluate the effectiveness of actions taken; - Contribute to achieving quality objectives; - Maintain records.

Source: ENIEM Human Resources Department, 2026.

Based on this table, HR has evolved from a primarily administrative role, focused on managing staff and social relations, to one more oriented towards developing skills impacting quality. This evolution is reflected in particular by a significant investment in training initiatives. The data collected shows that the company has made considerable efforts in this area, with 1,676 employees trained between 2002 and 2004, followed by 2,001 training sessions between 2008 and 2010, coinciding with the transition to the various versions of the ISO standard. The same trend was

observed for compliance with the 2015 version. These figures demonstrate a clear commitment to meeting certification requirements, which place significant emphasis on skills development (*interview with the HR Director, January 2026*).

Although ENIEM invested considerable resources in employee training, the empirical evidence suggests that these initiatives remained essentially compliance-oriented. Interviewees consistently reported that training activities were rarely followed by systematic evaluations of learning outcomes or mechanisms facilitating the transfer of acquired competencies into daily work practices. Consequently, training contributed to maintaining conformity with ISO 9001 requirements but generated only limited changes in managerial behaviour and employee involvement. This finding illustrates that investment in training alone is insufficient to produce organizational transformation unless it is accompanied by a broader strategy of organizational learning and continuous improvement.

However, beyond these figures, a more in-depth analysis of practices reveals a significant gap between the actions implemented and their actual impact on the company's performance. Indeed, despite the scale of the training programs, indicators related to the cost of poor quality and customer satisfaction do not show any notable improvement. On the contrary, the analyzed data highlights an increase in costs related to scrap and warranties, as well as a continued rise in customer complaints (management reviews, 2022, 2023, 2024).

This paradox is confirmed by interviews conducted with managers and employees, which reveal several limitations in the way training programs are designed and implemented. Firstly, training is mostly conducted in-house, under conditions deemed unfavorable by participants, particularly due to inadequate training facilities and a lack of incentives afterward. As one employee interviewed stated, "*Training takes place in a demotivating atmosphere and has no real impact on our daily work*" (interview,

January 2026). Secondly, the analysis highlights the absence of mechanisms for evaluating the effectiveness of training programs. The management reviews consulted, particularly those from 2023 and 2024, contain no specific indicators to measure the impact of these actions on quality or the company's overall performance. This lack of evaluation reflects an essentially formal approach to training, focused on meeting the requirements of the standard rather than on the effective improvement of skills.

All these results reveal that HR management remains dominated by an administrative logic, in which quality-related practices are superficially integrated. While training is a priority, other essential dimensions of human resource management, such as employee motivation, engagement, and empowerment, are neglected. This situation limits the company's ability to mobilize the potential of its human resources to serve quality. Therefore, human resource management at ENIEM appears as a weak link. The weakness of the quality management system is evident. Despite significant training efforts, the lack of a genuine strategy for employee involvement and skills development limits the effectiveness of the actions undertaken. This situation illustrates once again the limitations of a formal adoption of ISO 9001 certification, in which the normative requirements are met without a real transformation of management practices.

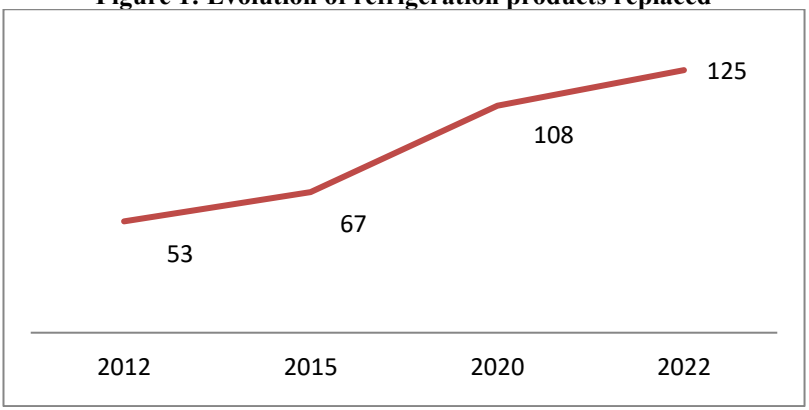
3. 2.4. Decline in some performance indicators despite certification

One of the reasons for adopting ISO 9001 certification is the formalization of processes, the control of activities, and continuous improvement, which should translate into improved performance in the medium and long term. Therefore, the evaluation of the impact of certification must also consider the evolution of the company's performance indicators.

