

Evaluating the Suitability and Implementation of ISO 9001 and Quality Management Systems in Algerian Companies

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Received: 14/04/2026

Accepted: 26/05/2026

Published: 10/06/2026

Abstract: This study formulates a theoretical comparative analysis of ISO 9001 and Quality Management Systems (QMS) in the context of Algerian enterprises. The paper uses a structured literature review and analytical synthesis to look at the relative suitability and implementation implications of both approaches. The study compares ISO 9001, which is a standardised, certification-based framework, with QMS models that are more flexible and driven by the company itself. SWOT analysis was performed to define the strengths and weaknesses for each path and their implementations at workplace. The results show that ISO 9001 improves procedural formalisation, external legitimacy, and market credibility. However, its strict compliance requirements and need for resources may make it harder to adapt to different situations. On the other hand, broader QMS approaches allow for more strategic flexibility and gradual integration, which may fit better with how organisations actually work. The study advances a context-sensitive perspective on quality adoption and proposes an integrative pathway that balances international standardization with local organizational needs.

Keywords: ISO 9001; Quality Management Systems; Algeria; Quality Management Implementation; Organizational Performance.

JEL Codes: M11, L15, M10

Citation : ZID Chaher (2026), Evaluating the Suitability and Implementation of ISO 9001 and Quality Management Systems in Algerian Companies, *Journal of economics studies and researches in renewable energies*, 13(01), 437-451.

I. Introduction:

Quality management has become a cornerstone of sustainable organizational performance in an increasingly competitive global economy. At the heart of this evolution lies the concept of Quality Management Systems (QMS), which encapsulate formal structures, procedures, and practices designed to ensure consistent quality delivery and continuous improvement (Evans & Lindsay, 2017). Among the various frameworks, ISO 9001 developed by the International Organization for Standardization stands as the most universally implemented quality standard, adopted by organizations seeking to enhance customer satisfaction, operational efficiency, and market credibility (ISO, 2015).

The proliferation of ISO 9001 certification reflects a broader trend toward formalized quality assurance mechanisms. Prior research has shown that ISO 9001 can improve internal coordination, increase process transparency, and support strategic alignment (Tarí, 2018; Zu, Fredendall, & Douglas, 2018). However, its effectiveness is contingent on organizational readiness, resource availability, and contextual factors that may vary by geographical and

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institutional environment (Sampaio, Saraiva, & Rodrigues, 2019). These considerations raise important questions about the relative suitability of ISO 9001 compared to other, more flexible QMS models in specific national contexts.

In Algeria, quality management practices remain an area of growing academic and practical interest. Despite widespread recognition of quality as a strategic imperative, evidence suggests that many Algerian firms struggle with the practical implementation and adaptation of formal quality frameworks (Bouzidi & Belkacemi, 2022). This suggests the need for a theoretically grounded examination of ISO 9001 and alternative QMS approaches to better understand their fit in the Algerian institutional and organizational landscape.

II. Background of the Research

2.1. Quality Management Systems and ISO 9001

Quality Management Systems encompass a range of formal and informal mechanisms designed to manage and improve organizational processes. While various QMS models exist, ISO 9001 represents a standardized, certification-oriented approach that specifies requirements for establishing, implementing, and maintaining a quality system (ISO, 2015). The adoption of ISO 9001 has been linked with improved operational performance, enhanced customer focus, and stronger market positioning (Zeng, Phan, & Matsui, 2018).

However, the success of ISO 9001 implementation depends on organizational characteristics such as leadership commitment, resource capacity, and cultural readiness (Rahman & Kumaraswamy, 2020). Some scholars argue that excessively rigid frameworks may hinder flexibility, particularly when organizations face diverse market pressures and limited internal capabilities (Fotopoulos & Psomas, 2018). Consequently, a wider spectrum of QMS practices with emphasis on adaptability, strategic customization, and incremental integration has been proposed as an alternative or complement to ISO 9001 (Jaca, Santos, & Vilela, 2019).

Quality Management in the Algerian Context

In the Algerian setting, quality management research has documented both opportunities and challenges in adopting ISO 9001. Early studies identified improvements in procedural discipline and customer orientation following ISO 9001 certification (Nasira & Maachu, 2016). However, empirical work also pointed to obstacles such as inadequate managerial skills, limited technological resources, and weak institutional support (Bouzidi et al., 2025). These constraints underscore the complexity of transferring internationally developed quality models to a developing economy context.

