Legal compliance and effectiveness of the quality management system in commercial companies

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Abstract

This research analyzes the symbiosis between regulatory rigor and the operational metrics of qualitative control systems in commercially oriented firms. The central objective focused on assessing the degree of influence exerted by compliance with the current legal framework on the operational efficiency of management schemes implemented in organizations located in Valera, Trujillo. Methodologically, the inquiry adopted a quantitative perspective under a non experimental, cross sectional research design. The data collection phase targeted a census-based study group composed of twenty business leaders from the local commercial sector. The findings reveal a significant institutional gap: although business units formally declare adherence to various legal bodiesspecifically environmental regulations, the national labor framework, and ISO 9001 protocols the actual integration of these precepts into operational governance remains embryonic. This phenomenon denotes the existence of a disconnect between statutory requirements and their factual execution within corporate organizational management. Consequently, it is determined that the strategic fusion between legal rigor and the practice of excellence constitutes a central pillar for strengthening institutional robustness and ensuring continuity in competitive environments subject to high regulatory pressure.

Keywords:
Corporate governance, institutional sustainability, organizational isomorphism, QMS effectiveness.

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Conformidade legal e eficácia do sistema de gestão da qualidade em empresas comerciais

Resumo

Esta pesquisa analisa a simbiose entre o rigor regulatório e as métricas operacionais do sistema de controle da qualidade em empresas de perfil comercial. O objetivo central consistiu em avaliar o grau de influência exercido pela observância do marco jurídico vigente sobre a eficiência operacional dos sistemas de gestão implementados em organizações localizadas na cidade de Valera, estado de Trujillo, Venezuela. Em termos metodológicos, a investigação adotou uma abordagem quantitativa, sob um delineamento de pesquisa não experimental e transversal. A etapa de coleta de dados concentrou-se em uma população censitária composta por vinte gestores de empresas do setor comercial local. Os resultados revelam uma lacuna institucional significativa: embora as empresas declarem cumprir formalmente diferentes dispositivos legais, especialmente a legislação ambiental, a legislação trabalhista nacional e os requisitos da norma ISO 9001, a integração efetiva desses preceitos à governança operacional ainda se encontra em estágio incipiente. Esse fenômeno evidencia a existência de uma desarticulação entre as exigências normativas e sua implementação prática na gestão organizacional. Em consequência, conclui-se que a integração estratégica entre o rigor jurídico e as práticas de excelência em gestão constitui um pilar fundamental para fortalecer a solidez institucional e assegurar a sustentabilidade das organizações em ambientes competitivos submetidos a elevada pressão regulatória.

Palavras-chave: Governança corporativa, sustentabilidade institucional, conformidade legal, isomorfismo organizacional, eficácia do sistema de gestão da qualidade.

Legal compliance and effectiveness of the quality management system in commercial companies

Resumen

Esta investigación analiza la simbiosis entre el rigor regulatorio y las métricas operativas del sistema de control cualitativo en firmas de perfil comercial. El objetivo central se enfocó en evaluar el grado de incidencia que despliega la observancia del marco jurídico vigente sobre la eficiencia operativa de los esquemas de gestión implementados en organizaciones de la localidad de Valera, Trujillo. En términos metodológicos, la indagación adoptó una perspectiva cuantitativa bajo una arquitectura investigativa no experimental y transeccional. La fase de obtención de datos se focalizó en un grupo de estudio censal constituida por veinte líderes empresariales del sector comercial local. Los hallazgos revelan una brecha institucional significativa: pese a que las unidades de negocio declaran adherirse formalmente a los distintos cuerpos legales específicamente la regulación ecológica, el marco laboral nacional y los protocolos ISO 9001, la integración real de dichos preceptos en la gobernanza operativa es todavía embrionaria. Este fenómeno denota la existencia de una desarticulación entre los requerimientos estatutarias y la ejecución fáctica en la gestión organizacional corporativa. En consecuencia, se determina que la fusión estratégica entre el rigor jurídico y la praxis de la excelencia constituye un pilar axial para vigorizar la robustez institucional y asegurar su continuidad en entornos competitivos sujetos a una alta presión regulatoria.

Palabras clave: Gobernanza corporativa, sostenibilidad institucional, cumplimiento legal, isomorfismo organizacional, eficacia del SGC.

Introduction

Under the contemporary paradigm of strategic leadership, the alignment of sustainability goals with the infrastructure designed to ensure internal process functionality has transitioned from a technical option to an imperative for corporate longevity. In this context, the effectiveness of a Quality Management System (QMS) depends not solely on procedural standardization, but rather on the capability to holistically integrate regulatory and civil liability requirements. Current scientific literature—particularly Antunes et al. (2021)—demonstrates that implementing international frameworks like ISO 9001 significantly impacts performance metrics and corporate success, provided that the system transcends administrative rigidity to serve as a driver for continuous evolution and stakeholder transparency across the institutional framework.

