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Challenges of Corporate Governance in State-Owned Enterprises: Between Accountability, Efficiency, and Social Value

Editors:
Darko Tipuric, Lana Cindric, Davorko Obuljen

CIRU
Governance Research and Development Centre

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LEADERSHIP WITHOUT COMPETENCE: BEHAVIORAL PATTERNS OF LEADERS IN MOROCRATIC STRUCTURES

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ABSTRACT

Leadership competence is widely regarded as a central driver of organizational performance, innovation, and employee well-being. Nevertheless, organizational systems do not always reward expertise, critical thinking, or ethical judgment. In certain environments, loyalty, political conformity, and narrative control may become more influential criteria for advancement than demonstrated competence. This literature review examines such environments through the conceptual lens of morocratic structures, defined here as organizational contexts in which incompetence is structurally reproduced and normalized.

Drawing upon existing research on the Peter Principle, the Dunning–Kruger effect, destructive and toxic leadership, organizational politics, groupthink, and psychological safety, the paper synthesizes theoretical and empirical findings to identify recurring behavioral patterns among leaders operating in morocratic settings. Four dominant patterns are discussed: (1) preference for loyalty over competence ("yes-men" dynamics), (2) control-oriented micromanagement stemming from insecurity and low trust, (3) the displacement of expertise by political maneuvering in decision-making processes, and (4) narrative control practices that rationalize poor decisions and suppress dissent. The review further explores the organizational consequences of these patterns, including reduced psychological safety, erosion of expertise, talent attrition, and diminished capacity for learning and adaptation. By integrating fragmented strands of leadership and organizational research under a unified conceptual framework, this paper contributes to a deeper understanding of how systemic incompetence shapes leadership behavior and organizational outcomes. Practical implications for leadership selection, accountability mechanisms, and competence-based governance are discussed.

Keywords: *Destructive leadership; Incompetent leadership; Morocracy; Organizational politics; Psychological safety*

1. INTRODUCTION

Leadership competence has long been regarded as a cornerstone of organizational effectiveness. Decades of research have demonstrated that capable leadership contributes to higher performance, innovation, employee engagement, and organizational adaptability (Hogan & Kaiser, 2005). In increasingly complex and uncertain environments, organizations rely on leaders not only for strategic direction but also for cultivating psychological safety, fostering collaboration, and enabling learning. Competence, therefore, is typically assumed to be both a prerequisite and a predictor of leadership success. However, organizational systems do not always reward competence. Promotion and selection processes frequently prioritize short-term performance indicators, loyalty, political alignment, or conformity over broader leadership capability. The well-known Peter Principle suggests that individuals are often promoted based on their success in previous roles until they reach a level at which they are no longer competent (Lazear, 2004; Benson, Li, & Shue, 2019). While originally formulated as a satirical observation, subsequent theoretical and empirical research has shown that promotion systems may indeed create structural mismatches between technical performance and leadership competence. As a result, incompetence at higher organizational levels may not be accidental but systematically reproduced.

This paper examines leadership behavior in such contexts through the conceptual lens of *morocratic structures*. Although the term "morocracy" is colloquial rather than formally established in academic literature, it serves here as a descriptive construct referring to organizational environments in which incompetence becomes normalized, reinforced, and institutionally sustained. Morocratic structures are not defined by isolated instances of poor leadership, but by systemic conditions that allow and reproduce ineffective or counterproductive leadership patterns. In such environments, competence ceases to be the primary criterion for advancement or legitimacy. Existing leadership research provides fragmented insights into this phenomenon. Studies on destructive and toxic leadership document patterns of behavior that harm employees and organizations (Einarsen, Aasland, & Skogstad, 2007; Schyns & Schilling, 2013). Research on organizational politics highlights how power dynamics and impression management may override merit-based decision-making (Ferris et al., 2005). Psychological studies, including work on the Dunning-Kruger effect, suggest that individuals with lower competence may lack the metacognitive awareness necessary to recognize their own limitations (Kruger & Dunning, 1999). Meanwhile, scholarship on psychological safety demonstrates how environments characterized by fear and suppression of dissent inhibit learning and innovation (Edmondson, 1999). Despite these contributions, there is limited integrative work that synthesizes structural, cognitive, and behavioral perspectives into a coherent framework explaining how systemic incompetence shapes leadership behavior. This literature review addresses that gap by conceptualizing the behavioral patterns of leaders operating within morocratic structures. Specifically, the paper identifies recurring leadership dynamics that emerge when competence is no longer the dominant selection criterion. These include the preference for loyalty over expertise, control-oriented micromanagement, the displacement of professional judgment by political maneuvering, and narrative practices that rationalize poor decisions while suppressing dissent. The aim of this review is threefold. First, it seeks to consolidate existing research on leadership derailment, destructive leadership, organizational politics, and psychological safety under a unified conceptual framework. Second, it examines how structural promotion systems and cognitive biases contribute to the emergence and persistence of incompetent leadership. Third, it explores the organizational consequences of these behavioral patterns, including talent attrition, erosion of expertise, and reduced adaptive capacity. By framing morocracy as a systemic rather than purely individual problem, this paper contributes to leadership studies through a structured interpretation of how incompetence can become embedded within organizational governance. Understanding these dynamics is essential not only for diagnosing dysfunctional leadership environments but also for designing mechanisms that restore competence-based accountability and sustainable organizational performance.

2. STRUCTURAL PRODUCTION OF INCOMPETENCE

Leadership incompetence in organizational hierarchies is often interpreted as an individual failure. However, a growing body of literature suggests that incompetence at higher managerial levels may be structurally produced rather than randomly occurring. Organizational systems of promotion, evaluation, and reward frequently prioritize performance in current roles without adequately assessing leadership capability required for future positions. As a result, systemic mechanisms may unintentionally generate and sustain incompetent leadership.

2.1 The Peter Principle and Promotion Mismatch

The Peter Principle proposes that employees in hierarchical organizations tend to be promoted based on success in their current role until they reach a position where they are no longer competent (Lazear, 2004).

Although initially formulated in a satirical tone, subsequent theoretical modeling and empirical research have demonstrated the structural logic behind this phenomenon. Promotions often reward high technical or operational performance rather than strategic thinking, people management skills, or adaptive leadership competencies. Empirical evidence supports this structural mismatch. Benson, Li and Shue (2019) demonstrate that sales employees who perform exceptionally well are more likely to be promoted into managerial roles, yet their managerial performance frequently declines compared to their performance as individual contributors. This suggests that promotion systems may systematically reward the wrong competencies for leadership roles. The skills that make someone a strong technical expert do not automatically translate into effective leadership capacity. This structural misalignment contributes to the accumulation of leaders whose competencies do not match role requirements. Over time, such mismatches may become embedded within the governance structure, producing what this paper conceptualizes as morocratic environments—organizational contexts in which incompetence is reproduced through institutional processes rather than isolated poor decisions.

2.2 Performance-Based Legitimacy and Short-Term Metrics

Another structural driver of incompetence lies in performance-based legitimacy systems. Modern organizations frequently emphasize quantifiable short-term results as primary indicators of success. While performance metrics are essential for accountability, excessive reliance on short-term outputs may obscure deficiencies in long-term strategic judgment, ethical reasoning, or team development capabilities. Lazear (2004) argues that organizations often lack precise tools to evaluate latent leadership capacity before promotion. In such cases, observable short-term performance becomes the default proxy for broader competence. However, this creates a measurement problem: current performance is treated as a predictor of future leadership effectiveness, despite evidence that the competencies required for the two roles differ substantially. When performance metrics are narrowly defined, individuals who excel at impression management or political maneuvering may gain advantage over those who demonstrate deeper but less visible competencies. Research on organizational politics indicates that political skill and strategic self-presentation can significantly influence career advancement (Ferris et al., 2005). In environments where visibility and loyalty outweigh critical evaluation and expertise, advancement may become decoupled from substantive competence.

2.3 Institutionalization of Incompetence

Once promoted, leaders play a central role in shaping future selection processes. Leaders who have advanced through loyalty-based or politically driven mechanisms may replicate similar criteria in subsequent promotions. This creates a self-reinforcing cycle in which conformity and allegiance become valued over expertise and independent judgment. Over time, this institutionalization of misaligned criteria contributes to what can be described as a structural reproduction of incompetence. Rather than being corrected through internal feedback mechanisms, incompetence may persist due to power asymmetries, weak accountability structures, and limited transparency in decision-making processes. In such contexts, organizational systems fail to self-correct and instead normalize declining leadership quality.

Understanding incompetence as structurally produced shifts the analytical focus from individual pathology to governance design. Morocratic structures, therefore, emerge not from isolated poor leaders but from systemic conditions that consistently reward the wrong attributes for leadership roles.

3. COGNITIVE MECHANISMS BEHIND INCOMPETENT LEADERSHIP

Structural promotion systems alone do not fully explain the persistence of incompetent leadership. Cognitive and psychological mechanisms significantly contribute to the stabilization of morocratic structures. When individuals ascend to roles that exceed their competence, their ability to accurately assess their own limitations may be compromised. In such cases, incompetence is not only structurally reproduced but cognitively insulated from correction.

3.1 The Dunning-Kruger Effect and Metacognitive Limitations

The Dunning-Kruger effect provides a foundational explanation for miscalibrated self-assessment. Kruger and Dunning (1999) demonstrated that individuals with lower ability in a given domain tend to overestimate their performance because they lack the metacognitive skills necessary for accurate evaluation. The competencies required for effective performance are often the same competencies required for self-monitoring. Consequently, incompetence may obscure itself. In leadership settings, this dynamic manifests as unwarranted confidence in strategic decisions, dismissal of expert advice, and resistance to developmental feedback. Importantly, later discussions of the Dunning-Kruger effect have clarified that while statistical regression contributes to the phenomenon, systematic overconfidence among lower performers remains empirically supported across domains. The implication for leadership is critical: individuals promoted into roles requiring complex judgment may lack both capability and awareness of that lack.

3.2 Overconfidence and Executive Decision-Making

Beyond the Dunning-Kruger framework, extensive research in behavioral decision-making demonstrates that overconfidence is a pervasive bias among individuals in positions of authority. Overconfidence has been linked to excessive risk-taking, acquisition errors, strategic escalation of commitment, and failure to revise flawed strategies. Leaders may overestimate the precision of their knowledge and underestimate environmental uncertainty. Hayward and Hambrick (1997) show that CEO hubris significantly predicts acquisition premiums and subsequent firm performance decline. Similarly, Malmendier and Tate (2005) demonstrate that overconfident CEOs are more likely to pursue value-destroying investments. These findings suggest that cognitive miscalibration at the top of organizational hierarchies can produce systemic consequences. In morocratic structures, where promotion criteria may already be misaligned, overconfidence compounds structural weaknesses. Leaders who lack domain competence may simultaneously possess high subjective confidence, creating a dangerous asymmetry between authority and actual capability.

3.3 Power, Reduced Perspective-Taking, and Feedback Suppression

Power itself alters cognition. Research indicates that individuals in positions of power exhibit reduced perspective-taking, heightened reliance on internal judgments, and decreased sensitivity to external feedback (Galinsky et al., 2006). Power can create psychological distance, diminishing empathy and increasing cognitive rigidity. Moreover, leaders often inhabit environments with constrained upward feedback. Subordinates may avoid voicing dissent due to fear of retaliation, career risk, or social exclusion. Edmondson (1999) demonstrates that psychological safety is a necessary condition for open error reporting and learning. In the absence of such safety, leaders receive filtered information that confirms existing beliefs. This dynamic produces epistemic insulation: leaders are surrounded by agreement not because they are correct, but because dissent is suppressed.

The phenomenon aligns with Janis's (1972) concept of groupthink, where cohesive groups prioritize unanimity over critical evaluation. Within morocratic structures, loyalty-based promotion further intensifies conformity pressures.

3.4 Defensive Cognition and Narrative Control

When outcomes contradict self-perception, individuals often engage in defensive cognitive strategies to protect identity and authority. Self-serving attribution bias leads leaders to attribute success internally and failure externally. Over time, repeated rationalization may institutionalize flawed decision-making patterns. Vaughan's (1996) concept of normalization of deviance illustrates how repeated departures from established standards can become reframed as acceptable practice. Similarly, Ashforth and Anand (2003) describe how unethical behaviors can gradually become normalized through rationalization, socialization, and institutional embedding. In leadership contexts, comparable mechanisms may normalize poor strategic choices or managerial misconduct. Narrative control thus becomes a stabilizing mechanism within morocratic environments. Leaders reinterpret setbacks as strategic pivots, discredit critics as resistant to change, and adjust performance criteria post hoc. Such practices reduce opportunities for corrective learning and further entrench systemic incompetence.