More recent Algerian research suggests that organizational success in quality implementation depends not only on compliance with standards but also on the adaptability of quality practices to internal processes and external market dynamics (Aribi & Cherif, 2021). This has led scholars to call for context-sensitive frameworks that balance the rigor of formal quality standards with the flexibility necessary for local environments (Meghil, 2023). Despite this recognition,

comprehensive comparative analyses between ISO 9001 and broader QMS options remain limited in the Algerian literature, revealing a clear gap in theoretical understanding.

Against this backdrop, there is a compelling need for a structured theoretical comparison between ISO 9001 and more flexible QMS formulations within Algerian firms. Such analysis can help clarify the institutional alignment, contextual fit, and strategic implications of each approach. By systematically synthesizing international and Algerian literature, this study aims to fill that gap and contribute to emerging discussions on quality strategy in emerging economies.

III. Literature Review

3.1 ISO 9001 and QMS Through a Multi-Theoretical Lens

ISO 9001 represents the most globally diffused quality management standard, prescribing formalized requirements for establishing, implementing, maintaining, and continuously improving organizational processes (International Organization for Standardization [ISO], 2015). Beyond its technical specifications, ISO 9001 can be theoretically interpreted through institutional theory, which posits that organizations adopt formal structures not only for efficiency but also to gain legitimacy within their institutional environment (DiMaggio & Powell logic; see Sampaio et al., 2019). Certification functions as a legitimizing mechanism that signals conformity to globally recognized norms, thereby enhancing external credibility and access to markets. From a resource-based view (RBV) perspective, ISO 9001 can also be seen as a structured mechanism for codifying organizational routines and developing process-based capabilities. When effectively embedded, it strengthens internal competencies such as documentation discipline, audit routines, and process control, which may constitute valuable and hard-to-imitate organizational capabilities (Zu et al., 2018; Tarí, 2018).

However, broader Quality Management Systems (QMS) including integrated and TQM-oriented approaches are conceptually aligned with dynamic capability theory, emphasizing organizational learning, cultural alignment, and continuous adaptation (Evans & Lindsay, 2017; Jaca et al., 2019). Unlike certification-driven models, flexible QMS frameworks prioritize strategic alignment and context sensitivity, allowing firms to adapt quality practices to their operational realities.

Thus, ISO 9001 and flexible QMS represent two distinct governance logics:

- Standardization and institutional conformity, and
- Strategic alignment and capability development.

3.2 Empirical Evidence and Contingency Effects

Empirical research consistently documents operational benefits associated with ISO 9001 adoption, including enhanced process discipline, improved documentation systems, and stronger internal audit mechanisms (Fotopoulos & Psomas, 2018; Tarí, 2018). Yet, meta-analytical and systematic reviews indicate that performance outcomes are heterogeneous and

strongly contingent upon firm-specific and environmental conditions (Sampaio et al., 2019; García-Fernández et al., 2022).

This variability aligns with contingency theory, which argues that organizational practices yield performance benefits only when aligned with contextual variables such as firm size, industry complexity, institutional maturity, and managerial competence (Rahman & Kumaraswamy, 2020). In SMEs, particularly, certification drivers often relate to market pressure and coercive institutional demands rather than purely efficiency-based motivations (Susanto, 2024). Therefore, ISO 9001's performance effect should not be conceptualized as universally positive but as context-dependent, moderated by organizational readiness and absorptive capacity.

3.3. Institutional Constraints in North Africa and Algeria

Applying institutional theory to the North African context reveals structural constraints that condition quality governance outcomes. Studies highlight limited managerial competencies, weak enforcement mechanisms, and financial constraints that reduce the effectiveness of strictly prescriptive models (Meghil, 2023). In Morocco, ISO-certified firms demonstrate performance improvements primarily when certification is complemented by training, digital infrastructure, and managerial commitment (Modeling the Impact..., 2024). This suggests that institutional support mechanisms act as enabling moderators.

Within Algeria, empirical research reports uneven QMS awareness and fragmented implementation, particularly in construction and service sectors (Bouzidi et al., 2023; Aribi & Cherif, 2021). Certification costs, limited institutional incentives, and skill gaps further constrain adoption (Latoui, 2022). Case-based evidence nevertheless shows that where managerial leadership and structured implementation exist, ISO adoption can significantly enhance process clarity and operational consistency (Bouchetara et al., 2022; Derrar et al., 2024). Thus, from a contingency perspective, Algeria represents a resource-constrained institutional environment where uniform certification strategies may generate diminishing returns unless supported by capability-building mechanisms.