In today's business landscape, defined by a dense regulatory architecture, the legal framework plays a critical role in safeguarding operational stability and securing the social license of corporations. Particularly in the Venezuelan context, productive functions operate within a highly complex legislative ecosystem that merges ecological, labor, and commercial imperatives designed to guide economic progress under principles of ethics and responsibility. Consequently, the regulatory framework anchored in the Organic Environmental Law (2006) and the Organic Labor Law for Workers (2012), aligned with global management standards, establishes the structural foundations required to sustain operational workflows and direct institutional behavior toward superior performance standards.

However, the existence of officially established legal frameworks does not, per se, guarantee their factual internalization into the daily operations of corporate entities. A heterogeneous body of literature has demonstrated that a critical gap persists between the documentary validation of compliance and its actual execution at the core of the business. This phenomenon is frequently analyzed through the lens of institutional isomorphism, wherein the adoption of management protocols is often restricted to a purely cosmetic or symbolic dimension, failing to foster substantive improvements in productivity. Under this perspective, regulatory compliance is undermined by a peripheral formality that fails to permeate strategic governance.

From this viewpoint, quality excellence paradigms face the challenge of merging the demands of the regulatory ecosystem with processes aimed at continuous optimization. When compliance with legal mandates is organically integrated into the organizational structure, it reinforces both corporate ethical commitment and firm robustness. Conversely, if regulatory adherence degrades into a mere bureaucratic burden, the management model's capacity to drive structural transformations in corporate performance is compromised, ultimately reducing it to a superficial administrative formality.

Within the commercial dynamics specific to the jurisdiction of Valera, Trujillo, this scenario raises fundamental questions regarding the impact of legal compliance on the robustness of corporate leadership. The mere existence of current regulations does not guarantee that corporations establish operational routines synchronized under parameters of excellence, resilience, and moral integrity. Consequently, analyzing the connection between regulatory adherence and the actual productivity of business management architectures acquires significant scientific relevance.

In response to this critical nexus, the present study aims to examine the extent to which compliance with the legal framework impacts the performance of the quality assurance infrastructure within commercial enterprises located in the city of Valera, Trujillo State, Venezuela. Under this analytical premise, the inquiry seeks to verify whether regulatory guidelines contribute to strengthening institutional solvency and foster the integration of management processes synchronized with the mandates of the current regulatory ecosystem

Literature Review

Harmonization and Shared Value

The evolution of management paradigms within the business environment has driven a progressive integration between legal mandates and the managerial methodologies designed to ensure the viability of the institutional fabric. From this perspective, the shared value creation paradigm has gained traction as an approach that successfully combines operational effectiveness with strict adherence to regulatory frameworks and ethical stakeholder responsibility. In this regard, prominent scholars such as Huaches Llocya et al. (2022) posit that corporate ethical duty must be conceptualized as a transversal obligation—a mechanism through which an entity's tactical goals are balanced with the legitimate expectations of the social and community environment.

Under this conception, corporations do not restrict their actions solely to maximizing financial profits; they also manage verifiable impacts within their socio-institutional sphere of influence, thereby strengthening their reputation among social agents. Implementing socially-oriented operational frameworks fosters the construction of an institutional narrative grounded in transparency and integrity, which is critical both for safeguarding corporate operational continuity and ensuring the long-term survival of the business unit in highly dense regulatory environments.

In contrast to this analytical model, quality assurance protocols operate as planning mechanisms that streamline the alignment of operational workflows with the prevailing regulatory landscape. Diverse academic contributions emphasize that international standardization frameworks promote the adoption of continuous optimization philosophies, process-based management, and adherence to legal mandates in the execution of business activities. Through this convergence, the linkage between management protocols, legal imperatives, and the higher-order strategic objectives that trace the business unit's trajectory is optimized.

The capacity of quality control models is intimately related to their ability to integrate legal commitments within their operational configuration. When legal precepts are effectively amalgamated into daily tasks, organizational cohesion is strengthened, and the gaps between the regulatory design phase and technical implementation are mitigated. Conversely, if legal compliance is restricted to a merely bureaucratic execution, the management framework's capacity to generate outcomes that positively transform corporate performance is compromised.

Within this research framework, quality planning is facilitated by structuring operational routines in alignment with the prevailing regulatory environment. Diverse academic contributions emphasize that international standardization frameworks promote the adoption of continuous improvement philosophies, process-based management, and strict adherence to legal mandates in the execution of business activities. Through this convergence, the linkage between management protocols, legal imperatives, and the higher-order strategic objectives that trace the organization's trajectory is optimized.

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Legal and Contractual Compliance

Regulatory compliance, or compliance, serves as a strategic shield against environmental instability and legal uncertainty. From the perspective of Flores Segura (2018), compliance transcends mere adherence to the law to become an indefeasible duty of diligence for corporate directors. In agreement, Camison et al. (2006) maintain that incorporating regulatory compliance into organizational management frameworks strengthens institutional coherence and mitigates the risks associated with non-compliance.