In the case of ENIEM, the analysis of data from management reviews and internal documents reveals an overall unfavorable

trend in the main performance indicators, despite certification being maintained over a long period. The results show a significant decrease in production, from 5,402,228 KDA in 2013 to 4,077,434 KDA in 2015, representing a decrease of more than 24% over the period considered. This trend continued until the complete cessation of production in 2023 and 2024, following a 15% capacity utilization rate in 2022 (*interview, Director of the Refrigeration Unit, October 2025*). Concurrently, the company's revenue experienced significant fluctuations, declining steadily to reach its lowest point in 2022 at 39 billion dinars, compared to over 58 billion in 2013 (management review 2014 and 2023). This instability reflects persistent difficulties in terms of sales performance and market positioning. Similarly, the number of customer complaints increased steadily over the period studied, rising from 923 in 2015 to 1102 in 2022. This also had a significant impact on the number of product returns and replacements, particularly in the Refrigeration Unit (see Figure 1).

Figure 1: Evolution of refrigeration products replaced



Source: ENIEM Management Review, (2013-2023).

Despite all these underperformances, ENIEM has consistently maintained its ISO 9001 certification through the 2000, 2008, and

current 2015 versions. This paradox reveals a glaring disconnect between the quality management system's compliance with the ISO 9001 standard and the company's actual performance. It reflects an operational logic in which certification is more of an end in itself than a means of improving performance.

The persistence of customer complaints despite long-term certification indicates that the formal implementation of customer satisfaction procedures did not necessarily translate into improved responsiveness to customer expectations. This finding suggests that customer focus remained largely procedural rather than strategically embedded within organizational decision-making processes.

Overall, the empirical findings reveal that ISO 9001 certification has generated significant improvements in the formalization of managerial processes, documentation practices, and procedural standardization within ENIEM. However, these improvements have not been accompanied by equally significant changes in leadership practices, employee involvement, organizational learning, or operational performance. The results therefore suggest that the quality management system has primarily evolved as a mechanism of formal compliance, while only partially fulfilling its potential as a driver of managerial transformation. This observation directly addresses the research question and provides the basis for the theoretical interpretation developed in the following discussion section.

4. Discussion of Results

The findings of this study indicate that ISO 9001 certification has contributed to a significant formalization of management practices within ENIEM without generating a profound transformation of managerial processes. Although the company has established a structured quality management system through documented procedures, process mapping, and quality audits, these

changes have remained largely administrative and have not substantially altered organizational routines or managerial behaviors. This finding is consistent with the institutional perspective developed by Heras-Saizarbitoria and Boiral (2019), who argue that management system standards often produce symbolic rather than substantive organizational changes when organizations pursue certification primarily for legitimacy and compliance purposes. Likewise, Boiral (2020) emphasizes that certification may reinforce organizational legitimacy while leaving underlying managerial practices largely unchanged. Our findings therefore support the argument that compliance with ISO 9001 requirements does not necessarily translate into effective organizational transformation.

Another important finding concerns the role of leadership in the implementation of the quality management system. Although senior managers formally fulfilled the responsibilities required by ISO 9001, their involvement remained largely focused on maintaining certification rather than promoting organizational learning and continuous improvement. This result contrasts with the quality management literature, which identifies leadership as one of the principal determinants of successful quality initiatives. According to Goetsch and Davis (2021) and Oakland (2014), effective quality management requires transformational leadership capable of creating a shared vision, motivating employees, and supporting continuous improvement. Similarly, Abdallah et al. (2021) demonstrate that transformational leadership significantly enhances organizational performance through its positive influence on quality management practices. The limited managerial commitment observed at ENIEM therefore appears to constitute one of the principal factors explaining the weak impact of certification on managerial transformation.