3.4. Gap of the Study

Based on the synthesis above, the following gaps emerge and justify this theoretical paper:

1. Lack of theory-driven comparative syntheses focused on Algeria. Empirical Algerian studies are mainly sectoral (e.g., construction) or descriptive; there is no comprehensive, theory-based comparison of ISO 9001 versus broader QMS approaches that integrates international findings with Algerian institutional realities.
2. Insufficient attention to context-sensitive adoption pathways. While international literature suggests hybrid adoption strategies, there is limited work that articulates explicit, size- and context-sensitive decision frameworks or policy recommendations tailored to Algeria's institutional capacities.
3. Methodological fragmentation. Systematic reviews note diverse methods and inconsistent outcome measures across ISO/QMS studies; a theoretically organized

literature synthesis that imposes a common multidimensional evaluation framework (institutional fit, resource requirements, managerial capacity, performance outcomes) is missing for the Algerian case.

This paper fills these gaps by delivering a structured, theoretical comparative assessment of ISO 9001 and alternative QMS approaches for Algerian firms. It proposes a multidimensional evaluation framework that clarifies when and why ISO 9001 or a more flexible QMS is likely to be preferable in Algeria, and it outlines policy and managerial prescriptions for a context-sensitive, hybrid adoption pathway.

IV. Methodology

4.1 Research design

This study adopts a structured literature-review design (systematic, theory-driven synthesis) to compare ISO 9001 and broader Quality Management Systems (QMS) in the Algerian context. The review follows contemporary reporting guidelines (PRISMA 2020) and guidance for systematic reviews to ensure transparency, reproducibility, and rigor in study identification, selection, appraisal and synthesis.

4.2 Data sources and search strategy

It has been searched as follow for the electronic bibliographic databases and repositories to capture international and Algerian scholars (2015–2025): Scopus, Web of Science, PubMed/PMC, ScienceDirect, Emerald Insight, Google Scholar, ResearchGate, and Algerian repositories (ASJP / CERIST, university theses repositories). Search terms combined controlled keywords and Boolean operators, for example: "ISO 9001" AND ("quality management system" OR "QMS") AND (Algeria OR Algerian), and more generic queries such as "ISO 9001" AND "implementation" AND "SME". The search window was restricted to publications dated 2015–2025 to reflect the ISO 9001:2015 revision and the most recent regional literature. This approach follows recommendations for comprehensive database coverage in SLRs.

4.3 Inclusion and exclusion criteria

Studies were screened using predefined criteria:

Inclusion criteria

- Peer-reviewed journal articles, conference papers, policy/institutional reports, and high-quality theses published 2015–2025.
- Empirical, theoretical or review studies addressing ISO 9001 and/or QMS adoption, implementation, outcomes, or contextual fit, including Algerian and Maghreb evidence.
- English, French, or Arabic publications with accessible full text.

Exclusion criteria

- Non-scholarly commentary, or items without retrievable full text.
- Studies that mention ISO 9001 only tangentially without analytical substance for comparison.

The screening and selection process (title/abstract screening followed by full-text assessment) was conducted independently by two reviewers; disagreements were resolved through discussion and consensus, following PRISMA recommendations. Given the mix of empirical, review, and conceptual papers, quality appraisal used a tailored checklist adapted from established SLR tools: clarity of objectives, appropriateness of methods, sample/scope transparency, validity of conclusions, and relevance to the Algerian context. Empirical studies were additionally rated for methodological robustness (sample size, measurement clarity, statistical analyses). Low-quality items were retained only for contextual richness but flagged in the synthesis. This balanced approach follows PRISMA's emphasis on transparent reporting and quality consideration.

V. Result

5.1 Descriptive synthesis

First, it has been presented the descriptive statistics summarizing the evidences: number of records retrieved and screened, distribution by year, geography (Algeria vs. other countries), sectoral focus (manufacturing, services, construction), and study type (empirical, theoretical, review). A PRISMA flow documents the screening steps and final sample. This step provides empirical grounding for later comparisons and highlights the volume and temporal trends of research on ISO 9001/QMS (2015–2025).