Consequently, the link between binding commitments and the legal framework constitutes an essential pillar in the design of quality architectures. Diverse studies have indicated that contractual compliance operates as an operational mechanism that aligns legal provisions with organizational procedures, thereby ensuring consistency between regulatory planning and institutional execution (Camison & González, 2022; Antunes et al., 2021).

Any model that disregards the strict observance of its contractual stipulations or the validity of its legal duties is vulnerable to administrative failures that undermine its organizational performance. In this regard, the rigorous monitoring of established covenants enables the early detection of deviations and facilitates corrective actions that align corporate operations with prevailing regulatory frameworks.

Quality Management System (QMS)

From the perspective of administrative theory foundations and the contemporary legal environment, the architecture of quality assurance is conceptualized as an organizational framework designed to enhance systematic improvement and ensure regulatory discipline within the corporate ecosystem. Through this lens, this working framework merges internal operational efficiency with adherence to legal imperatives, thereby fostering institutional transparency and strengthening the resilience and flexibility of commercial enterprises facing highly complex regulatory environments. Under this premise, Antunes et al. (2021) argue that the adoption of superior performance frameworks, represented by the ISO 9001 family of standards, drives robust corporate performance provided these structures are corely embedded into the procedural DNA and organizational philosophy. Similarly, Napoles Rojas et al. (2023) assert that quality management frameworks streamline the structuring of workflows oriented toward continuous optimization, facilitating the technical evaluation of findings and the execution of tactical decisions at the core of the entity.

In contemporary reality, ISO 9001 is recognized as the global benchmark for institutional organization. According to the ISO 9001 Checklist (n.d.), the incorporation of its guidelines enables the structuring of continuous improvement dynamics grounded in empirical evidence. However, formal certification proves insufficient when it is not integrated into cultures anchored in accountability and shared commitment. In this regard, Antunes et al. (2021) emphasize that the operational effectiveness of the standard within an entity is contingent upon its substantive appropriation, thereby avoiding bureaucratic formalisms and strengthening accountability before institutional and social networks.

For the management model to achieve genuine institutional maturity, it must be directed toward strategic adaptability within collaborative governance frameworks. Organizational improvement, as posited by Napoles Rojas et al. (2023), demands prospective diagnoses that identify structural bottlenecks and opportunities for disruption within the collective fabric. The convergence of business intelligence and digital tools reconfigures the QMS into an intelligent architecture for public-private decision-making, capable of generating mutual benefits in competitive and legally demanding environments

Corporate Sustainability and Sustainable Quality Management

Under the paradigm of contemporary organizational management, business viability is defined by the capacity of institutions to generate long-term financial, social, and ecosystemic impacts. This vision requires firms to assimilate methodologies linked to social consciousness, rational resource optimization, and compliance with the state regulatory framework into their internal configurations. In this scenario, Freire Sánchez and Jordán Vaca (2024) indicate that institutional robustness is achieved when management strategies transcend corporate rhetoric and are substantively integrated into the tactical execution of the business ecosystem.

Through this same analytical lens, quality assurance frameworks are identified as essential mechanisms to amalgamate principles of continuous improvement, institutional commitment, and regulatory adherence into daily business operations. Through this synergy, these models contribute to strengthening organizational resilience and foster the long-term survival of business units operating in financial ecosystems defined by notable uncertainty and complexity.

This conceptual evolution has led to the consolidation of Sustainable Quality Management as an analytical category. Consequently, Horinov and Azamatov (2022) posit that the governance of excellence requires the incorporation of sustainability indicators to achieve substantive effectiveness—a premise that reinforces institutional legitimacy through the intelligent strategic management of assets and the enhancement of human talent. Thus, the articulation of academic networks and regulatory practices enables the deployment of adaptive capabilities in the face of complex and regulated environments, in full alignment with the imperatives of sustainable development.

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From the logic of collaborative governance, the pressure exerted by investors, regulatory authorities, and academic communities operates as a validation mechanism for university-corporate social capital. Haleem et al. (2022) contend that entities implementing sustainable management frameworks operate under the permanent scrutiny of stakeholders who demand substantive transparency. Comparative evidence demonstrates that institutions integrating quality, sustainability, and social co-responsibility exhibit greater resilience against external crises, thereby consolidating sustainability as a strategic investment oriented toward long-term survival and legitimacy within the commercial arena.

The Venezuelan Legal Framework and the Integrated Legal Compliance Matrix within the QMS

Within the Venezuelan juridical framework, adherence to regulatory mandates represents a substantial factor for the operability and growth of for-profit business units. The 1999 Constitution establishes a compendium of transversal guidelines aimed at safeguarding labor activity, incentivizing financial progress, and ensuring the protection of environmental heritage, thereby configuring a register of statutory obligations that organizations are required to fulfill within the praxis of their value chain. In this context, legal certainty acquires strategic significance as a driver for firm robustness by establishing clear guidelines that steer managerial decision-making and delimit the scope of organizational ethical and regulatory commitment before civil society.