4. BEHAVIORAL PATTERNS IN MOROCRATIC LEADERSHIP

While structural promotion mismatches and cognitive biases create conditions for incompetent leadership, these mechanisms become visible through concrete behavioral patterns. In morocratic structures, leadership behavior is not merely ineffective but systematically shaped by misaligned incentives, power asymmetries, and epistemic insulation. This section identifies four recurring behavioral patterns that emerge when competence is no longer the primary criterion of legitimacy.

4.1 Preference for Loyalty Over Competence: The Yes-Men Dynamic

One of the most prominent characteristics of morocratic leadership is the prioritization of loyalty over expertise. Leaders operating beyond their competence may perceive highly skilled subordinates as potential threats rather than assets. As a result, they may favor individuals who demonstrate conformity, agreement, and personal allegiance. This dynamic aligns with research on organizational politics, where career advancement can depend on impression management and political skill rather than substantive contribution (Ferris et al., 2005). In such environments, dissent becomes risky and alignment becomes strategically rational. The phenomenon also overlaps with Janis's (1972) concept of groupthink, in which cohesive groups suppress dissenting viewpoints to maintain unanimity. However, in morocratic settings, conformity is not accidental but structurally incentivized. Leaders who advanced through loyalty-based mechanisms are likely to replicate similar criteria in selecting their inner circles, reinforcing epistemic homogeneity. The long-term consequence is informational narrowing. Decision-making quality declines not necessarily because of malicious intent, but because critical evaluation is systematically filtered out.

4.2 Control-Oriented Micromanagement and Low Trust Climate

Another recurring pattern is control-oriented micromanagement. Leaders who lack confidence in their strategic or technical competence may compensate by increasing surveillance, centralizing decision authority, and intervening excessively in operational details. Micromanagement reflects low trust in subordinates and reduced delegation. Research on empowering leadership demonstrates that autonomy and participative decision-making are positively associated with creativity, performance, and engagement (Zhang & Bartol, 2010). By contrast, control-dominant leadership styles restrict initiative and reduce ownership.

In morocratic environments, micromanagement may serve a defensive function. By retaining control over details, leaders minimize exposure to evaluation and reduce the visibility of competence gaps. However, this behavior produces decision bottlenecks, slows responsiveness, and discourages proactive problem-solving. Over time, excessive control erodes intrinsic motivation and increases burnout. The organization becomes dependent on centralized authority while simultaneously suffering from reduced adaptive capacity.

4.3 Political Displacement of Expertise in Decision-Making

When competence ceases to be the central selection criterion, professional expertise may gradually lose authority in decision-making processes. Organizational politics begin to substitute for merit-based evaluation. Ferris et al. (2005) demonstrate that political skill can significantly influence perceived effectiveness and career advancement. While political skill is not inherently negative, its dominance over substantive expertise can distort resource allocation and strategic direction. In morocratic structures, decisions may increasingly reflect coalition-building, alliance maintenance, or image preservation rather than evidence-based reasoning. Experts who challenge dominant narratives may be marginalized or excluded from strategic discussions. As a result, technical rationality gives way to political rationality. This displacement undermines knowledge utilization and organizational learning. Over time, professional competence becomes devalued, and strategic misalignment accumulates.

4.4 Narrative Control and Normalization of Poor Decisions

A fourth behavioral pattern involves narrative control mechanisms that protect leadership authority in the face of negative outcomes. When decisions lead to suboptimal results, leaders may reframe outcomes as intentional trade-offs, strategic pivots, or necessary disruptions. This aligns with the concept of normalization of deviance (Vaughan, 1996), where deviations from established standards gradually become reinterpreted as acceptable. Similarly, Ashforth and Anand (2003) describe how unethical or ineffective practices may become normalized through rationalization and institutional embedding. In leadership contexts, repeated reframing of failures can produce collective cognitive drift. Performance criteria may be adjusted retrospectively, critics may be labeled as resistant to change, and learning opportunities may be lost. Narrative control is particularly powerful in hierarchical settings, where authority shapes interpretation. When accountability mechanisms are weak, narrative dominance can substitute for performance legitimacy. Over time, this dynamic stabilizes morocratic governance by suppressing corrective feedback loops. These four behavioral patterns—loyalty prioritization, micromanagement, political displacement of expertise, and narrative control—do not operate independently. They reinforce one another. Loyalty reduces dissent, which increases epistemic insulation; micromanagement suppresses initiative; political maneuvering marginalizes expertise; and narrative control prevents corrective learning. Together, they form a self-reinforcing behavioral architecture characteristic of morocratic leadership.

5. ORGANIZATIONAL CONSEQUENCES OF MOROCRATIC LEADERSHIP

The behavioral patterns described in the previous section do not remain confined to interpersonal dynamics; they generate systemic organizational consequences. When loyalty replaces competence, when control suppresses initiative, and when political maneuvering overrides expertise, the organization's adaptive capacity becomes progressively compromised. Morocratic leadership thus produces structural vulnerabilities that extend beyond individual performance.

5.1 Erosion of Psychological Safety

One of the most immediate consequences of morocratic leadership is the erosion of psychological safety. Psychological safety refers to a shared belief that the work environment is safe for interpersonal risk-taking, including speaking up, admitting mistakes, and offering dissenting opinions (Edmondson, 1999). It is a foundational condition for team learning and innovation. In environments characterized by loyalty-based selection and narrative control, dissent becomes risky. Employees may perceive that voicing concerns threatens career progression or social standing. As a result, silence becomes a rational survival strategy. Research consistently demonstrates that low psychological safety reduces error reporting, inhibits knowledge sharing, and weakens collective learning processes. When leaders respond defensively to feedback or reinterpret criticism as disloyalty, they inadvertently reinforce silence norms. Over time, this produces informational blind spots. Problems remain unaddressed not because they are invisible, but because they are unspoken.

5.2 Talent Attrition and Withdrawal

Another significant consequence is the loss of high-performing and highly skilled employees. Competent individuals who value professional standards and evidence-based decision-making may experience frustration in morocratic contexts. When expertise is marginalized and advancement depends on conformity rather than merit, motivation declines. Turnover research indicates that perceived injustice, lack of development opportunities, and dysfunctional leadership significantly increase voluntary exit intentions (Hom et al., 2017). In morocratic environments, talented employees may choose either psychological withdrawal—reducing discretionary effort—or physical exit. This creates a selection paradox. As competent employees leave, the relative concentration of conformist or politically skilled individuals increases. The organization becomes progressively less capable of critical evaluation and innovation, further entrenching systemic incompetence.

5.3 Learning Inhibition and Strategic Drift

Organizations operating in dynamic environments require continuous learning and strategic adaptation. However, morocratic leadership undermines the mechanisms necessary for adaptive learning. When failures are reframed rather than analyzed, and when dissent is discouraged, feedback loops weaken. Learning theory emphasizes the importance of error detection and correction for long-term performance. In psychologically unsafe climates, errors may be concealed rather than surfaced. Over time, this produces strategic drift: the gradual misalignment between organizational strategy and environmental demands. Moreover, excessive micromanagement restricts experimentation. Innovation requires autonomy and tolerance for uncertainty. Control-dominant leadership styles suppress exploratory behaviors, reducing the organization's ability to generate novel solutions.

5.4 Institutional Fragility and Reputational Risk

Beyond internal consequences, morocratic structures can generate external vulnerabilities. Poor strategic decisions, combined with suppressed internal critique, increase the likelihood of reputational crises, financial underperformance, and governance failures. Historical analyses of organizational disasters frequently reveal patterns of ignored warnings, conformity pressures, and normalization of deviation prior to crisis escalation. Although morocratic environments may appear stable in the short term, their lack of corrective mechanisms renders them fragile under stress. In this sense, morocracy represents not merely a leadership deficiency but a systemic governance risk. The absence of competence-based accountability weakens resilience and amplifies the consequences of strategic misjudgment.

Morocratic leadership erodes psychological safety, accelerates talent attrition, inhibits organizational learning, and increases institutional fragility. These consequences are mutually reinforcing. As competence declines and silence increases, corrective capacity diminishes, further stabilizing incompetent governance. Understanding these consequences highlights the urgency of examining not only individual leader behavior but also the structural and cultural conditions that enable it.

6. CONCLUSION

The analysis presented in this review suggests that morocratic structures do not emerge from isolated individual failures, but from the interaction of structural promotion mismatches, cognitive biases, political dynamics, and weakened accountability mechanisms. In such environments, incompetence becomes self-reinforcing: leaders selected through misaligned criteria replicate similar selection patterns, suppress dissent, and normalize ineffective decision-making. Over time, these processes erode psychological safety, accelerate talent attrition, and reduce organizational learning capacity. Addressing morocratic leadership therefore requires systemic intervention rather than individual replacement. First, organizations must realign promotion systems with leadership role requirements. Research on the Peter Principle demonstrates the risks of promoting individuals solely on the basis of prior technical performance (Lazear, 2004; Benson, Li and Shue, 2019). Clear differentiation between technical and managerial career tracks, competency-based selection frameworks, and structured assessment processes can mitigate role-performance mismatches. Second, institutionalized feedback and accountability mechanisms are essential to counter epistemic insulation. Psychological safety research underscores that dissent and error reporting must be structurally protected (Edmondson, 1999). Transparent evaluation systems, independent oversight structures, and multi-source feedback processes reduce the likelihood that authority becomes detached from competence. Third, organizations must limit the dominance of political maneuvering in advancement decisions. While organizational politics cannot be eliminated, increasing transparency in promotion criteria and broadening performance indicators beyond short-term metrics can reduce incentives for impression-based leadership. Ultimately, restoring competence-based governance requires cultural as well as structural change. Learning-oriented environments depend on intellectual humility, openness to revision, and tolerance for critical dialogue. Leaders who model adaptive learning behaviors create conditions for sustainable performance. Morocratic structures represent not merely dysfunctional leadership, but a governance risk embedded in organizational design. By conceptualizing morocracy as a systemic phenomenon rather than a collection of individual deficiencies, this paper integrates structural, cognitive, and behavioral perspectives into a unified framework. Future research may empirically test the proposed model and examine intervention strategies across different organizational contexts. Re-establishing alignment between authority, competence, and accountability is not only a matter of leadership development: it is a prerequisite for organizational resilience in complex and uncertain environments.

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POLITICAL SELECTION AND MOROCRACY: IMPLICATIONS FOR BOARD COMPETENCE AND DYNAMICS IN STATE-OWNED ENTERPRISES

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ABSTRACT

This paper examines how morocracy, a governance system characterized by the systematic promotion of incompetent, intellectually weak, and ethically indifferent individuals, manifests within state-owned enterprises and fundamentally shapes board composition, competence, and group dynamics. Drawing on corporate governance theory, institutional economics, and organizational behavior, we argue that political selection mechanisms in SOEs routinely prioritize loyalty and conformity over expertise, resulting in boards populated by individuals who conspicuously lack the skills, independence, and ethical orientation required for meaningful oversight. Through conceptual analysis enriched by empirical observations from transition economies, we demonstrate that morocratic governance systematically undermines board functionality, distorts decision-making, and perpetuates mediocrity, ultimately eroding institutional integrity and public trust. Perhaps most provocatively, we suggest that in morocratic systems, incompetence is not an unfortunate byproduct but rather a deliberate feature, a mechanism ensuring that power holders face no intellectual challenge from below. The paper concludes by proposing institutional reforms aimed at strengthening meritocratic principles in board appointments, enhancing transparency, and fostering critical thinking as essential prerequisites for responsible governance.

Keywords: *morocracy, state-owned enterprises, corporate governance, board competence, political selection, meritocracy*

1. INTRODUCTION

State-owned enterprises occupy a peculiar and often uncomfortable position at the intersection of political authority and economic activity. While these entities are formally structured as commercial organizations, expected to operate according to market logic and business principles, they remain deeply and inextricably embedded in political systems. They exist under the perpetual gaze of government bodies and remain chronically vulnerable to interference by political elites who view them less as autonomous economic actors and more as instruments of political will (Shleifer, 1998; Megginson and Netter, 2001). This dual nature creates inherent and often irreconcilable tensions in governance that manifest in ways both subtle and profound. On paper, boards are expected to operate according to professional standards, conducting themselves with the gravitas and competence befitting stewards of substantial public assets. Yet the reality often tells a different story entirely. Board composition and functioning are frequently shaped not by considerations of expertise, experience, or even basic qualifications, but by political calculations that have remarkably little to do with governance competence. Recent scholarly attention has increasingly focused on a phenomenon we call morocracy, a distinctive form of governance in which incompetent, intellectually limited, and ethically indifferent individuals systematically ascend to positions of considerable power and influence (Tipurić, 2025).