The results also underline the limited contribution of human resource management to the effectiveness of the quality management system. Although considerable investments were

made in employee training, these initiatives remained essentially compliance-oriented and were not accompanied by mechanisms designed to strengthen employee motivation, participation, or organizational learning. Consequently, training activities produced little observable impact on quality performance. This finding confirms recent studies showing that employee involvement and organizational culture are critical mediating variables between ISO 9001 implementation and organizational performance (Bakhtiar et al., 2023). Likewise, Khlif and Ghozzi (2023) demonstrate that quality management practices improve organizational performance primarily when they foster organizational learning and innovation. The ENIEM case suggests that the absence of these complementary mechanisms considerably limits the capacity of ISO 9001 certification to generate sustainable improvements.

One of the most significant contributions of this research lies in explaining the apparent paradox observed at ENIEM. Despite maintaining ISO 9001 certification for more than twenty-five years and continuously updating its quality management system according to successive versions of the standard, the company has experienced declining operational performance, increasing customer complaints, and reduced production capacity. This paradox supports the institutional theory developed by Meyer and Rowan (1977), which argues that organizations frequently adopt formal structures in order to gain external legitimacy while decoupling these structures from their actual operational practices. In the present case, certification appears to have become an institutional requirement aimed at preserving legitimacy rather than a strategic mechanism for improving organizational performance. This interpretation is consistent with the conclusions of Boiral (2020) and Heras-Saizarbitoria and Boiral (2019), who describe ISO 9001 certification as producing symbolic conformity whenever organizations prioritize audit compliance over genuine organizational learning.

Overall, the findings suggest that ISO 9001 certification should not be considered an autonomous driver of organizational performance. Rather, its effectiveness depends on the interaction between the quality management system and several organizational factors, including leadership, employee involvement, organizational culture, and the degree to which quality principles are embedded in everyday managerial practices. This conclusion confirms recent empirical evidence indicating that certification creates value only when organizations move beyond procedural compliance and integrate quality management into their strategic decision-making processes (Fonseca et al., 2021; El Moury et al., 2024; Limón-Romero et al., 2024). Consequently, the ENIEM case illustrates that maintaining certification over a long period is insufficient to ensure managerial transformation unless the organization simultaneously develops the institutional, cultural, and human conditions necessary to support continuous improvement.

5. CONCLUSION

At the end of this research, we can conclude that ISO 9001 certification, while a structuring mechanism for quality management, does not in itself guarantee improved organizational performance. Our case study shows that, in the context studied, this certification primarily resulted in a formalization of practices, without substantial transformation of management methods. Indeed, the empirical results reveal a significant disconnect between the requirements prescribed by the standard and the practices actually implemented. This disconnect manifests itself at several levels:

- a more structured but still highly hierarchical organization,
- formally engaged but not very transformative leadership,
- human resource management focused on compliance rather than stakeholder involvement,
- and, finally, declining organizational performance despite maintaining certification.

These findings confirm critical approaches in the literature, which suggest that ISO 9001 certification can be used for legitimation and compliance rather than for continuous improvement. This research also highlights the crucial role of factors such as leadership, culture, and human resource involvement in the success of quality initiatives. Thus, this research underscores that the effectiveness of ISO 9001 certification depends less on its formal adoption than on the concrete conditions of its implementation. In the absence of a transformative commitment from management, a supportive organizational culture, and a genuine customer focus, the standard tends to reinforce existing bureaucratic practices rather than transform them.

The results obtained encourage Algerian companies, particularly public ones, to move beyond a purely instrumental

approach to certification and integrate it into a genuine organizational change strategy. The main objectives are:

- to strengthen the role of leadership,
- to foster employee involvement,
- and to fully integrate the principles of quality management into daily practices.

Finally, we wish to point out the limitations of this research, primarily related to access to information spread over a long period and the reluctance of those interviewed to share their true opinions on the quality approach within ENIEM. However, data triangulation allowed us to overcome a significant number of these obstacles. It is also important to note that our research focuses on only one public company case, which will need to be expanded to generalize the results obtained. This is precisely the objective of our future research.

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