5.2 Thematic synthesis

It was applied the thematic synthesis to integrate qualitative findings across the selected studies. Textual data (results, discussion, recommendations) were coded into the framework's five dimensions (institutional fit, resources, operational fit, flexibility, outcomes). Thematic aggregation identified consistencies and divergences between studies (e.g., repeated reporting of certification costs as a barrier; recurrent emphasis on managerial commitment as an enabler). Thematic synthesis methods followed established guidance for literature reviews in management research.

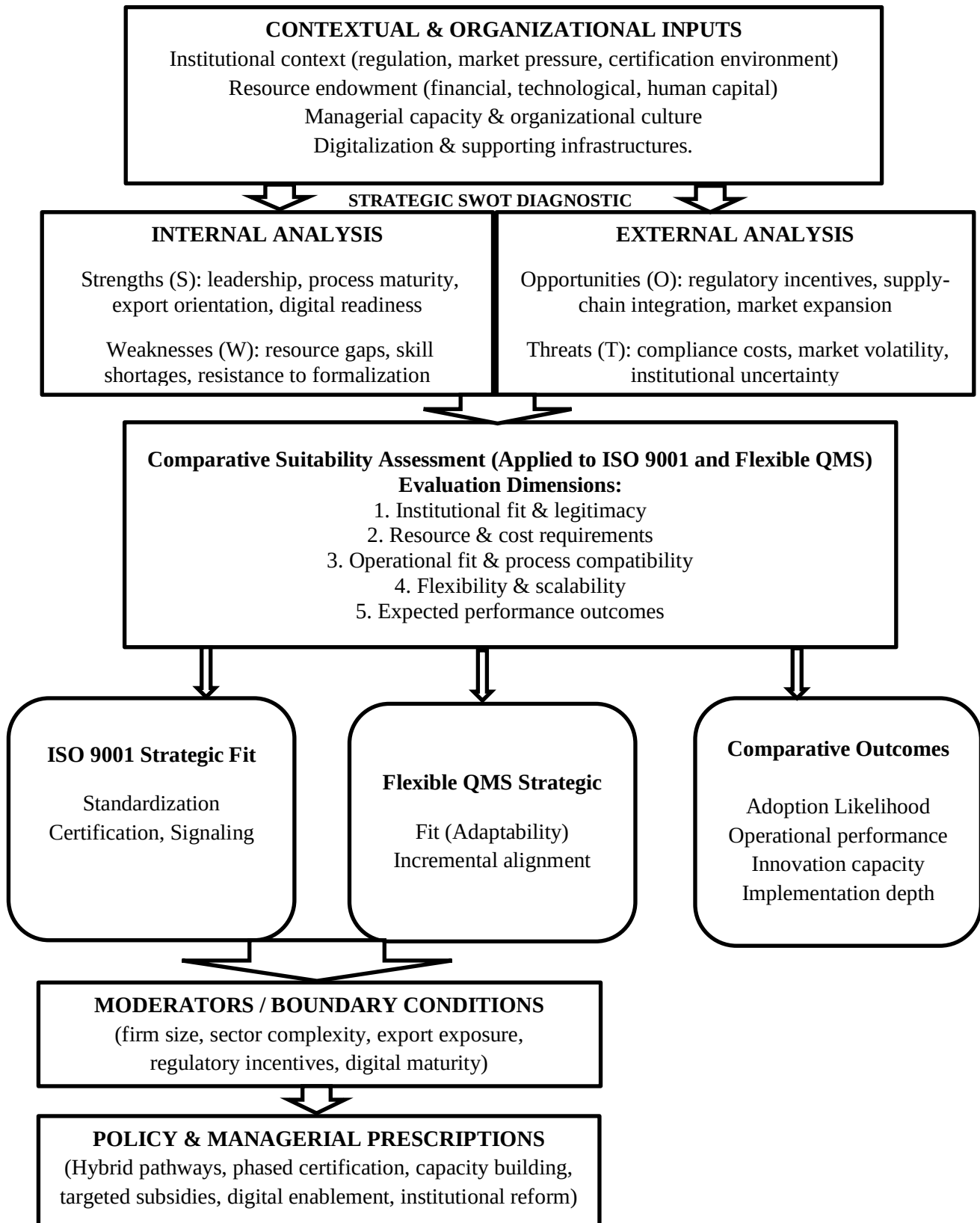


Figure 01: Conceptual framework

The framework organises the comparison between ISO 9001 and broader QMS along three analytic layers. First, contextual & organizational inputs capture the institutional and resource conditions that shape feasibility and fit. Second, the comparative suitability assessment applies the same multidimensional criteria to each approach (ISO 9001 and flexible QMS) using Swot Analysis so that their relative strengths and constraints can be systematically contrasted. Third, the model links suitability judgments to implementation outcomes (adoption likelihood, implementation quality, and performance effects), while explicitly recognising moderators and policy levers that shape realized results as shown in figure 01.