The term derives from the ancient Greek word moros, meaning fool or intellectually limited, combined with kratia, meaning rule or governance. Unlike kakistocracy, which emphasizes moral corruption, willful malice, and the deliberate pursuit of harmful ends, morocracy centers instead on cognitive and professional inadequacy as the defining features of leadership failure. This distinction matters considerably, and not merely as a matter of academic taxonomy. Morocratic systems do not necessarily involve malicious intent, corrupt motives, or deliberate villainy in the conventional sense. Instead, they reflect deeper and more troubling structural dysfunctions in selection processes that systematically reward conformity, loyalty, and passivity while ruthlessly marginalizing expertise, autonomy, and critical thinking. The incompetent rise to power not despite their limitations but precisely because of them. Their deficiencies render them unthreatening to those already holding power, making them ideal appointments from the perspective of political elites seeking to maintain control without challenge. In state-owned enterprises, morocracy manifests most visibly and consequentially in board appointments. Political elites routinely and systematically populate boards with loyalists who conspicuously lack relevant experience, technical knowledge, or ethical grounding. These appointments often provoke knowing smirks among insiders who understand the real criteria at work, while formal justifications are crafted with appropriate bureaucratic solemnity. The result is a governance structure that exists elaborately and sometimes quite expensively in form but distressingly little in substance. Boards convene with appropriate ceremony, agendas are carefully prepared and distributed, decisions are meticulously recorded in official minutes, reports are dutifully produced with impressive covers and executive summaries, committees meet and engage in what appears to be deliberation. Yet genuine oversight, strategic guidance grounded in expertise, and meaningful accountability remain conspicuously and systematically absent. It is governance as theater, an elaborate performance staged primarily for external audiences who might still harbor naive expectations about how public institutions ought to function (Alvesson and Spicer, 2016). This paper explores how morocratic governance emerges within SOEs, examining the mechanisms through which incompetence becomes systematically institutionalized rather than accidentally present. We investigate how morocracy shapes board competence and group dynamics in ways both subtle and profound, creating self-reinforcing cycles that prove remarkably resistant to reform. We then examine the specific mechanisms through which morocratic dynamics undermine board competence, followed by an analysis of their consequences for group dynamics and decision-making within boards. Building on this analysis, we consider institutional reforms aimed at restoring meritocratic principles, while harboring no romantic illusions about the formidable obstacles such reforms would inevitably face. The paper concludes with reflections on the broader implications of these findings for governance research and practice.

2. POLITICAL SELECTION AND BOARD GOVERNANCE

Political appointments to SOE boards have long been recognized as a significant source of governance weakness, though the full extent and systematic nature of the problem has perhaps been underappreciated in academic literature (Hellman, Jones and Kaufmann, 2000; North, Wallis and Weingast, 2009). In contrast to private firms operating in competitive markets, where directors are selected through processes that at least nominally emphasize expertise, demonstrated performance, and relevant experience, SOE board members are often chosen through patronage networks that prioritize political allegiance above virtually all other considerations. This dynamic reflects broader patterns of what political scientists call partitocracy, in which political parties systematically colonize state institutions and transform them into instruments of narrow party interests rather than vehicles for public service (Sartori, 1976).

The political logic underlying such appointments is straightforward, even brutally simple when stripped of euphemism. Placing loyalists in key positions ensures control over resource flows, minimizes the risk of inconvenient dissent or embarrassing revelations, and facilitates the discreet distribution of rents to political supporters (Grzymala-Busse, 2007). Boards become less about governance in any meaningful sense and more about power consolidation. However, this logic produces a fundamental misalignment between organizational needs and individual capabilities. Boards populated by politically selected members systematically lack the independence, technical knowledge, and ethical orientation required for effective oversight (Tipurić and Cindrić, 2025). Morocracy extends well beyond isolated instances of poor appointments to describe a systemic condition in which incompetence becomes thoroughly institutionalized (Tipurić, 2025). It refers to governance by individuals who lack the cognitive, professional, or ethical capacities necessary for their roles. Three features distinguish morocracy from related concepts. First, negative selection operates as the primary mechanism. Incompetent individuals are not accidentally promoted but systematically favored precisely because their limitations make them non-threatening to existing power holders (Michels, 1962; Wilber, 2000). A genuinely capable director might ask uncomfortable questions, demand evidence, or resist questionable decisions. An incompetent director will do none of these things, lacking both the knowledge to recognize problems and the confidence to challenge authority. Second, cognitive closure characterizes the entire system. Morocratic systems actively discourage critical thinking, treat genuine expertise as potentially subversive, and systematically reward conformity over competence. Knowledge becomes suspect, questions become problematic, and independence becomes dangerous. Third, normative inversion transforms evaluation standards. Mediocrity becomes normalized as acceptable, while excellence is viewed with suspicion. Outstanding individuals are not celebrated but contained, not promoted but marginalized. These dynamics resonate with Ortega y Gasset's (1930) analysis of ‘mass man’, an individual who participates in public life without possessing the knowledge, discipline, or responsibility such participation demands. In morocratic systems, governance becomes fundamentally performative. Decisions are made, procedures are followed, documents are signed, yet the substance of accountability and oversight evaporates. What remains is elaborate choreography executed by actors who understand nothing of the play's meaning. Boards prove particularly vulnerable to morocratic capture because effective functioning depends on qualities that political selection systematically undermines. In well-functioning boards, directors challenge management, scrutinize strategies, and safeguard stakeholder interests (OECD, 2023). Morocratic boards become ceremonial bodies that ratify predetermined decisions without meaningful deliberation. This dysfunction reflects what Bourdieu (1990) terms symbolic violence, the imposition of arbitrary power structures as natural and inevitable. Directors lacking competence cannot challenge management; their presence serves not to govern but to legitimize. Over time, morocratic governance erodes institutional memory, stifles innovation, and entrenches stagnation. Morocratic boards function as intellectual deserts where good ideas go to die, strangled by indifference and incomprehension.

3. MOROCRACY AND BOARD COMPETENCE: MECHANISMS OF DECLINE

Competence in board governance begins with selection. In private firms, appointments involve rigorous assessment of expertise, track records, and organizational fit. In SOEs subject to morocratic pressures, appointments follow different logic. Candidates are evaluated not for what they know but for whom they know and, critically, for whom they will not challenge. This produces defensive staffing, where managers and elites prefer subordinates who pose no threat to existing hierarchies (Wilber, 2000).

Each appointment layer yields slightly less competent individuals, creating cascading decline. Organizations become dominated by actors whose primary qualification is unthreatening mediocrity. Here we arrive at a provocative thesis: in morocratic systems, incompetence is not a bug but a feature. It is not an unfortunate side effect but the entire point. Power holders deliberately select incompetent board members because they understand exactly what serves their interests. Incompetence provides insurance against accountability, ensuring uncomfortable questions will not be asked. It guarantees oversight remains nominal and that existing power structures face no intellectual challenge from those charged with oversight. Morocracy institutionalizes a cognitive distortion identified by Dunning and Kruger (1999): individuals with low competence systematically overestimate their abilities while failing to recognize expertise in others. In morocratic boards, this operates collectively. Directors lacking knowledge confidently opine on matters beyond their grasp while dismissing qualified individuals. This dynamic is self-reinforcing. As incompetent directors consolidate positions, they select new members resembling themselves, perpetuating the cycle. Competent individuals either exit voluntarily or are pushed out as threats. In morocratic systems, expertise becomes politically suspect. Directors who ask probing questions or challenge assumptions disrupt governance-as-performance. Knowledge is no longer valued but feared as instability. This recalls Revel's (1988) concept of useless knowledge: information that loses its functional role in shaping action. In morocratic boards, knowledge exists in reports and analyses but is systematically ignored or reinterpreted through political expediency.

4. GROUP DYNAMICS IN MOROCRATIC BOARDS

Morocracy thrives on conformity, feeding upon it as a plant feeds upon sunlight, drawing sustenance from the very absence of challenge or disagreement. Boards populated by politically selected members exhibit remarkably strong pressures toward consensus, not through the genuine meeting of minds that characterizes healthy deliberation, but through the systematic and often quite calculated avoidance of anything that might be construed as dissent. This dynamic, while superficially resembling normal organizational behavior, carries a darker and more consequential undertone. It mirrors, in many respects, what Janis (1972) famously identified as groupthink, that peculiar psychological phenomenon in which the desire for harmony and cohesion within a group overrides the capacity for critical evaluation of alternatives, leading to poor decision-making that no single member would have endorsed individually. However, morocratic groupthink differs from Janis's original formulation in one crucial and deeply troubling respect. Classical groupthink, as Janis described it, emerges somewhat inadvertently from well-intentioned efforts to maintain group cohesion and positive working relationships. It represents, in essence, a cognitive trap that even capable and conscientious individuals can fall into when social dynamics override rational deliberation. The groups Janis studied were not inherently incompetent or malicious. Rather, they were victims of their own desire for consensus and their failure to institutionalize constructive conflict (Tetlock et al., 1992). Morocratic groupthink, by sharp and consequential contrast, is not an inadvertent outcome of otherwise healthy group processes gone slightly awry. Rather, it represents a deliberate governance design feature, carefully engineered into the system's very architecture. Directors are selected with meticulous attention precisely because they will not disrupt, precisely because they lack either the knowledge to identify problems or the courage to name them if somehow they stumble upon them. The selection process itself functions as a remarkably effective filter, screening out anyone who might introduce uncomfortable facts, ask inconvenient questions, or insist on standards that would interfere with political agendas. In this sense, morocratic boards do not accidentally fall into groupthink; they are constructed specifically to ensure its perpetuation.

Dissent, that essential ingredient of healthy governance and robust decision-making, is structurally foreclosed before meetings even begin. The very composition of morocratic boards guarantees that no genuine challenge to prevailing wisdom will emerge from within. This is not merely because board members lack the expertise to recognize problems, though that certainly contributes. More fundamentally, it reflects the fact that anyone with sufficient independence of mind to potentially dissent has already been systematically excluded from consideration during the appointment process. As Sunstein (2003) observes in his analysis of group deliberation, the most dangerous form of conformity is not that which is imposed through overt pressure, but that which emerges from homogeneous group composition where everyone already thinks alike and no one possesses the inclination or capacity to challenge prevailing assumptions. The result is a kind of intellectual echo chamber where ideas circulate without ever encountering serious resistance, where proposals are endorsed without genuine scrutiny, and where the absence of debate is mistaken for consensus rather than recognized as the void it actually represents. In such environments, silence is often misinterpreted as agreement, when in reality it may reflect resignation, confusion, or simply the recognition that speaking up would be pointless. The group moves forward with apparent unanimity, yet this unanimity conceals a profound absence of the kind of rigorous deliberation that ought to precede important decisions. Morocratic boards engage in what can only be described as 'ceremonial governance', an elaborate performance of oversight without any of the substance that would make such oversight meaningful or effective. They go through all the proper motions with almost ritualistic precision. Meetings are duly held according to schedule, convening at appointed times in appropriate settings with all the formal trappings of serious deliberation. Agendas are carefully prepared and distributed in advance, giving the appearance of structured consideration of important matters. Resolutions are solemnly passed after what seems like appropriate discussion. Minutes are meticulously recorded, documenting decisions and creating a paper trail that suggests accountability and careful governance. All of this creates an elaborate appearance of proper procedure, a facade of governance that can be presented to external auditors, regulatory bodies, and the general public as evidence that appropriate oversight is occurring. Yet these rituals, performed with such apparent seriousness and attention to form, serve primarily to legitimize decisions that have actually been made elsewhere, in different rooms and different contexts, by political elites who may never attend board meetings but whose preferences are perfectly understood by everyone present (Meyer and Rowan, 1977). The board meeting becomes, in effect, a rubber stamp ceremony, where the real function is not deliberation but ratification. Proposals arrive at the board not as tentative suggestions open to debate and modification, but as fait accompli requiring only formal approval. Board members understand, often without anyone saying so explicitly, that their role is not to question or challenge but to provide the appearance of proper governance oversight. This phenomenon extends beyond individual board meetings to encompass the entire architecture of governance structures. Morocratic boards are, in essence, organizational myths as described by institutional theorists (Meyer and Rowan, 1977; DiMaggio and Powell, 1983). They exist not to enhance efficiency, improve decision-making, or ensure accountability, but rather to signal conformity with institutionalized expectations about what proper governance should look like. They are facades of accountability that mask their own irrelevance, stage sets for a play about governance rather than the genuine article. The tragedy here lies not merely in the waste of time and resources devoted to these elaborate ceremonies, though that waste is certainly real and substantial. More profoundly, ceremonial governance actively crowds out the possibility of genuine governance. The very existence of these formal structures and processes creates an illusion that adequate oversight is occurring, deflecting pressure for real reform and allowing problematic practices to continue unchallenged.