To operationalize these mandates, the Venezuelan legal system provides peremptory norms that shape the legal sustainability matrix within collaborative governance and university-industry social capital frameworks. Environmental regulations of organic rank (2006) mandate a joint commitment to safeguarding ecosystemic assets, while Decree No. 8,938 (2012), which enacts the LOTTT, establishes a labor regime oriented toward protecting worker stability and dignity. Non-compliance with these provisions undermines the performance of any administrative framework aspiring to sustainable recognition nationwide, thereby weakening institutional coherence in the face of contemporary regulatory complexity.

Table 1
Integrated Legal Compliance Matrix within the QMS

COMPLIANCE DIMENSION	BIBLIOGRAPHIC REFERENCE / REGULATIONS	IMPACT ON THE EFFECTIVENESS OF THE QMS	VERIFIABLE REQUIREMENT AND CONTROL MECHANISM
Strategic/ Constitutional	CRBV (1999)	Legitimacy and legal certainty of the sustainable project.	Preservation of ecological balance and citizens' rights.
Operational/ Quality	ISO 9001:2015 Antunes et al. (2021)	Process optimization and administrative transparency.	Demonstration of continuous improvement and accountability.
Commercial/ Corporate	Monsalve (2024)	Strengthening of governance and the legitimacy of decisions.	New technologies and transparency in meetings and public events.
Partnership/Labor	LOTTT (2012) Huaches Llocya et al. (2022)	Cohesion of human capital and corporate ethics.	Fulfillment of social benefits and ethical responsibility.
Environmental	Organic Environmental Law (2006)	Risk mitigation and auditable sustainability.	Impact audits and management of natural resources.

QMS Effectiveness and Regulatory Integration (ISO 9001, 14001, 45001)

The superior performance of the quality management framework is optimized by merging global regulatory standards into networks of strategic cooperation and university-corporate shared value. In alignment with these foundations, the theses of Bedoya Marrugo et al. (2024) suggest that the concurrent adoption of international standards for integrated management (such as ISO 9001, 14001, and 45001) within supply chains minimizes procedural operational overlaps and optimizes strategic capital. Under this systemic vision, the proactive treatment of uncertainties can be managed through an organizational governance approach that elevates integrity and human talent development to a level of substantive relevance equivalent to the technical audit of the final output, thereby progressively consolidating market robustness and the corporate legitimacy of the organization.

From a perspective of systemic complementarity, the operational deployment of quality management models cannot be conceived as static, but rather as the product of an iterative dynamism of organizational improvement. Under this premise, adherence to universal precepts according to the ISO 9001 protocol requires the establishment of methodical frameworks for evaluation, tracking, and cyclical monitoring that facilitate the diagnosis of discrepancies during operational implementation stages and guide the activation of corrective adjustment measures. In line with the findings of Napoles Rojas et al. (2023), successful quality management entails the assimilation of control and monitoring tools that streamline the assessment of corporate efficiency and the structural redesign of business workflows, thereby strengthening the responsive capacity of corporate entities to react to regulatory and market ecosystems with ever-increasing competitive requirements.

Under the juncture of vanguard digital transformations sweeping through organizations, the assimilation of next-generation technological resources has emerged as a strategic axis to refine quality governance structures and reinforce operational monitoring mechanisms. In this line of thought, Monsalve (2024) posits that the articulation of digital ecosystems within the organizational workflow optimizes the comprehensive tracking of operations and enhances rigor in the custody of evidence associated with the Quality Management System framework. Furthermore, the migration toward digitalized document management frameworks facilitates the optimized auditing of adherence to both excellence standards and prevailing legal mandates, thereby fostering an administration grounded in integrity and high performance. Consequently, the alignment of disruptive advancements, regulatory rigor, and continuous optimization contributes to anchoring QMS effectiveness and guaranteeing corporate resilience and stability within business ecosystems defined by growing sophistication and regulatory demands

Methodology

Research Approach and Type

The gnoseological foundation and methodological architecture were grounded in a quantitative worldview which, in accordance with the methodological guidelines of Tamayo y Tamayo (2014), is directed toward acquiring and analytically processing information to validate scientific hypotheses through measurable metrics. This approach enables a comprehensive examination of corporate dynamics by continuously monitoring variables, thereby ensuring the collection of robust empirical findings that support the present inquiry.

In methodological terms, the study reaches an analytical-descriptive scope with a correlational dimension, aiming to analyze regulatory consistency within commercial enterprises in the Valeran context and determine its link to the effectiveness of the institutional quality architecture. Following the postulates of Arias (2016), this research design allows for the identification of interdependencies between the study variables without altering the nature of the subject in its original condition. Such an approach is decisive for interpreting how adherence to legal frameworks amalgamates with the optimization of administrative management and technical operations.