5.3 SWOT comparative tables between ISO 9001 vs. QMS for Algerian firms

Below are SWOT tables for each approach (strengths, weaknesses, opportunities, threats), followed by a compact comparative table that highlights the practical implications for firms in the context of Algeria and the international standard ISO. The tables draw on the reviewed literature and Algerian case evidence summarized.

Table 01: SWOT for ISO 9001

Category	Key items (evidence & implications)
Strengths	- Formalisation & process control : encourages documented processes, internal audits and standardized workflows, improving repeatability. (e.g., bank case evidence). (ISO, 2015; Bouchetara et al., 2022). - External legitimacy & market signal : certification acts as observable proof of quality for customers, regulators, and foreign buyers. (Ghafir & Bessouh, 2025). - Structured continuous improvement : risk-based thinking, PDCA cycles support systematic improvement. (Tari, 2018).
Weaknesses	- High upfront & recurring costs: consultancy, certification and surveillance audits create financial barriers for many firms. (Latoui, 2022; Bouzidi et al., 2023). - Documentation burden: heavy paperwork can divert attention from operational problem solving and be perceived as “bureaucratic.” (Bouzidi et al., 2023). - Perceived rigidity: standardized clauses can be misapplied, reducing local adaptability and innovation in resource-constrained settings. (Susanto, 2024).
Opportunities	- Market access & export potential: certification can unlock procurement and export opportunities for Algerian firms seeking foreign partners. (Ghafir & Bessouh, 2025). - Integration with digital QMS tools: digitisation can reduce admin burden and increase traceability (Tari, 2018; Zeng et al., 2018).

Threats	- Shallow compliance: firms may implement “paper ISO” without cultural change, limiting performance gains (Latoui, 2022). - Inequitable access: only better-resourced firms can adopt, potentially widening performance gaps across sectors. (Susanto, 2024).
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Table 02: SWOT for Locally-tailored QMS

Category	Key items (evidence & implications)
Strengths	- High contextual fit & adaptability: can be tailored to existing processes and cultural routines, increasing frontline adherence (hotel case). (Derrar et al., 2024). - Lower initial cost and scalable adoption: allows phased implementation (process mapping → internal audits → metrics) suited to resource-constrained firms. (Latoui, 2022). - Focus on capability building and learning: incremental steps facilitate staff training and ownership.
Weaknesses	- Weaker external signalling: absence of formal certification reduces observable credibility in procurement or export markets. (Ghafir & Bessouh, 2025). - Outcome variability: results depend strongly on managerial commitment and implementation quality, producing heterogeneous impacts. (Bouzidi et al., 2023).
Opportunities	- Pre-certification pathway: flexible QMS can be used as a stepping stone toward ISO 9001, building capacity and lowering shock of certification. (Susanto, 2024). - Cluster/shared services: SMEs can pool resources for joint QMS practices and later coordinate certification.
Threats	- Comparability and trust limits: without third-party assurance, buyers may prefer certified suppliers. (Ghafir & Bessouh, 2025). - Policy/market pressure: sudden regulatory or buyer demands for certification can force costly, rapid compliance.

VI. Discussion of Results

6.1 Summary of the evidence

The structured synthesis (2015–2025) drew on many core studies addressing ISO-based certification and broader quality-management approaches in the Algerian context including case and sectoral studies and recent systematic/narrative reviews (Bouchetara et al., 2022; Bouzidi et al., 2023; Derrar et al., 2024; Latoui, 2022; Susanto, 2024; Nazmia et al., 2023; Ghafir & Bessouh, 2025). Thematic coding identified recurring advantages and disadvantages

for both ISO-style certification and flexible QMS implementation. These recurring themes (process formalization, legitimacy, cost, documentation burden, adaptability, outcome variability) form the basis of the comparative synthesis below.