As long as boards meet regularly, produce appropriate documentation, and follow established procedures, it becomes remarkably difficult to argue that governance is inadequate, even when outcomes consistently demonstrate otherwise. The ceremony provides cover for dysfunction, allowing serious problems to fester beneath a veneer of procedural propriety. Moreover, this ceremonial character tends to be self-perpetuating and remarkably resistant to reform. Once established, these patterns become deeply embedded in organizational culture and difficult to dislodge. Board members who have participated in ceremonial governance for years may lose any sense that boards could or should function differently. New members are quickly socialized into existing patterns, learning through subtle cues and occasional more explicit guidance that their role is to attend, listen politely, vote as expected, and above all not to make waves. The ceremony becomes reality in the minds of participants, who may eventually lose the ability to distinguish between the performance of governance and the genuine article (Brunsson, 2002).

Occasionally, despite the careful screening mechanisms that characterize morocratic appointment processes, competent individuals find themselves appointed to these boards. This may happen through various pathways. Sometimes it represents simple oversight, a gap in the political vetting process where someone slips through who should not have. Other times it occurs as a symbolic gesture, a calculated move to include one or two individuals with genuine credentials and expertise to provide a thin veneer of legitimacy to the overall composition. Perhaps a token academic is appointed to signal seriousness, or a respected industry figure to suggest that real expertise is valued. These appointments may even be sincere in their intention, reflecting a momentary hope that competence might actually improve board functioning, though such hopes are rarely realized in practice. These individuals, whatever the circumstances of their appointment, quickly find themselves in an uncomfortable and often quite disorienting position. They arrive expecting to engage in genuine governance, to apply their knowledge and experience, to contribute meaningfully to organizational oversight and strategic guidance. Instead, they encounter an environment that seems almost designed to frustrate such contributions. They face a stark and often painful choice: conform to the prevailing norms of ceremonial participation and strategic silence, or risk isolation, marginalization, and ultimately removal. Most, it must be acknowledged, choose adaptation over resistance. The incentives for conformity are powerful and multiple. Positions on boards, even dysfunctional ones, often come with compensation, prestige, and valuable networking opportunities. Challenging the prevailing culture means risking these benefits for uncertain gain. Moreover, individuals who initially attempt to raise concerns or introduce more rigorous standards quickly discover how thoroughly they are outnumbered and how firmly entrenched the existing patterns have become. After a few attempts to push for genuine oversight or challenge questionable decisions, most competent directors recognize the futility of their position and adapt accordingly. This adaptation typically takes the form of what we might call strategic silence. These directors continue to attend meetings, maintaining their formal role and collecting whatever benefits it provides, but they carefully avoid any confrontation or challenge that might mark them as troublemakers. They learn to read the room, to understand which topics can safely be discussed and which must be avoided. They master the art of asking questions that seem probing but do not actually challenge anything important, of making comments that sound substantive but commit them to no particular position. They preserve their positions by carefully refraining from challenging the status quo in any meaningful way, essentially participating in the ceremonial performance while privately recognizing it for what it is (Westphal and Khanna, 2003). A few directors, more principled than their colleagues, resist this pressure to conform. They insist on asking difficult questions, demanding evidence for assertions, pointing out inconsistencies or problems that others prefer to ignore. They attempt to fulfill what they understand as their fiduciary duties, taking seriously their responsibility to provide genuine oversight. But such resistance is typically futile and often painful for those who persist in it.

Morocratic structures have evolved sophisticated mechanisms to absorb and neutralize dissent without resorting to anything so crude as open suppression. These mechanisms operate at multiple levels. Socially, dissenting directors find themselves increasingly isolated, excluded from informal conversations and networks where much board business actually gets conducted. Their comments in meetings are met with uncomfortable silence or perfunctory acknowledgment before the discussion moves quickly along as if nothing of substance had been said. They may find their concerns mysteriously absent from official minutes, or summarized in ways that drain them of their critical force. Their questions somehow never quite receive satisfactory answers, yet this lack of response is never explicitly acknowledged as problematic. Over time, the message becomes unmistakable: your input is not wanted, your concerns are not taken seriously, your continued presence is tolerated only insofar as you do not disrupt the smooth functioning of the ceremonial process. Eventually, competent directors who refuse to conform face more direct consequences. They may find their terms not renewed when reappointment time comes, with the decision cloaked in vague references to organizational needs or strategic repositioning. Or they may be quietly removed before their terms expire, perhaps with a face-saving explanation that they are needed elsewhere or that they resigned for personal reasons. Some, recognizing the writing on the wall, leave voluntarily rather than wait for formal removal, departing with whatever dignity they can salvage from the experience. The end result, regardless of the specific mechanism, is always the same: the competent director is gone, the challenge to morocratic norms is neutralized, and the board returns to its comfortable patterns of ceremonial governance and strategic silence (Leblanc and Schwartz, 2007). What makes this dynamic particularly insidious is that each cycle of appointing, marginalizing, and removing competent directors serves to reinforce the morocratic culture and make future reform even more difficult. Each competent director who leaves carries away their expertise and their example of what genuine governance might look like. Each one who remains but chooses strategic silence provides implicit validation for the existing system, suggesting through their continued participation that perhaps things are not so bad after all. And each failed attempt at reform demonstrates to remaining members and potential future appointees that resistance is futile, that the system is too entrenched to be changed from within, and that the wisest course is either to play along or to seek opportunities elsewhere.

5. CONCLUDING REMARKS: PATHWAYS TOWARD MERITOCRATIC GOVERNANCE

Morocracy represents a profound challenge to effective governance in state-owned enterprises, one that extends well beyond the familiar problems of political interference or occasional poor appointments. By systematically selecting incompetent, conformist, and ethically indifferent individuals for board positions, morocratic systems undermine the very purpose and possibility of corporate governance, rendering meaningless those functions that ought to define board work: providing independent oversight, offering strategic guidance grounded in expertise, and ensuring accountability to stakeholders and the broader public. This paper has examined how morocracy manifests in SOEs, exploring the mechanisms through which political selection systematically erodes board competence and profoundly distorts group dynamics. We have argued that morocratic governance is not merely a matter of individual appointment failures or isolated instances of poor judgment, but rather represents a structural condition deeply embedded in institutional practices, cultural norms, and even the epistemological frameworks that shape how organizations understand competence, merit, and legitimate authority. Countering such deeply entrenched patterns requires nothing less than multifaceted institutional reforms that address the problem at multiple levels simultaneously. First and foremost, establishing transparent, merit-based selection processes stands as an essential prerequisite for any meaningful improvement.

This includes public vacancy announcements that clearly specify qualification criteria, independent selection committees composed of individuals with demonstrated expertise rather than political connections, and mandatory disclosure of candidates' qualifications and potential conflicts of interest. Such reforms would not eliminate political influence entirely, nor should we harbor naive expectations that they would. Political considerations will inevitably play some role in appointments to organizations that exist at the intersection of public authority and economic activity. However, these measures would introduce meaningful friction into morocratic appointment processes, making it considerably more difficult for blatantly unqualified individuals to secure positions and creating at least some space for merit to influence outcomes (Acemoglu and Robinson, 2012). Transparency alone, however, proves insufficient without corresponding mechanisms for evaluation and accountability. Boards must undergo regular, rigorous evaluation through external audits of effectiveness, individual director assessments that genuinely inform reappointment decisions, and clear performance metrics systematically linked to organizational outcomes rather than political loyalty. Most critically, these evaluations must have real consequences. Consistently underperforming boards should face restructuring; directors who fail to meet established standards should be replaced rather than reappointed as a matter of political convenience. Without such consequences, evaluation becomes merely another ceremonial exercise, producing reports that gather dust while the underlying dysfunction continues unabated. The challenge here lies not in designing appropriate evaluation frameworks, which are well understood in the corporate governance literature, but in creating institutional arrangements that ensure evaluations actually matter and that poor performance carries genuine professional costs (Tipurić and Cindrić, 2025). Reducing morocratic capture also requires insulating appointment processes from the most corrosive effects of short-term political pressures. This might be achieved through several complementary mechanisms: fixed-term appointments not aligned with electoral cycles, making it more difficult for incoming governments to immediately purge boards of perceived opponents; supermajority requirements for premature removals, preventing arbitrary dismissals based solely on political whim; and legally mandated professional qualifications for certain positions, establishing minimum competence thresholds that political considerations cannot override. These measures create institutional bulwarks against the most egregious forms of political interference, though again we must acknowledge their limitations. Determined political actors with sufficient motivation can find ways around such protections, but the very existence of these barriers raises the costs of morocratic appointment practices and may deter some of the most blatant abuses. Yet even the most carefully designed institutional reforms will ultimately prove inadequate if the broader cultural environment continues to tolerate and even celebrate mediocrity. Ultimately, countering morocracy requires cultural change that extends well beyond formal institutional arrangements. Educational institutions must actively promote critical thinking rather than mere credential accumulation, teaching students not just what to think but how to think rigorously and independently. Media organizations must challenge mediocrity rather than normalize it, refusing to treat obvious incompetence as acceptable or inevitable. Civil society must hold power holders genuinely accountable, not through ritualistic criticism that everyone understands as performative, but through sustained pressure that makes incompetence politically costly. Public discourse should celebrate genuine expertise while maintaining appropriate skepticism about claims to authority, demand evidence for assertions rather than accepting pronouncements based on position or political affiliation, and refuse to normalize incompetence as simply the way things are done (Taleb, 2018). This cultural transformation represents perhaps the most difficult reform precisely because it requires not just institutional redesign, which can at least in principle be accomplished through legislative or regulatory action, but rather a collective shift in values, expectations, and social norms.

It demands that societies actively cultivate and defend standards of excellence in contexts where powerful interests benefit from their absence. It requires that individuals with the capacity for critical thought and independent judgment choose to exercise these capacities even when doing so proves uncomfortable, professionally risky, or socially isolating. It depends on creating and sustaining social environments in which competence is genuinely valued rather than merely given lip service, where asking difficult questions is seen as a contribution rather than a threat, and where the exposure of incompetence is treated as a service to the public good rather than a breach of elite solidarity. The stakes in this struggle extend well beyond questions of organizational efficiency or even economic performance, significant though these concerns certainly are. Morocratic governance systematically erodes public trust in precisely those institutions that democratic societies require to function effectively. When citizens observe that positions of authority and responsibility are filled not by the most capable individuals but by those with the right political connections and sufficient willingness to conform, they quite rationally conclude that the system is rigged, that merit does not matter, and that excellence is punished rather than rewarded. This erosion of trust has cascading effects throughout society, undermining not just particular institutions but the very legitimacy of institutional authority itself. It legitimizes mediocrity at precisely those historical moments when societies desperately need excellence, when complex challenges demand sophisticated responses, and when incompetence carries potentially catastrophic costs. Perhaps most fundamentally, it threatens the possibility of collective self-governance itself by ensuring that those charged with stewarding public resources and managing public institutions systematically lack the capabilities such stewardship requires. Restoring meritocratic principles in board governance thus represents far more than a technical exercise in improving organizational efficiency, important though such improvements would certainly be. It stands as nothing less than a prerequisite for sustaining democratic accountability and fostering societies that genuinely value excellence, responsibility, and integrity over the hollow alternatives of loyalty, passivity, and conformity. The alternative, a future in which morocracy becomes ever more deeply entrenched and normalized, is one in which the very possibility of good governance gradually evaporates, replaced by elaborate ceremonies that fool fewer and fewer people but continue nonetheless because no one possesses either the power or the courage to demand something better. That future, comfortable though it may be for those who benefit from current arrangements, represents a profound betrayal of the promise of democratic governance and the potential of human societies to organize themselves according to principles of reason, merit, and genuine accountability. Whether we can collectively summon the will to choose a different path remains an open question, one whose answer will be written not in academic papers but in the countless small decisions through which individuals and institutions either uphold or abandon standards of competence and integrity.

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FROM POLICY TO PRACTICE: THE BECOME PROJECT AND THE INSTITUTIONALISATION OF CIRCULAR ECONOMY IN EUROPE

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ABSTRACT

The European Union has placed the circular economy (hereafter CE) at the centre of its sustainability, competitiveness, and strategic autonomy agenda under the European Green Deal and the 2020 Circular Economy Action Plan. Despite substantial regulatory development and improvements in resource productivity, Europe continues to operate largely within a linear economic model, while material consumption and circularity rates remain structurally limited. In a context of ecological overshoot, geopolitical instability, and dependence on external sources of critical raw materials, the circular transition has become both an environmental necessity and a strategic economic priority. This paper situates the BECOME project within the broader European CE framework and examines its role in narrowing the gap between policy ambition and practical implementation. Drawing on established CE concepts such as resource efficiency, product life-cycle extension, regenerative design, and systemic decoupling, the study explores how the project translates these principles into organisational transformation, capacity development, and cross-sector collaboration. Particular attention is given to the project's alignment with key EU regulatory instruments, including the Waste Framework Directive and the forthcoming Circular Economy Act, as well as its role in strengthening resilience and reducing dependency on critical raw materials. The analysis combines conceptual discussion with an examination of the project's governance structure, activities, and stakeholder engagement mechanisms. The findings suggest that although Europe has developed a sophisticated policy and financing ecosystem for circularity, meaningful progress requires stronger institutional integration, clearer monitoring frameworks, and sustained organisational change. The BECOME project illustrates how EU-funded initiatives can act as practical platforms for translating CE policy into organisational capabilities and collaborative learning processes.