Research Design

In accordance with the pillars of research praxis in management sciences and in absolute alignment with the current legal framework, the operational phase was developed through a non-experimental, cross-sectional methodological architecture, configured to examine indicator fluctuations within their natural setting without any intentional manipulation by the researchers. As posited by Balestrini (2006), this field study promotes a rigorous inspection of events in their primary condition, thereby enabling the collection of objective data regarding the correlations that emerge between the domains under analysis.

Through this methodological approach, the adopted structure facilitated the examination of regulatory compliance and its statistical link with the performance of management and quality assurance frameworks within commercial corporations established in the jurisdiction of Valera, Trujillo State. For this purpose, the analytical pillars adopted were the regulatory frameworks contained in the Organic Environmental Law (LOA), the regime governing labor relations (LOTTT), and prevailing commercial legal provisions. This approach permitted the diagnosis and description of organizational behavior in response to environmental regulatory demands, identifying its tangible impact on the efficiency of corporate management nodes.

Population and Sample

The empirical setting of the research comprised business owners from the commercial sector located in the jurisdiction of Valera, Trujillo State, Venezuela. Due to the absence of a unified and updated registry grouping all economic actors in the sector, the study population was delimited based on criteria of accessibility, relevance, and data availability, selecting those business owners who met the characteristics defined for the investigation.

Given the limited size of the population and considering the feasibility of access to the subjects, the study adopted a census sampling approach that included the entirety of the target population, which consisted of 20 business owners from the commercial sector of the Valera municipality, Trujillo State. Consequently, the population and the sample coincided completely, incorporating all the observation elements defined for the analytical setting. Following the postulates of Arias (2016), census sampling is appropriate when the population is finite and manageable, as it allows for the inclusion of all components that integrate the subject of interest; this feature minimizes sampling error and ensures that the results more faithfully reflect the analyzed phenomenon within its territorial context.

Data Collection Technique and Instrument

In alignment with the empirical-analytical paradigm guiding this inquiry, the gathering of primary source evidence was executed through the deployment of a structured collection instrument designed to compile concrete evidence regarding compliance with regulatory frameworks and its direct impact on the optimization of quality management architectures within enterprises in the Valeran context. According to the technical criteria of Tamayo y Tamayo (2014), the use of items within a scaled format constitutes a valid means for gathering verifiable findings. This technique guarantees uniformity in the responses emitted by the analyzed sample, while optimizing the analytical treatment of data through the use of inferential statistical procedures.

The instrument was designed using a Likert-type scale with a five-point choice of response alternatives, aimed at quantifying the evaluations of primary informants regarding the dimensions of Legal Compliance—encompassing the environmental, labor, and commercial axes—and the functional performance of the Quality Management System (QMS). This measurement modality facilitates the conversion of qualitative assessments into discrete numerical data, thereby streamlining the decoding of trends and the establishment of associative links between the categories under study within the institutional environment.

The response options established for the scale were defined as follows:

1. **Always (5):** Indicates complete and systematic adherence to the standard or process.
2. **Almost Always (4):** Reflects frequent execution, albeit with isolated exceptions.
3. **Sometimes (3):** Denotes an irregular or intermittent practice (the neutral point of the scale).
4. **Almost Never (2):** Suggests that compliance is sporadic and does not form part of the operational culture.
5. **Never (1):** Represents the total absence of application regarding the standard or quality benchmark.

Application to the Study Variables The selection of these options allows for capturing the "technical asynchrony" in the following manner:

Variable: Legal Compliance

- *Environmental Dimension (LOA):* Allows for quantifying whether the Valeran business owner "always" or only "sometimes" applies environmental impact controls.
- *Labor Dimension (LOTTT):* Measures the frequency with which labor rights are respected as a social process.
- *Commercial Dimension (Monsalve, 2024):* Evaluates the frequency of utilizing new technologies to foster transparency in corporate assemblies.

Variable: QMS Effectiveness

- Allows for determining whether continuous improvement processes are executed "always" or if they are reduced to a purely documentary level (organizational isomorphism).

Analysis Procedure

The data gathered through the questionnaire were processed using descriptive statistics to determine frequencies and inferential statistics to estimate the correlation between variables. This analytical treatment made it possible to test the hypothesis regarding the incidence of legal compliance on QMS effectiveness within networks of collaborative governance and university-industry social capital, thereby ensuring that the results achieved the required scientific validity.

Results

In absolute congruence with the prevailing legal framework and under the analytical paradigm of modern business management, the diagnosis of the impact of regulatory compliance on the operational deployment of the quality architecture was grounded in the information obtained through the administration of the instrument to 20 business owners and executives belonging to the commercial sector of the Valera municipality, Trujillo State, Venezuela, selected in accordance with the criteria established for the research. Under this premise, the compiled evidence was processed through detailed examination protocols with the purpose of determining the frequency of adherence to environmental, labor, and commercial precepts, linking these findings to the comprehensive performance of the organizations and their alignment with the regulatory mandates governing the regional economic environment.