The ISO standard referenced throughout is ISO, and the national context is Algeria. The principal empirical contributions include the Algerian case studies by Bouchetara M. and Bouzidi Y., plus service-sector evidence from Derrar A. and thesis-level barrier analysis by Latoui M.A.; international syntheses include work by Susanto D.A., Nazmia I. and policy/market evidence from Ghafir A.

6.2 Advantages and disadvantages for ISO 9001

A) Advantages

1. Process formalization and operational discipline. ISO adoption strongly correlates with clearer process maps, documented procedures, internal audit cycles and role clarity all of which improve repeatability and control (Bouchetara et al., 2022; Bouzidi et al., 2023). For example, the bank case in Bouchetara et al. (2022) documented standardized service procedures and a sustained internal-audit calendar following implementation.
2. External legitimacy and market signalling. Several studies report that ISO certification functions as a credible signal to large buyers and export partners, facilitating market entry and contract eligibility (Ghafir & Bessouh, 2025; ISO, 2015).
3. Customer-focus and continuous improvement orientation. A number of reviews and empirical items record better complaint-handling systems, KPIs for customer satisfaction, and the embedding of PDCA cycles after certification (Nazmia et al., 2023).

B) Disadvantages

1. Certification and audit costs. The literature repeatedly highlights direct and indirect financial burdens (consultancy, initial and surveillance audits). These costs are frequently cited as the primary barrier for resource-constrained firms in Algeria (Latoui, 2022; Bouzidi et al., 2023).
2. Documentation burden and administrative overhead. Firms report heavy paperwork and a tendency to focus on audit-readiness over operational improvement when the documentation burden is high (Bouzidi et al., 2023; Latoui, 2022).
3. Rigidity and low contextual adaptability. International syntheses warn that prescriptive interpretations of the standard can reduce flexibility and stifle ad-hoc innovation, especially where managerial capacity is limited (Susanto, 2024).

ISO 9001's main strategic asset is institutional legitimacy and procedural standardisation; its main liabilities are financial and organisational. In Algerian firms the net payoff depends

on the firm's ability to (a) finance certification and (b) convert formalisation into genuine operational improvement rather than paperwork compliance (Tari, 2018; Bouchetara et al., 2022).

6.3 Advantages and disadvantages for QMS

A) Advantages

1. Adaptability and contextual fit. Flexible, locally-tailored QMS models better accommodate frontline routines, cultural norms and sectoral idiosyncrasies (Derrar et al., 2024; Bouzidi et al., 2023). The Ibis Hotel Tlemcen case showed that adapting procedures to staff workflows materially increased compliance and service quality.
2. Lower upfront costs and incremental scaling. Non-certified QMS practices (process mapping, internal audits, staff training) are usually cheaper and can be scaled gradually, making them more accessible for many Algerian firms (Latoui, 2022).
3. Facilitates capability building. Phased QMS adoption supports on-the-job learning and managerial skill accumulation without the immediate pressure of external audits.

B) Disadvantages

1. Weaker external legitimacy. Without third-party certification, flexible QMS approaches provide less observable assurance to export buyers and large procurement clients (Ghafir & Bessouh, 2025).
2. Outcome variability and comparability issues. Flexible QMS outcomes are heterogeneous; success depends heavily on managerial commitment and the quality of internal implementation (Bouzidi et al., 2023).

Flexible QMS models are pragmatically attractive where resources or institutional support are limited; they enable capability building and short-term performance gains. However, firms relying solely on this path risk missing opportunities that require formal certification unless they hybridize later.

6.4 Comparative synthesis

Multi-criteria insight. It can be suggested a contingent rule:

- If market/regulatory incentives demand certification (exports, regulated procurement), ISO 9001 is advantageous (despite costs). (Ghafir & Bessouh, 2025; ISO, 2015).
- If firms lack resources or QMS maturity, flexible QMS yields higher adoption likelihood and immediate internal benefits and can act as a precursor to ISO certification. (Susanto, 2024; Bouchetara et al., 2022).

Sectoral evidence (illustrative):

- Banking (Bouchetara et al., 2022): ISO adoption produced measurable document-control and customer-service improvements but required substantial consultancy and IT investment.
- Construction (Bouzidi et al., 2023): Low awareness, weak documentation and training shortfalls reduced the attractiveness of immediate certification.
- Hospitality (Derrar et al., 2024): Tailored QMS improved service consistency without formal certification, suggesting effective staged approaches.