Keywords: *BECOME, Circular Economy Action Plan, Critical Raw Materials, EU-funded projects, Resource Efficiency, Strategic Autonomy, Sustainability Transition*

1. BETWEEN RESOURCE EFFICIENCY AND MATERIAL TRANSFORMATION: THE EU'S CIRCULARITY PARADOX

The 20th century witnessed a surge in biodiversity loss so profound that it has been described as the onset of a sixth mass extinction, the first in Earth's history driven not by natural cataclysms but by the actions of a single species, Homo sapien (Ceballos, Ehrlich, & Dirzo, 2017; Cowie, Bouchet & Fontaine, 2022; Pereira et al., 2024).

Climate change is now placing even greater strain on species and ecosystems, just as rising overconsumption and overexploitation continue to push the planet's natural systems closer to their limits. The circular economy (hereafter CE) has emerged as a comprehensive economic model aimed at addressing the environmental degradation and resource depletion associated with the traditional linear "take, make, dispose" system (Lacy, Long & Spindler , 2021; Binder & Braun, 2024; Sangoremi, Abosede and Adeleke, 2025; Weetman, 2025; Chen, Zhao & Ramzan, 2025). By promoting the principles of reducing resource consumption, reusing products and materials, and recycling waste into new production cycles, the CE seeks to minimise environmental impact while maintaining economic value (EEA, 2024; Velenturf & Purnell, 2021; Guo, Ali & Xu, 2023; Yang et al., 2023; Chen, Zhao & Ramzan, 2025; Kirchherr et al., 2023; Lacy & Rutqvist, 2015). In this sense, it represents not only an environmental strategy but also a systemic rethinking of how economic activity is organised and sustained over.

1.1. The Circular Economy as a Systemic Response to Ecological Limits

Beyond its ecological rationale, the CE has evolved into a strategic framework that seeks to reconcile environmental limits with long-term competitiveness. It is increasingly understood as a driver of structural change in production systems, value chains, and institutional arrangements. The Earth's biocapacity has been exceeded and can no longer sustain the resource demands imposed by contemporary business models and the globalized economy. A central ambition of the CE is to decouple economic growth from the intensive use of finite natural resources (EEA, 2024). Rather than relying on continuous extraction and disposal, circular models emphasise extending product lifecycles, improving resource efficiency, and closing material loops (Binder & Braun, 2024; Stahel, 2019). These principles contribute directly to addressing global challenges such as climate change, pollution, and biodiversity loss (HBS, 2021; Binder & Braun, 2024; Lacy, Long & Spindler , 2021), while also supporting longer-term socio-economic resilience (Kennedy & Linnenluecke, 2022). Importantly, the CE moves beyond a narrow focus on waste management and recycling, instead encompassing product design, consumption patterns, and regenerative approaches to natural systems (OECD, 2020; Kirchherr et al., 2023; Munonye, Ajonye, & Akinl, 2025). However, the translation of these principles into measurable systemic change remains uneven. While the theoretical foundations of circularity are well established, their operationalisation across sectors and governance levels presents significant institutional and organisational challenges.

1.2. Institutional and Regulatory Framework of the European Circular Economy

In Europe, the CE has gained prominence as a strategic policy priority. The adoption of the European Commission's Circular Economy Action Plan (CEAP) in 2020 marked a significant step in embedding circularity within the broader objectives of the European Green Deal (EC, 2020; Righetti & Rizos, 2023; Spani, 2020; Bourdin & Jacquet, 2025). The CEAP outlines a set of legislative and non-legislative measures targeting the entire product life cycle, from design and production to consumption and end-of-life processes. Its overarching goal is to foster sustainable production and consumption patterns while enhancing competitiveness and innovation within the European economy (Afolabi, 2025; Bourdin & Jacquet, 2025). Yet the existence of a comprehensive action plan does not automatically guarantee coherent implementation.

The effectiveness of CE policy depends on how successfully regulatory ambition is embedded within organisational practice, investment decisions, and cross-sector collaboration. At the same time, recent analyses highlight the labyrinthine nature of the EU waste-related institutional framework, characterised by overlapping directives, international conventions, and sector-specific regulations (Halkos & Aslanidis, 2024). This institutional complexity reflects both the historical development of EU environmental policy and the ambition to address circularity through a multi-level governance framework. However, it can also create fragmentation. Without sufficient coordination and institutional alignment, overlapping instruments may create uncertainty and slow transformative change. The policy relevance of the CE has become even more pronounced in light of Europe's growing awareness of its dependence on external sources of raw materials. Geopolitical developments, including the war in Ukraine, have highlighted vulnerabilities related to critical raw material supply chains, particularly those essential for the low-carbon transition (Righetti & Rizos, 2023; Baranowski, Jabkowski & Kammen, 2025). As a result, CE policies are increasingly framed not only as environmental instruments but also as mechanisms for strengthening economic security, resilience, and strategic autonomy (Baldassarre, 2025; Pimenow, Pimenowa & Rembisz, 2026). In this geopolitical context, CE initiatives are expected to contribute not only to environmental goals but also to supply security and economic resilience. This increases the need for projects that bridge policy objectives with practical implementation. At the regulatory level, the CE framework in Europe is supported by several key directives and initiatives. The Waste Framework Directive establishes the waste hierarchy and introduces fundamental concepts such as prevention, reuse, recycling, and the Polluter Pays Principle (Jouhara, Malinauskaite & Spencer, 2017; Halkos & Aslanidis, 2024; EC, 2026). Recent amendments have expanded its scope to address specific waste streams, including textiles and food waste, and to strengthen extended producer responsibility schemes (Laureti et al., 2024; EC, 2026). Looking ahead, the proposed Circular Economy Act is expected to further address structural barriers by harmonising end-of-waste criteria, enhancing transparency and digitalisation, and supporting the recovery of critical raw materials (EC, 2026). In addition, the corporate operationalisation of CE principles is being strengthened through the Corporate Sustainability Reporting Directive (CSRD) and ESRS E5 on Resource Use and Circular Economy, which require in-scope companies to report, where material, on their resource inflows and outflows, waste generation, circular economy-related policies, actions and targets, as well as the related financial effects, thereby reinforcing the link between regulatory ambition and firm-level accountability (EFRAG, 2025). Beyond EU-level policy, national and local implementation plays a crucial role in advancing CE objectives. Evidence from recent European mapping exercises shows that while most initiatives are implemented at national level, an increasing number originate at regional and municipal levels, confirming the multi-level character of circular governance. By 2023, the majority of EU Member States had adopted national CE strategies, roadmaps, or action plans, reflecting a broad commitment to translating European frameworks into concrete action (EEA, 2025; Baldassarre, 2025). At the local level, cities and regions are increasingly recognised as laboratories for circular innovation, testing new governance models and practical solutions that integrate circular principles across sectors (Di Francesco et al., 2024). Nevertheless, challenges such as limited resources, fragmented governance, and the lack of common metrics continue to constrain implementation (Hedlund et al., 2023; Hu & Pikalo, 2025; Garefalakis et al., 2025). Existing reporting frameworks emphasise peer learning and qualitative good practices rather than comparative performance ranking, reflecting the ongoing challenge of developing harmonised metrics for circularity (Di Francesco et al., 2024).

1.3. Structural Implementation Challenges in Europe's Circular Transition

Despite this strong policy commitment, Europe continues to face substantial structural challenges. Each European consumes approximately 14 tonnes of materials and generates around 5 tonnes of waste annually, placing the EU among the highest material consumers globally and beyond levels considered environmentally sustainable (Righetti & Rizos, 2023; EEA, 2024). This reflects a broader global asymmetry in resource use: high-income countries have a per capita material footprint roughly six times that of lower-income countries, averaging around 24 tonnes per person compared to 4 tonnes, while accounting for less than one-fifth of the global population. The EU and the United States alone consume more than half (52%) of the world's materials despite housing only around 10% of its population (IRP, 2024; Hickel et al., 2022). At the same time, Europe has managed to grow its economy while maintaining relatively stable levels of resource use and waste generation, achieving a modest degree of decoupling between economic growth and material consumption (Righetti & Rizos, 2023; Ariño & Wang, 2025). This suggests that while progress has been made, the transition remains incomplete and uneven. Europe is nevertheless among the most resource-efficient regions in the world and recycles nearly half of the waste it generates, which indicates significant potential for circularity, particularly if further progress is achieved through higher-quality recycling, upcycling and the effective functioning of secondary material markets (EP, 2025; EEA, 2024; Laureti et al., 2024). However, these achievements have not yet translated into a substantial increase in overall material circularity. The EU's circular material use rate reached 11.8% in 2023 and has shown only limited improvement in the past decade, as both recycling volumes and total material consumption have remained relatively stable since 2014 (Righetti & Rizos, 2023; Eurostat, 2024; EEA, 2024). A similar pattern is visible at the global level. The Circularity Gap Report 2025 estimates that only 6.9% of the 106 billion tonnes of materials entering the global economy originate from secondary sources, a decline of 2.2 percentage points since 2015, highlighting the continued structural dominance of virgin resource extraction despite increasing policy attention to circularity (CEF, 2025). Taken together, these figures reveal a structural tension within the European transition: while regulatory ambition and resource efficiency have advanced, the underlying material metabolism of the economy remains largely linear. These figures reveal a structural tension within the European transition: regulatory sophistication has advanced more rapidly than material transformation. Despite policy maturity, the underlying economic metabolism remains predominantly linear in structure and operation. At the same time, long-term analyses of material intensity indicate that several advanced economies have achieved sustained reductions in material use per unit of GDP, reflecting relative and in some cases absolute decoupling trends (Ariño & Wang, 2025). Countries such as the Netherlands, Germany, France, Sweden and Italy are frequently cited as European frontrunners in CE implementation due to their high recycling rates, advanced waste management infrastructure and proactive CE strategies. This suggests that progress is possible, but not yet systemic. Cross-country analyses further reveal significant heterogeneity in how environmental technology, taxation, and emissions interact with waste management choices, suggesting that circular transitions remain uneven across Member States (Imran et al., 2024; Di Francesco et al., 2024). These trends underline a critical challenge in the circular transition: while enabling frameworks are increasingly sophisticated, linear systems continue to dominate economic practice. The EU has developed a strong policy, knowledge, and financing ecosystem to support CEinitiatives, and both companies and consumers show early signs of adopting new business models and consumption patterns (EEA, 2024; Di Francesco et al., 2024).

Yet, the overall effectiveness of these efforts remains difficult to assess, partly due to limitations in monitoring and data availability. A practical approach is to combine harmonised waste indicators (e.g., Eurostat) with innovation proxies (e.g., Global Innovation Index) to benchmark countries and identify policy-relevant clusters (Laureti et al., 2024). Monitoring the CE therefore requires not only tracking material flows, but also assessing environmental degradation associated with resource extraction, processing, and use (Imran et al., 2024; Ariño & Wang, 2025). Advanced econometric and machine-learning approaches have recently been applied to assess the long-run relationships between waste management practices, environmental taxation, and carbon emissions in the EU, demonstrating the importance of multidimensional monitoring frameworks (Imran et al., 2024). Effective monitoring is therefore inseparable from institutional learning. Data collection alone is insufficient unless accompanied by governance mechanisms that translate insights into adaptive policy and organisational reform. Recent geopolitical developments, including the US-Israel-Iran war, have further exposed Europe's dependence on external sources of critical raw materials, reinforcing the strategic relevance of CE policies. In this context, circularity is increasingly framed as an instrument of economic resilience and strategic autonomy, rather than solely an environmental objective (Hartley, Baldassarre & Kirchherr, 2024; Imran et al., 2024; Tukker, 2024). Nevertheless, global environmental impacts associated with Europe's consumption continue to rise, and the expected environmental benefits of circularity have not yet fully materialised. While the CE offers substantial opportunities for sustainable growth and environmental regeneration, it also faces persistent misconceptions. One of the most common is the assumption that circularity is primarily about recycling, whereas in reality recycling represents only one component of a much broader systemic transformation (Laureti et al., 2024; Imran et al., 2024). This is visible in Europe, where recycling rates vary substantially by country and track differences in technology adoption, infrastructure, and governance. Comparative evidence shows that high-performing EU countries (e.g. Germany, Sweden, the Netherlands, Belgium, Austria, and Slovenia) pair regulatory frameworks with investments in advanced sorting, smart collection, and data-enabled waste management systems (EEA, 2024; Imran et al., 2024). Therefore, effective circular transitions require coordinated policy efforts, organisational change, and new business models that prioritise durability, repairability, and shared value creation (Sakao et al., 2024; Curran & Joltreau, 2026). Within this broader theoretical and policy landscape, the CE provides a relevant and necessary framework for analysing EU-funded initiatives that aim to support sustainable organisational and sectoral transformation. By aligning project activities with established CE principles and European policy objectives, such initiatives contribute to bridging the gap between policy ambition and practical implementation. This perspective offers an appropriate conceptual foundation for the EU project presented in this paper, situating it within ongoing European efforts to advance circularity, resilience, and sustainable development (Taylor, 2020). Against this background, EU-funded projects assume a strategic role as experimental arenas for institutional innovation. They operate at the intersection of policy design and practical implementation, testing how circular principles can be translated into organisational capabilities, stakeholder engagement models, and measurable transformation pathways. It is within this context that the BECOME project is positioned and analysed in the following sections.