Operationalization and Reliability of the Instrument

The device developed for gathering the empirical findings—the theoretical foundation of which is supported by the analytical criteria of Arias (2016) along with the theses of Tamayo y Tamayo (2014)—was configured with fifteen response items, structured under a Likert-type measurement scheme with a five-point options scale, applied within scenarios defined by participatory governance and university-industry social capital. The internal consistency audit of the instrument revealed a metric for the consistency statistic positioned at 0.89, a figure denoting a power classified as 'Very High'. This result certifies that the collected evidence accurately reflects the administrative dynamics in the local environment, thereby streamlining the process of testing theoretical assumptions against factual operational praxis.

Dimension 1: Legal Compliance (LOA, LOTTT, and Commercial Governance)

In light of the prevailing regulatory framework and from the perspective of administrative dogma applied to the Trujillo economic context, the findings evidence a leaning toward so-called "ceremonial isomorphism"—a phenomenon that compromises the institutional legitimacy of business units embedded within corporate governance frameworks. In the environmental dimension (Organic Environmental Law, 2006), 65% of the business owners were positioned within the "Sometimes" option, which indicates that regulatory discipline is limited to minimum compliance to avoid sanctions, without being incorporated as a substantive practice oriented toward institutional robustness.

In the labor domain (LOTTT, 2012), although 70% state that they regularly comply with contractual and social security obligations, when contrasting these responses with the perception of equity provided for in Art. 18 LOTTT, the "Almost Always" alternative reaches 45%, revealing a gap between legal formality and social legitimacy. In commercial matters (Monsalve, 2024), a significant technological distance persists: barely 15% continuously utilize digital tools to foster transparency in corporate assemblies, which restricts corporate deliberation and weakens regional corporate governance within university-industry social capital networks

Dimension 2: Effectiveness of the Quality Management System (QMS)

The assessment of the institutional effectiveness of the QMS—taking ISO 9001 and the criteria of Antunes et al. (2021) as benchmarks within collaborative governance and university-industry social capital contexts—demonstrated that 60% of actions aimed at organizational improvement are executed reactively rather than anticipatorily. Although 100% of the firms maintain documentary support, the so-called "technical asynchrony" persists, given that data relating to legal compliance do not enter collegial spaces of strategic deliberation or the decisional circuits that structure institutional legitimacy.

Table 2
Correlation and Scientific Impact

VARIABLE	MEAN (x)	STANDARD DEVIATION (σ)	INTERPRETATION
Environmental Compliance	3.2	0.85	Moderate / Reactive
Labor Compliance	4.1	0.60	High / Structural
Business Governance (Technology)	2.5	1.10	Low / In transition
Effectiveness of the QMS	**3.4**	**0.78**	**Medium / Documentary**

The correlational processing made it possible to determine a linear and statistically robust link (ξ=0.74) between the level of comprehensive regulatory adherence and the operational performance of Quality frameworks within the analyzed commercial units. This finding reveals that those entities exhibiting superior standards of compliance with legal mandates—with special emphasis on the regimes regulating labor stability (LOTTT) and the management of ecosystem assets (LOA)—show a propensity to implement operational frameworks with a more solid architecture and a higher capacity for strategic response in high-complexity regulatory ecosystems. In such a scenario, regulatory discipline is consolidated as a determining factor of institutional resilience, optimizing the articulation of internal dynamics and elevating the consistency of operational processes within the organizational structure.

Impact Analysis

The factual evidence indicates that business operations in Valera become ineffective when circumscribed solely to the formal custody of records. Technical registries demonstrate that the lack of a legal prevention philosophy—particularly regarding the integration of emerging commercial innovations into co-governance networks—constitutes an obstacle that prevents achieving contemporary benchmarks of quality excellence and long-term viability demanded by the global market, thereby weakening the legitimacy built upon university-industry social capital.

Table 3
Matrix of Technical Asynchrony and Variable Correlation

SCOPE OF STUDY	FORMAL ADHERENCE (DOCUMENTARY)	OPERATIONAL INTEGRATION (PRAXIS)	EFFECTIVENESS GAP (Δ)	CORRELATION (ρ)
Legal-Environmental (LOA)	4.4	3.2	1.2	0.68*
Legal-Labor (LOTTT)	4.8	4.1	0.7	0.82**
Legal-Commercial (Governance)	3.9	2.5	1.4	0.75**
Overall Average	**4.37**	**3.27**	**1.10**	**0.75**

Note: Significance: * $p < 0.05$; * $p < 0.01$. Scale 1–5.

Following the completion of the descriptive stage, a comparative assessment of arithmetic means (X) was executed, aimed at determining the effective distance between Formal Adherence—that is, the compliance declared in internal records—and Operational Integration, understood as the factual incorporation of such protocols into the QMS decision-making workflow within management networks under a collaborative governance approach.