Table 03: Practical comparative summary

Dimension	ISO 9001 (implication)	Flexible QMS (implication)
Adoption likelihood (resource constraint)	<i>Lower</i> costly, administratively demanding (Latoui, 2022).	<i>Higher</i> accessible incremental path (Derrar et al., 2024).
Market / export benefit	<i>High</i> credible signal for buyers and procurement (Ghafir & Bessouh, 2025).	<i>Low_Moderate</i> needs later certification for full market access.
Operational fit	<i>Good</i> if processes & digital support exist; otherwise friction (Bouchetara et al., 2022).	<i>High</i> designed around current routines; quick operational gains.
Time to impact	<i>Medium_Long</i> planning, investment, audits.	<i>Short_Medium</i> quick wins from process fixes & training.
Risk of superficial implementation	<i>High</i> risk of “paper ISO” if focus is on certificate, not change (Latoui, 2022).	<i>Moderate</i> risk if managerial commitment low, but easier to correct.
Recommended use in Algeria	Use when market/regulatory returns justify cost; pair with government support (Tarí, 2018; Ghafir & Bessouh, 2025).	Use as capacity-building first step; adopt hybrid pathway toward certification when ready (Susanto, 2024).

6.5 Balancing Certification and Flexibility is Considered the Best Strategic Quality Choices for Algerian Firms

A structured comparison between ISO 9001 certification and flexible Quality Management Systems (QMS), highlighting their practical implications for firms operating in Algeria is illustrated in the Table 03. The analysis shows that ISO 9001 offers substantial advantages in terms of market legitimacy and export competitiveness. Certification acts as a credible signal for buyers and public procurement authorities, strengthening trust and facilitating access to

regulated markets. However, ISO implementation is resource-intensive, administratively demanding, and often associated with longer timeframes before tangible performance gains are realized. Moreover, the risk of superficial or “paper-based” compliance remains significant when firms pursue certification primarily for reputational purposes rather than operational transformation.

In contrast, flexible QMS approaches demonstrate higher adoption feasibility, particularly for resource-constrained firms. They allow incremental implementation, better alignment with existing routines, and faster operational improvements. Although these systems provide limited external signaling power compared to certification, they foster internal capability building and managerial learning at lower cost and risk.

Overall, the article demonstrates that ISO 9001 and flexible QMS should not be viewed as competing alternatives but as sequential and complementary strategies. A hybrid pathway starting with flexible QMS and progressing toward certification when market incentives justify the investment offers a balanced and context-sensitive model for sustainable quality governance in Algerian firms.

VII. Conclusion and Recommendations

This study synthesised the 2015–2025 literature on ISO 9001 and broader Quality Management Systems (QMS) to evaluate their suitability and implementation implications for firms in Algeria and to derive practicable guidance for managers and policymakers. The evidence shows a clear pattern: ISO 9001 delivers strong process formalization and external legitimacy (a credible market signal), while flexible QMS approaches deliver contextual adaptability, faster operational gains, and lower upfront costs. Empirically, six of seven core studies report substantive gains in procedural standardisation associated with ISO adoption, and five of seven note its signalling value for market access; conversely, flexible QMS is repeatedly identified as the more feasible initial pathway where resources or institutional support are limited

However, the synthesis also highlights salient trade-offs. ISO’s principal liabilities are certification and audit costs, heavy documentation burdens, and risks of superficial compliance (“paper ISO”) when certification is pursued without concomitant capability development. Flexible QMS approaches, while accessible and learning-oriented, lack third-party assurance and produce more heterogeneous outcomes unless managerial commitment and measurement systems are robust.

On balance, the most defensible strategy for Algerian firms is a hybrid, staged adoption model: (a) commence with tailored QMS practices to build process awareness and managerial capability; (b) invest in digital tools and internal audit routines to reduce documentation friction; and (c) pursue ISO 9001 certification selectively when market or regulatory returns justify the costs and internal readiness is demonstrable. Policymakers should support this pathway via targeted subsidies or cluster certification schemes, capacity-building programs, and incentives for digital QMS adoption to lower barriers for SMEs. Managers should prioritize

readiness diagnostics, leadership development, and measurable pilot projects that demonstrate short-term gains before committing to external certification.

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