2. INTRODUCTION TO THE BECOME PROJECT

The three-year BECOME project (Boosting Circular Economy Expertise through Learning Communities, January 2024–January 2027) aims to develop innovative and multidisciplinary approaches to CE education. The project focuses on the co-creation of teaching and training materials for educators and professionals (WP3 and WP4), while also fostering innovation through CE Learning Communities (WP5). Together, these activities contribute to the development of green skills. As the transition to a CE requires changes in higher education (HEI) and vocational education and training (VET) curricula, the project seeks to strengthen the provision of green skills and address existing skills mismatches (WP2). By designing new educational content and learning approaches, the project also supports the development of entrepreneurial mindsets in Europe. The project pursues several key goals:

1. promoting corporate social responsibility and sustainable development;
2. strengthening green skills and competencies in line with the EU Green Competence Framework (GreenComp);
3. improving the quality and relevance of circular economy-related skills;
4. facilitating knowledge exchange and co-creation between HEIs, VET institutions, labour market actors and other stakeholders through CE Learning Communities.

BECOME addresses three main challenges. First, achieving lifestyles compatible with the Paris Agreement requires a shift from linear production and consumption models ("take–make–waste") towards systemic approaches that respect planetary boundaries. Second, significant skills gaps remain in the practical implementation of CE principles. Third, cooperation between key stakeholders in the CE ecosystem remains limited, particularly between education institutions and industry actors. To respond to these challenges, the project defines five main objectives. These include analysing existing CE learning communities and ecosystems, mapping relevant stakeholders and cooperation networks, developing educational building blocks for CE teaching, introducing innovative teaching methods for green skills development, and establishing European-wide CE learning communities ("Circular Hubs") that facilitate collaboration between HEIs, VET institutions and businesses. The project is structured around several work packages. WP2 analyses stakeholder needs and the current state of CE learning ecosystems in the participating countries. WP3 and WP4 focus on developing and testing training materials for educators and professionals. WP5 establishes regional CE learning communities in Slovenia, Finland, the Netherlands and Bulgaria. Together, these activities aim to strengthen collaboration between education systems and industry while supporting the broader transition to a circular economy.

2.1. Mapping Circular Economy Ecosystems

WP2 established the empirical and strategic foundation of the project by analysing existing European CE initiatives and learning community models. The analysis aimed to identify relevant synergies, good practices, and gaps that could inform the development of BECOME's learning communities and educational content. In parallel, stakeholder needs were mapped through interviews and surveys conducted across the four partner countries, with particular attention to skills gaps and mismatches in CE-related education and practice. The main output was a benchmark and gap-analysis report covering EU initiatives, stakeholder needs, country comparisons, and the broader CE ecosystem, which served as the basis for the design of WP3–WP5 (BECOME, 2024).

2.1.1. Methodology of the research

The first step analysed EU-level initiatives to identify synergies relevant for CE learning communities and educational building blocks. This benchmarking included four components: (1) literature review on CE education; (2) analysis of European initiatives based on the Erasmus+ database; (3) review of regional best practices; and (4) mapping of existing educational programmes. The second step focused on identifying stakeholder needs through interviews and surveys with key actors. Based on the desk research, survey and interview guides were developed to complement the skills needs analysis. Each partner region conducted two to three interviews and completed between 11 and 16 surveys. The ecosystem analysis of these two tasks produced a set of requirements for the CE Learning Communities and CE Learning Building Blocks. The benchmarking provided insights into existing learning community models at national and international levels, while the stakeholder analysis helped identify key skills gaps and needs. Together, these findings informed the design of the educational building blocks and training activities developed later in the project.

2.1.2. Benchmarking Results: Skills and Education Challenges

Benchmarking was conducted to better understand how educational systems across Europe prepare future professionals for the CE and where gaps exist between academic training and industry needs. While both policymakers and researchers recognise the importance of green skills, studies indicate differing interpretations of CE concepts and skill requirements. This has contributed to a persistent mismatch between competencies developed in education systems and those demanded by industry. Research on the integration of circular concepts into higher education remains limited and fragmented. Several key barriers were identified. First, curricula often lack systems thinking and CE perspectives, as teaching still largely reflects traditional linear economic models. Second, educational programmes frequently emphasise theoretical knowledge while offering limited exposure to real-world circular challenges. Third, disciplinary silos hinder the integration of circular concepts across fields, making it difficult for future professionals to apply knowledge in complex system transformation contexts. Finally, interdisciplinary approaches remain underdeveloped despite the cross-sector nature of circular transitions. The transition to a CE therefore requires a workforce equipped with interdisciplinary competencies such as systems thinking, life-cycle assessment (LCA), value-chain collaboration and innovation in sustainable business models. Industry actors increasingly expect professionals who can integrate sustainability into strategic decision-making and support the development of circular business models (Bocken et al., 2014). However, many educational programmes still emphasise traditional skills and insufficiently address the practical implementation of circular principles. The literature highlights several pathways for improvement. These include curriculum reform that integrates CE concepts, stronger collaboration between academia and industry through co-designed programmes, supportive policy frameworks that encourage knowledge exchange, and the development of innovative teaching methods such as flipped classrooms and challenge-based learning (Rodriguez-Chueca et al., 2020). Interdisciplinary learning and collaborative approaches are particularly important for developing the systems thinking required for circular economy transitions.

2.1.3. Key Findings of the Ecosystem Gap Analysis

The ecosystem analysis identified a combination of technical and transversal skills required for the CE transition. Key technical competences include resource efficiency, life cycle analysis, and circular business models, complemented by broader capabilities such as creativity, innovation, and critical thinking. Learning communities should therefore adopt challenge-based and interdisciplinary approaches that connect theory with practical application and support systemic change.

The reviewed learning communities address diverse audiences, ranging from unemployed individuals and low-skilled workers to professionals and trainers. They emphasise practical and accessible learning resources for non-experts while also offering more advanced materials for experienced participants. This highlights the importance of defining clear target groups rather than attempting to address all stakeholders simultaneously. Learning communities are expected to function as knowledge hubs that provide training materials such as MOOCs, online platforms, and specialised handbooks, while also enabling collaboration between education, industry, policymakers, and civil society. Such partnerships are essential for addressing skill gaps and supporting the broader circular transition. Lifelong learning, interdisciplinary collaboration, and practical application emerge as key priorities for developing the competences needed to scale CE initiatives. The ecosystem analysis across four regions shows that, despite contextual differences, learning communities consistently focus on skills development, knowledge exchange, and collaboration. While Slovenia, Finland, and the Netherlands emphasise circular business models and system-level approaches, Bulgaria places stronger emphasis on material reuse and sector-specific applications. Dutch and Finnish initiatives particularly highlight innovation capacity and value chain integration. Across all regions, stakeholders identify similar skill gaps, including systems thinking, knowledge of circular practices and materials, and leadership for managing circular transitions. Leadership is especially important for mobilising value chain actors and supporting organisational change. The transition also requires workforce reskilling, interdisciplinary collaboration, and stronger life cycle analysis capabilities. At the same time, a lack of detailed technical knowledge about circular production chains and business models remains a major barrier. Combined with weak regulatory clarity and unclear ownership responsibilities, these gaps continue to slow the adoption of circular practices in many organisations. Overall, the ecosystem analysis provides the basis for the development of BECOME's educational building blocks. It highlights both the key competences required for circular transformation and the institutional barriers that learning communities need to address.

2.2. Development of Circular Economy Learning Modules and Training Materials

WP3 focused on designing the project's pedagogical core. It developed an educational framework for CE learning within an international learning community context and created modular learning building blocks for higher education, vocational education and training, and professional training. The work included reviewing existing educational programmes, defining relevant competences and learning approaches, and co-creating teaching materials with professionals and students. The work package also included a five-day educator training held in May 2025, translation of materials into Finnish, Slovenian, Bulgarian, and Dutch, and the development of a microcredential certification framework. The main deliverable is a public set of CE training materials, including a train-the-trainer manual for educators. As the project is still ongoing, some outputs, including final translations and the microcredential framework, remain under development. Insights from the ecosystem analysis in WP2 highlighted several key skill gaps, including systems thinking, knowledge of circular practices and materials, and leadership for managing circular transitions. Stakeholders also pointed to limited technical knowledge of circular production chains and business models, as well as regulatory uncertainty and unclear ownership responsibilities. These findings informed the development of the CE learning modules and training materials presented in Table 1. Based on the gap analysis, a modular learning structure for CE training materials was developed.

Table 1. *Module structure for the circular economy training materials.*

Module Title	**Description**
Introduction to Circular Economy Principles	Introduction to circular principles, global benefits, challenges, and case studies.
Optimisation of Resource Flows in CE	Tools and techniques to understand and optimise resource flows (e.g., material flow mapping).
Environmental Impact Analysis via Life Cycle Assessment (LCA)	Methods for analysing environmental impacts across a product's lifecycle.
Comparative Cost Analysis in CE	Financial analysis for comparing traditional and circular economic models (e.g., Life Cycle Costing (LCC).
Innovative Business Models for the Circular Economy	Exploration of business models like product-as-a-service and sharing economies.
Driving Organisational Change for Circular Transformation	Strategies for organisational change and stakeholder engagement.
Financial Strategies for Circular Economy Ventures	Accessing funding and investment opportunities for circular initiatives.
Values Thinking on Circular Economy	Examining social, ethical, and cultural implications and dimensions of circularity.
Circularity Metrics and Performance Standards	Metrics, KPIs, and standards to assess circular progress.
Policy Frameworks for Advancing the Circular Economy	Understanding and applying local and global policy frameworks.
Systems Thinking in Circular Economy Implementation	Integrating circularity into complex organisational systems.
Design Principles for Circular Products	Eco-design principles for creating reusable, recyclable, and sustainable products.
Technological Innovations in the Circular Economy	Role of digital tools like AI, IoT, and blockchain in advancing circular systems.
Partnerships and Collaboration in the Circular Economy	Fostering partnerships and cross-sector collaboration for circular solutions.

The building blocks were designed to address the identified skills gaps and cover the main dimensions of circular transformation. They begin with the foundations of CE thinking and continue with governance, organisational change, collaboration in value chains, and technological innovation. Each building block follows a common structure and includes several components: a pedagogical guide for educators, slide packages for each chapter, supporting training materials, and country-specific examples. The modules typically include an introduction to the topic, explanation of the method or tool, a practical case study, concluding reflections, exercises, and references for further reading. Using this framework, a comprehensive educational manual of approximately 400 pages was developed. The material formed the basis for a five-module educator training programme, with one module delivered online and four held in person during the education week. Around 30 educators participated and evaluated both the sessions and the training materials, providing feedback for further improvement. Participant feedback highlighted several priorities. First, educators emphasised the need for stronger practical orientation, including more case studies, real-world examples, and interaction with companies and practitioners.

Second, they recommended more interactive learning formats, particularly workshops, group exercises, and elements of gamification. Third, feedback pointed to improvements in course design, suggesting clearer task explanations, a more compact structure, and a better balance between theory and practice. Finally, participants highlighted the importance of improved preparation and resource availability, including sharing materials in advance and ensuring training content is finalised before delivery. Key recommendations included providing pre-reading materials, allocating more time for interactive sessions and case discussions, and introducing follow-up activities such as coaching or mentoring to reinforce practical application. Overall, the evaluation results indicate that the training programme was highly relevant and well received. Most participants reported significant value from the training and more than 90% indicated they would recommend it to others. Based on this feedback, the materials were further refined and condensed into a 100-page educator manual to improve usability and practical application.