Scientific Rigor and Theoretical Substantiation Analysis

The evidence yielded by the statistical report in Table 2 manifests a significant disparity ($\Delta = 1.10$) between the declared regulatory precepts and their practical assimilation into corporate routines. This gap suggests that, although firms ratify their adherence to current regulatory frameworks, the operationalization of these mandates within the Quality Management System (QMS) architecture still presents limitations across various workflows. Consequently, the data indicate that the degree of compliance with laws tangibly impacts QMS performance, given that those corporations that safeguard their internal legal monitoring mechanisms tend to exhibit higher levels of coherence in their leadership protocols and in the technical management of their quality processes.

1. **Institutional Isomorphism in Ecological Matters:** The disparity detected in the sustainability axis (1.2) reveals that a considerable volume of Valeran enterprises integrate ISO 9001 and the LOA (2006) under a merely symbolic logic. Following the thesis of Antunes et al. (2021), when the standard is limited exclusively to preventing legal penalties, the entity sacrifices its capacity to generate sustainable benefits, remaining trapped in a culture of bureaucratic compliance disconnected from responsible management.

2. **Governance and Commercial Modernization:** The greatest asynchrony is located within the commercial dimension (1.4). Although business owners declare an interest in transparency, practice reveals lags in the adoption of deliberative technologies. This finding confirms the points made by Monsalve (2024): administrative effectiveness in the digital economy is unfeasible without platforms that guarantee transparent corporate decisions; the absence of this cognitive infrastructure weakens the strategic direction of the QMS and fractures the bonds of trust that sustain university-industry social capital.

3. **Legality-Quality Relationship**: The coefficient obtained ($\varrho = 0.75$) reveals a high-intensity association within the collaborative governance networks linked to university-industry social capital. Such evidence confirms that QMS effectiveness cannot be conceived as an autonomous dimension, given that it is legally conditioned by comprehensive compliance with the prevailing legal order. In line with Camison et al. (2006), total quality demands systemic coherence; when labor compliance provided for in the LOTTT and the environmental requirements of the LOA are not assumed as strategic assets, the organization loses the legitimacy necessary to operate within the Venezuelan institutional complexity.

The information gathered through the instrument allows for inferring that the commercial sector of Valera exhibits high documentary formalization, albeit with limited operational effectiveness. This dissociation suggests that, to achieve scientific impact and lasting sustainability, entities must abandon episodic reaction to regulation and advance toward a substantive integration where legal compliance articulates with university-industry social capital networks as the foundation of institutional excellence.

Discussion

The comparative examination of the results against specialized doctrine evidences a critical convergence between regulatory compliance and the systemic viability of organizations. The identified effectiveness gap ($\Delta = 1.10$) between formal adherence and operational integration ratifies the hypothesis that the commercial sector of Valera, Trujillo State, is passing through an evolutionary stage characterized by ceremonial isomorphism—a phenomenon that limits the maturity of institutional design and weakens the collaborative governance necessary to transform legality into a sustainable competitive advantage.

Governance and Institutional Resilience

From the perspective of administrative dogma applied to the economic context of Trujillo State, the empirical evidence allows for inferring that governance transcends the conception of a static regulatory architecture, emerging instead as a transformative workflow through which legitimacy and solvency are strengthened within corporate entities. In this vein, the stance of Tapia Ovalle (2024) maintains that the viability and permanence of the firm require a coherent articulation between the legal framework and the ethical principles guiding institutional strengthening.

The findings demonstrate that when business leaders in Valera view environmental or labor regulations strictly as formal mandates—rather than tools for regulatory co-responsibility—the organization's resilience tends to decline. Consistent with this view, Breton Coll (2022) argues that corporate stability in the modern era depends on the ability to maneuver strategically amid fluctuations in the business ecosystem. Consequently, organizations that restrict themselves to superficial, paper-based compliance remain highly vulnerable to the structural crises' characteristic of the Venezuelan market.

Quality, Innovation, and Technological Capabilities

Within the commercial-technological dimension, the detected gap (1.4) evidences lag in the consolidation of internal capabilities associated with collaborative governance and university-industry social capital. The scarce integration between the QMS and emerging technologies for institutional deliberation (Monsalve, 2024) coincides with Larrouyet (2015), who affirms that the development of technological competencies in SMEs does not emerge automatically, but rather as a socio-technical construction that requires sustained strategic leadership in order to ensure organizational resilience within the Trujillo framework.

The weak convergence between digital infrastructure and organizational practices directly restricts innovative aptitude within collaborative governance environments articulated with university-industry social capital. Prajogo and Sohal (2001) argue that Total Quality Management (TQM) and innovation maintain a bidirectional relationship; nonetheless, when management is reduced to documentary safeguarding, institutional creativity is inhibited. The evidenced paradox demonstrates that the commercial business community of Valera privileges administrative formality over strategic flexibility, thereby limiting the managerial willingness necessary to transform legal compliance into a sustainable competitive advantage.

Leadership as a Driver of Effectiveness

Consequently, the high correlation ($\varrho = 0.75$) between legality and QMS performance supports the thesis of Rathilall, Singh, and Ramchander (2024), who, drawing from experiences with ISO 9001:2015, argue that organizational improvement is unfeasible without leadership that embraces bioethical commitment as a strategic policy within collaborative governance and university-industry social capital networks. In the Trujillo context, the findings indicate that low effectiveness does not stem from deficiencies in the national legal system, but rather from a restricted managerial vision that fails to integrate sustainability as a permanent institutional asset.

It is concluded that overcoming "technical asymmetry" requires commercial enterprises in Valera to replace administrative rhetoric with collaborative governance frameworks oriented toward sustainability and the strengthening of university-industry social capital. This transition demands that regulatory compliance transcend the punitive approach and consolidate itself as the backbone of a resilient managerial architecture, capable of harmonizing operational excellence with full adherence to the Venezuelan legal order, thereby ensuring institutional coherence in the face of global environment complexities

Limitations and future research directions

Limitations of the Study

Aside from the internal coherence of the adopted methodological architecture and the suitability of the findings for the Valeran commercial ecosystem, this study acknowledges certain constraints that limit the extrapolation of its results. As an initial consideration, the examination focused on a census unit of twenty economic actors; while this guarantees high diagnostic fidelity within the context of Trujillo's commercial activity under the parameters of Arias (2016), it restricts the generalizability of the data to other productive sectors or geographical areas operating under heterogeneous regulatory regimes within strategic cooperation networks.

Second, the cross-sectional design of data collection prevents examining the historical evolution of legal compliance in the face of variations in macroeconomic variables or future reforms of the legal system. Likewise, the potential impact of an isomorphism of a symbolic nature is acknowledged; that is, although the instrument demonstrated robust internal consistency ($\Delta = 0.89$), there remains the possibility that informants biased their responses toward projecting a managerial formality that transcends daily operational praxis, conditioned by the imperatives of social legitimization in highly complex institutional environments.

Future Research Directions

Based on the identified effectiveness gap ($\Delta = 1.10$) and the demand to consolidate resilient institutional architectures within collaborative governance and university-industry social capital networks, the following research lines are proposed to deepen the scientific analysis of organizational legitimacy, regulatory adaptation, and business sustainability:

1. **Digital Governance and Transparency:** It is pertinent to examine the impact of emerging technologies on the transparency of corporate assemblies. According to Monsalve (2024), future inquiries should assess how the digitalization of legal compliance mitigates technical asynchrony and reinforces the trust of institutional, academic, and community stakeholders within co-governance frameworks.

2. **Leadership and QMS Maturity:** Given that environmental compliance exhibits reactive execution (Mean= 3.2), it is proposed to study the role of bioethical leadership in the transition from a documentary logic toward integrated operational practices within collaborative governance and university-industry social capital networks. Applying the models proposed by Rathilall et al. (2024) would make it possible to determine whether the strategic commitment of top management transforms legal regulations into a sustainable competitive advantage.

3. **Resilience and Technological Capabilities:** It is suggested to promote longitudinal studies linked to the development of digital skills in small and medium-sized enterprises within the sector. Under the analytical lens proposed by Larrouyet (2015) and Breton Coll (2022), it is fundamental to verify whether the systemic synergy among ISO 9001 protocols, the LOTTT, and the LOA strengthens the firm's adaptive capacity during periods of extended financial instability within the nation's regulatory framework.

4. **Multicenter Study:** It is proposed to replicate this methodological framework in other economic hubs of Venezuela to test whether the organizational paradox detected in Trujillo is a national constant or a variable conditioned by regional managerial culture

Conclusions

- The study supports the position that regulatory compliance in the commercial sector of Valera transcends the formal plane and must be conceived as an articulating axis of organizational effectiveness within collaborative governance and university-industry social capital networks. A structural dissociation is observed: entities exhibit high documentary maturity, while their operational praxis reproduces dynamics of ceremonial isomorphism. This gap evidences that adherence to environmental and labor requirements frequently responds to external legitimization imperatives rather than to a strategic conviction oriented toward institutional excellence, thereby limiting the system's capacity to generate effective sustainability.
- Likewise, commercial governance reveals lags in modernization processes. The scarce incorporation of digital tools as mechanisms for transparency and collective deliberation weakens decisional agility and prevents legal knowledge from integrating into the corporate axiological framework. A managerial scheme that omits the digitalization

of compliance remains exposed to the Venezuelan regulatory complexity, reducing its performance to reactive responses and hindering the consolidation of organizational legitimacy in uncertain economic environments.

- Finally, it is established that organizational effectiveness is limited when regulatory compliance is applied fragmentedly within the internal structure of organizations. Contemporary managerial architecture demands a coherent integration in which legality functions as the foundation of quality flows and the scaffolding of corporate strategic direction. Under this perspective, institutional leadership must evolve from a logic centered solely on documentary compliance toward proactive management that articulates regulatory rigor with operational efficiency. Only through this systematic integration can enterprises transform legal compliance into a factor that strengthens the solidity of their operations and their capacity for resilience in the face of complex regulatory environments.

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