2.3. Professional Training and Skills Development in the Circular Economy

WP4 translates the educational building blocks developed in WP3 into practice-oriented training for students and professionals. Its aim is to strengthen CE competences required for Europe's green transition while ensuring that the training materials remain practical, adaptable, and responsive to participant feedback. The work package delivers CE training for future professionals and corporate practitioners, updates learning materials through piloting and evaluation, and provides translated versions in the partner languages. The main output is a professional training format based on the CE learning modules. As the training is scheduled for March 2026, evaluation results are not yet available. Feedback from company representatives during the preparation of educator materials (WP3) indicated that training for business professionals should place greater emphasis on practical problem solving and corporate engagement. In response, short exercise-based worksheets were developed for each training topic, providing step-by-step guidance for companies on implementing CE practices. Each worksheet is approximately three to four pages long and focuses on practical application. Companies also participated in selecting the most relevant topics for the training. This led to the introduction of new topics such as CSRD and material choices and recovery, while others, including design strategies for circular products and policy analysis, were removed from the programme.

The final set of training topics includes:

- Foundation of the Circular Economy
- Values Thinking in the Circular Economy
- Systems Thinking in CE Implementation
- Collaborative Strategies
- Material Flow Mapping
- Circular Maturity Tool
- Life Cycle Costing
- Sustainable Financing
- Initiating Organisational Change
- Innovative Business Models
- Technological Innovations in CE
- Corporate Sustainability Reporting Directive (CSRD)

The training programme involves more than 20 corporate professionals from the four partner countries and is organised over a three-week period. Day 1 is delivered online, Days 2 and 3 took place onsite in Utrecht, and Days 4 and 5 follow a hybrid format with both online sessions and local country teams. The first part of the training focuses on international exchange and shared learning, while the final sessions allow participants to apply the concepts within their local contexts.

2.4. Creation and Exploitation of Learning Communities on Circular Economy in Europe

WP5 operationalises the project's long-term collaborative infrastructure by establishing four CE Learning Communities in Finland, Slovenia, the Netherlands, and Bulgaria. Building on the needs identified in WP2 and the training materials developed in WP3 and WP4, this work package defines operating guidelines, event structures, and sustainability rules for the communities. Activities include webinars, trainings, networking events, and innovation challenges, while continuous evaluation and feedback support their further development. WP5 also introduces micro-credentials to make learning achievements visible and transferable. The main outputs are the establishment of four CE Learning Communities together with public guidelines and annual event schedules.

The project aims to attract at least 50 members or organisations per hub, resulting in a minimum of 200 participating institutions overall. Each hub will organise four physical learning network events during the project, totalling 16 events across all hubs, as well as six online knowledge-sharing sessions per year per hub, amounting to 24 sessions in total. Although the four learning communities share a common focus on CE capacity building, their priorities differ depending on regional ecosystems, institutional settings, and stakeholder networks. Rather than replicating a single model, WP5 adapts the concept of learning communities to national contexts while maintaining a shared orientation toward stakeholder engagement, knowledge exchange, and competence development. The Dutch learning community focuses primarily on educational innovation, skills development, and regional networking. Its activities emphasise future circular skills, the integration of sustainability into teaching practices, and collaboration between educational institutions, regional circular initiatives, and labour market actors.

The Slovenian learning community places stronger emphasis on cross-sector dialogue, bringing together businesses, policymakers, NGOs, academics, and legal experts. Its activities highlight collaboration mechanisms, lifecycle thinking, policy frameworks, deposit-return systems, compliance, and ethical considerations in circular transition governance. The Finnish learning community is closely linked to regional ecosystem development and applied learning. Its initiatives connect education with working life through collaboration between companies, educational institutions, and public organisations. The focus is on CE skills, career pathways, student engagement, and practical projects with regional partners.

The Bulgarian learning community emphasises ESG integration, regulatory literacy, and sector-specific sustainability training, particularly in relation to the raw materials and mining sector. Its activities combine sustainability concepts with environmental regulation, EU taxonomy, reporting requirements, and CE applications. Taken together, the four communities represent complementary pathways for CE learning. The Netherlands emphasises educational innovation and skills development; Slovenia focuses on policy-practice collaboration; Finland prioritises regional engagement and applied learning; and Bulgaria highlights ESG integration and sectoral transformation. This diversity illustrates that WP5 has produced a flexible and context-sensitive model in which CE competences are developed through different combinations of stekholder participation.

Table 2. *Comparison table of learning communities/hubs.*

Learning community	Main content / focus areas	Main stakeholder orientation	Distinctive contribution
The Netherlands	Circular skills development, educational innovation, integration of sustainability into teaching, regional networking, dissemination through vocational and higher education forums	Educational institutions, teachers, students, regional innovation actors, labour-market stakeholders	Functions mainly as a bridge between education and regional circular innovation ecosystems, with a strong emphasis on future skills and pedagogical renewal.
Slovenia	Cross-sector collaboration, lifecycle thinking, circular business practices, policy dialogue, legal and ethical aspects, governance instruments such as deposit-return systems	Businesses, policymakers, NGOs, academics, legal experts	Stands out for its policy–business–academia interface, treating CE as a systemic governance and institutional transition issue.
Finland	Regional ecosystem development, applied learning, CE skills, education–industry cooperation, career pathways, student engagement, sustainable consumption	Companies, educational institutions, students, regional partners, public organisations	Operates as a practice-based regional innovation environment, closely linking CE learning with employability and local experimentation.
Bulgaria	ESG, sustainability reporting, EU taxonomy, regulatory literacy, green and CE applications, sector-specific training in raw materials and mining	Industry actors, professionals, educators, sustainability and compliance stakeholders	Distinctive for its sectoral and regulatory focus, embedding CE learning within ESG competence-building and industry transformation.

3. CONCLUSION

The analysis presented in this paper shows that the CE has evolved from an environmental concept into a broader strategic framework for competitiveness, resilience, and institutional transformation in Europe. Although the EU has developed an increasingly sophisticated policy architecture to support circularity, the transition continues to face structural barriers, including fragmented implementation, skills gaps, limited cross-sector coordination, and the insufficient integration of circular principles into organisational practice. As a result, the gap between regulatory ambition and material transformation remains a central challenge of the European circular transition. The BECOME project addresses this challenge by translating CE objectives into a model of capacity-building, educational innovation, and stakeholder collaboration. Its structure moves from analysis to implementation: WP2 identifies ecosystem conditions and competence gaps; WP3 develops pedagogical foundations for CE education; WP4 applies these foundations through professional training; and WP5 embeds them within national learning communities designed to sustain collaboration and long-term competence development.

In this way, the project approaches circularity not as a purely technical issue but as a multidimensional transformation requiring new knowledge, partnerships, and institutional arrangements. An important finding is that the four learning communities did not replicate a single standardised model but adapted the concept to different regional and institutional contexts. This suggests that the institutionalisation of CE practices in Europe is most effective when it combines strategic coordination with context-sensitive implementation. In this respect, BECOME illustrates how EU-funded initiatives can function as experimental platforms for developing the capabilities, networks, and governance structures necessary for more durable circular transformation. Ultimately, the project highlights that the circular transition depends not only on regulatory frameworks or technological innovation, but also on the development of green skills, interdisciplinary learning, and collaborative infrastructures linking education, business, policy, and society. By demonstrating how CE principles can be operationalised through institutions and learning communities, BECOME contributes to bridging the gap between policy ambition and practical implementation. Theoretically, the study contributes to the literature on CE implementation by showing how EU-funded initiatives can link policy frameworks with organisational learning and capacity building. Practically, the BECOME project demonstrates how learning communities, targeted training, and cross-sector collaboration can translate CE policies into concrete skills, partnerships, and implementation pathways across regions.

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OWNERSHIP STRUCTURE OF MARINAS AS A FACTOR OF CORPORATE SOCIAL RESPONSIBILITY

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ABSTRACT

The fragmented ownership structure of Croatian marinas (65 facilities along 6,100 km of the Adriatic coast) presents significant coordination challenges for both national policy and local development. This is particularly evident in the context of the Croatian coastline, which has more than 90 municipalities with fewer than 10,000 inhabitants, where up to 70% of the marinas are located. The Croatian national policy, lacking a macro-strategic model and adequate regulation of FDI risks, leaves the assurance of corporate social responsibility (CSR) to the discretion of marina owners, in contrast to the EU standards of Germany and Denmark. This paper analyzes the CSR orientation of three marina ownership groups with distinct approaches to CSR: Croatian (high local connection), foreign (moderate orientation), and speculative funds (distanced approach). Through this analysis, hypothesis H0 is tested, which states that speculative funds exhibit the weakest CSR integration with local communities. Methodologically, this paper employs a combination of descriptive analysis of statistical data (2021 Census, marina capacities) and a comparative study of CSR indicators across a selected number of representative marinas. Key findings indicate the economic dependence of small municipalities on marinas, but highlight differing CSR approaches: Croatian ownership prioritizes local development, foreign ownership balances a profit-driven approach with CSR, while the 8-9 marinas under fund management (12-14% of the total) maximize ROI at the expense of the community. The results suggest the need for a national macro-strategic model with clear and monitored FDI screening and CSR standards for nautical tourism. The paper contributes to the literature on CSR in transition economies, offering policymakers tools to protect strategic resources and local development.

Keywords: *Adriatic coast, Socially responsible business (CSR), speculative funds, local development, national policy*

1. INTRODUCTION

1.1. Subject and Problems

The subject of this research arises from the fragmented ownership structure of Croatian marinas (65 marinas along 6,100 km of coastline), which are largely situated within small municipalities (35-45 marinas in municipalities with fewer than 10,000 inhabitants; while 55-60 marinas are in areas with fewer than 40,000 inhabitants), with a growing share of foreign ownership (8-9 marinas under speculative-predatory funds) (DZS, 2025). Given the need to regulate ownership in Croatia, national policy is expected to take this into account, primarily in terms of protecting domestic entrepreneurship.

Unfortunately, Croatia lacks a macro-strategic model that would regulate FDI risks and ensure Corporate Social Responsibility (CSR) and behaviour in the context of local communities, unlike the EU standards of Germany or Denmark, which integrate national interests with FDI screening (OECD, 2015; European Commission, 2023). This creates coordination challenges because small municipalities in Croatia's coastal region are economically dependent on marinas, and consequently face different approaches to CSR. These are three ownership approaches: Croatian ownership traditionally integrates local needs, foreign ownership shows a lower orientation toward CSR, while speculative-predatory funds prefer financial returns at the expense of the community (Jutarnji list, 2020). In line with the focus of this paper, the subject of the research is a comparative analysis of the socially responsible business practices (CSR) of three marina ownership groups: Croatian ownership (expected high local connection), foreign ownership (moderate CSR orientation), and ownership by speculative-predatory funds (the most detached approach). All of this becomes an unacceptable component of national policy for managing strategic resources (Investopedia, 2024). Therefore, the focus of this research is on the implications for local development in more than 90 fragmented small coastal municipalities and on testing hypothesis H0 through empirical indicators of CSR (employment, environment and community), while linking the findings to the macro-strategic model that Croatia has not yet established.

1.2. Ownership Structure and National Policy

What is important for any state is the macro-strategic system by which life in the state is conducted and the state's structure is managed, and the national policy that, through sub-national policies, regulates the relationships and development of every segment of the national economy. In this regard, in contemporary public policy theory, national policy is defined as a long-term, structured system of strategic goals, institutional arrangements, and implementation mechanisms through which the state directs social and economic development (OECD, 2015). This means that national policy is not a mere sum of individual laws or sectoral measures, but rather a network of policies within a macro-strategic model that ensures the coherence, stability, and predictability of public action. National policies also touch upon social policy, which means they deeply permeate every aspect of society. Accordingly, the formulation of national policy that had the greatest impact on theories of the state is the one presented in Hugh Heclo's renowned study of social policy in Britain and Sweden. In Heclo's words: “Policy finds its sources not only in power but in uncertainty, people collectively wonder what to do … Governments don't just ‘power’... they also puzzle. Policy-making is a form of collective puzzling on behalf of society... Many political interactions were a process of social learning expressed through politics” (Heclo, 1974, pp. 305-306). Given that national policy, in its global-national component, is based on a macro-strategic model, this clearly establishes a foundational model for responsible governance and the development of the state and its macro-sectors. This is particularly relevant for strategic sectors such as nautical tourism and marina management. Developed member states of the European Union, particularly Germany, Denmark, the Netherlands, Sweden, and Finland, have understood and developed this fact for decades, integrating national interests with EU frameworks to protect strategic sectors such as healthcare and infrastructure (European Commission, 2023). What is particularly important for any state are the resources it must specifically protect and manage responsibly and sustainably, prioritizing domestic entrepreneurship. Therefore, in the developed countries of the European Union, the macro-strategic model supports a hybrid ownership structure that combines private initiative with state oversight of foreign investments, thereby ensuring economic sovereignty and competitiveness (European Parliament, 2023).

As Zavarski notes, recent research shows that such models in the EU-CEE region, including transitional states, require strengthening industrial policies to transition to a new development model, emphasizing the role of national cohesion policies in reducing regional inequalities (Zavarská, 2023). As for Croatia, the national policy within the EU Partnership for 2021-2027 focuses on green and digital transitions, only occasionally supporting clusters and small entrepreneurship through the Plans for Industrial Transition (European Commission, 2023). Outside of this segment, Croatia significantly lags behind in the sustainable, responsible, and successful use of national resources due to the absence of a macro-strategic model, followed by a lack of long-term vision, political instability, and weak institutional capacity (European Commission, 2023; Luković, Piplica and Jurić, 2023). The key difference lies in the fact that developed countries have integrated ownership structures with strong FDI screening, while transitional countries, like Croatia, are still struggling with fragmented privatization and the risks of uncontrolled foreign investment (World Bank, 2025). Croatia has formally established the National Development Strategy until 2030, which sets goals such as GDP growth to 75% of the EU average and a green transition, but its reality and its effectiveness on development have been lacking. The Croatian strategy lacks realistic operational implementation and institutional depth, resulting in poor predictability and high risks of external influence on ownership structures (Government of the Republic of Croatia, 2021). While developed EU countries have integrated macro-strategic models with strong FDI screening, Croatia still suffers from political instability and fragmented privatization (World Bank, 2025).

1.3. Marina Ownership Structure

According to official data from 2024, Croatia had 65 marinas with about 16,000 berths, spread along approximately 6,100 km of coastline, which is home to five larger cities (with more than 40,000 inhabitants). In the Croatian coastal region, within six coastal counties (Primorsko-Goranska, Lika-Senj, Zadar, Šibenik-Knin, Split-Dalmatia and Dubrovnik-Neretva counties) there are about 90-100 municipalities with fewer than 10,000 inhabitants, of which 70-80 municipalities have fewer than 5,000 inhabitants (DZS, 2021; 2025). Of the 65 marinas, as many as 55-60 are located in municipalities with fewer than 40,000 inhabitants, of which 35-45 are in municipalities with fewer than 10,000 inhabitants (CharterCroatia.net, 2026). Therefore, it can be concluded that more than 50% of all marinas are located in municipalities with fewer than 10,000 inhabitants. In addition, mooring facilities should be included; it is estimated that about 130 municipalities with fewer than 40,000 inhabitants on the Croatian Adriatic coast have 30-40 larger mooring areas (with a capacity of >100-200 berths for yachts and boats) located within local harbors. It should be noted here that another problem arises regarding the marinas, namely unfair competition, but this will be set aside for now, as the topic is marinas. This raises the question of the role played by these 55-60 marinas in municipalities with fewer than 40,000 inhabitants, and the 35-45 marinas in municipalities with fewer than 10,000 inhabitants. In short, the smaller municipalities where the marinas are located are economically and developmentally dependent on the marina and its operations. Therefore, it is necessary to explain the nature of this relationship.

1.4. Socially Responsible Business

Socially responsible business or Corporate Social Responsibility (CSR) has developed as an extension of the classic concept of sustainable development. It is a framework that, in addition to the factors of sustainable business and development, introduces elements of business cooperation in such a way that through this cooperation, goals are achieved for all parties in the group, which through joint investments realizes both common and their own individual goals and results.

The most frequently cited definition of CSR states: "Corporate social responsibility (CSR) is a self-regulating business model that helps a company be socially accountable to itself, its stakeholders, and the public. By practicing corporate social responsibility, also called corporate citizenship, companies are aware of how they impact aspects of society, including economic, social, and environmental. Engaging in CSR means a company operates in ways that enhance society and the environment instead of contributing negatively to them" (Investopedia, 2024). This definition emphasizes that CSR is a business model that entities use to be socially responsible and positively impact society and the environment. Therefore, they voluntarily engage through a self-regulating approach to business. The European Union has also contributed to defining CSR, stating: "Corporate social responsibility refers to businesses taking responsibility for their behaviour and its impact on society. This can include employment conditions, environmental impact, ethical conduct, and other societal concerns."[1] The European CSR framework emphasizes the responsibility of businesses for their social and environmental impacts through the activities of CSR entities. Both definitions are widely accepted and recognized in the international business and academic communities.

2. RESEARCH LIMITATIONS, AIMS AND HYPOTHESIS

The research limitations lie in the fragmentation of the literature: previous research on sustainable marina development (e.g., capacities of 65 marinas along 6,100 km of coastline) neglects the strategic impact of foreign ownership by speculative-predatory funds on corporate social responsibility (CSR). Empirical data is lacking on their relationship with local communities in municipalities with fewer than 10,000 inhabitants, which are home to 35-45 marinas. The aim of the study is a comparative analysis of the CSR orientation of marinas in Croatian versus foreign ownership, testing the implications of a fragmented ownership structure (55-60 marinas in municipalities with fewer than 40,000 inhabitants). Hypothesis H0: Foreign-owned marinas (especially those managed by private equity funds) show a more detached approach to CSR regarding local destination priorities, for example, in small municipalities with fewer than 10,000 inhabitants, in contrast to Croatian marinas that integrate community needs with the local development. This research leaves room for future studies in terms of empirically validating the hypothesis through longitudinal data on investments by funds versus local governments.

3. METHODOLOGY

The subject of this research is based on a combined methodological approach of descriptive and comparative analysis of the ownership structure of 65 marinas along the Croatian Adriatic coast (6,100 km of coastline).

- Data and sources include:
  - Secondary statistics from the Croatian Bureau of Statistics (CBS, Census 2021) for demographic fragmentation (90+ municipalities with fewer than 10,000 inhabitants and 55-60 marinas in municipalities with fewer than 40,000 inhabitants).
  - Marina directories (MMPI, HAKOM, ACI) for the classification of ownership (Croatian vs. foreign/investment funds).
  - Qualitative analysis of CSR reports, local government plans, and case studies (e.g., Marina Frapa, Marina Punat, Marina Kremik…).

[1] European Commission. (2011). *A renewed EU strategy 2011–14 for Corporate Social Responsibility* (COM(2011) 681 final). Brussels.

- Analysis Methods: Given the objectives, the research utilized both quantitative and qualitative approaches. Of particular importance is the survey method, which was conducted in several marinas sampled across the three types of ownership.
  The conclusions resulting from the research were drawn using comparison and deduction methods. The part of the research related to statistical data is based on the desk research method.

4. RESEARCH AND RESULTS

To understand the development potential of the Croatian coast in the context of marinas, it is necessary to compare the level of development of its main Mediterranean competitors - Italy, France, and Spain - with Croatian capacities.

Country	Marinas	Berths	Average	Coast length (km)	Km per Marina	Berths/km
Italy	537	156 000	290.5	7 600	*14.2*	20.5
France	130	70 000	538.5	2 057	*15.8*	34.0
Spain	214	125 000	584.1	4 964	23.2	25.2
Croatia	65	16 000	246.0	6 100	93.8	2.6

Table 1: Capacities and spatial distribution of marinas in the Mediterranean (2024) (Source: Author's calculation based on IGY Marina Report 2024)

As shown in Table 1, the density of marinas and berths per kilometer of coastline in Italy, France, and Spain is significantly higher than in Croatia (HR: 93.8 km between marinas versus the 20 km "experiential" saturation standard). Italy and France are saturated, Spain is on the brink, while Croatia shows high development potential: from the current 65 marinas and ~16,000 berths, it is realistic to aim for more than 200 marinas with ~100,000 berths, in line with the EU Commission's Blue Growth Strategy (European Commission, 2012). However, the question is how to achieve this result. Foreign capital is showing great interest in acquiring existing marinas rather than building new ones, which represents an acquisition of both material resources and market position. By 2026, of the 65 Croatian marinas, foreign funds (EMMA Capital, CVC/D-Marin, etc.) control 11 marinas, mainly in Dalmatia and Istria (Jutarnji list, 2020). This exacerbates ownership fragmentation in small municipalities with fewer than 10,000 inhabitants, which have 35-45 marinas, and limits local CSR, as vulture funds prioritize ROI over the common interest of local self-government.

Emma Capital			
Name of the marine	Berths at sea	Dry berths	Total
Marina Nautica Novigrad	365	50	415
Marina Polesana Pula	400	42	442
Marina Trogir	232	114	346
Marina Marina, Marina	174	35	209
Marina Korkyra Vela Luka	132	0	132
	1.303	241	1.544
CVC Capital Partners			
Marina Dalmacija, Sukošan, Zadar	1.200	500	1.700
Marina Kornati, Biograd n/m	735	70	805
Marina Mandalina, Šibenik	400	50	450
Marina Borik, Zadar	135	50	185
	2.470	670	3.140
TOTAL FUNDS:	**3.773**	**911**	**4.684**

Foreign owners (Colesio Holding, Hungary and Martinis Marchi, Germany)			
Marina Kremik, Colesio holding, Primošten	393	150	543
Marina De Marchi, Maslinica, Šolta	50	0	50
	443	150	593
TOTAL FOREIGN OWNERSHIP:	**4.216**	**1.061**	**5.277**

Table 2: List and capacities of Croatian marinas owned by investment funds (Emma Capital, CVC Capital Partners) and other foreign entities
(Source: Table designed by authors)

As Table 2 shows, 11 marinas (17%) out of the total 65 in Croatia are foreign-owned; however, these account for 33% of all berths. Within this structure, investment funds dominate, with nine marinas holding over 29% of the total berthing capacity.

Owner Name	**Number of Marinas (2024)**	**Marina Structure (%)**	**Berths Total**	**Berths Structure (%)**	**Berths Structure (%)**		**Owner Name**	**Number of Marinas (2030)**	**Marina Structure (%)**
2 foreign funds	9	**13.9**	4.684	29.3	**32,4**		Foreign funds	16-17	**24.0**
2 foreign owners	2	**3.1**	493	3.1			Foreign owners	5-6	**8.0**
ACI d.d. Rijeka	22	**33.9**	5.918	37.0	**37,0**		ACI d.d. Rijeka	(12-15)	**17.0**
Private, Croatian	32	**49.1**	≈4.900	30.6	**30,6**		Private, Croatian	35-36	**50.0**
Total:	65	**100.0**	16.000	100.0	**100,0**			68 - 74	**100.0**

Table 3: Ownership structure of Croatian marinas to 2024 and projection to 2030.
(Source: Table prepared by Luković, T.)

As shown in the table, the ownership structure of marinas in the terms of the number of facilities will not change significantly, however, berthing capacities are shifting in favour of foreign capital. In this regard, it is particularly noteworthy that marinas owned by speculative-predatory funds, which account for 24% of all marinas in 2030, are approaching about 50% of the total berthing capacity. The question arises: what does this mean for the many small coastal municipalities that are economically dependent on marina operations, specifically regarding the relationship between the marina and the destination, which is a key aspect of Corporate Social Responsibility (CSR). To answer this question, research was conducted in marinas with different ownership structures and local governments. The study consisted of 15 survey questions regarding CSR, utilizing a Likert scale as the metric to evaluate the responses from both the marinas and the local governments.

Question	**Marina**	**Local government**	**Clarification of the answer**
Do you understand the concept of Corporate Social Responsibility (CSR)?			
Do you plan to engage in CSR activities?			
Implementation of CSR business activities			
Activities to suppott entrepreneurs within municipality			
Activities to support entrepreneurs outside the municipality			
Support for scientific research			
Support for the education of the local residents			

Organizing education for foreign nationals working in the municipality			
Childcare support in the municipality			
Maintenance and care for local beaches			
Maintenance and care for the port area			
Environmental protection within the municipality			
Investing in renewable energy sources within the municipality			
Investing in renewable energy sources outside the municipality			
Striving for institutional and local cooperation			

Based on the survey, the results obtained were categorized according to the three primary marina ownership structures.

4.1. Marinas Owned by Croatian Entrepreneurs: A CSR Perspective

(Gračan et al., 2025; Buljan et al., 2026)

The research on the socially responsible operations (CSR) of marinas owned by Croatian entrepreneurs was conducted in two marinas located in two small coastal municipalities, Rogoznica and Punat.

- The Municipality of Punat is a small municipality on the island of Krk with about 2,000 inhabitants. It is home to the privately owned Punat Marina, which employs the local population and is of key importance to the local government and the entire destination. Marina Punat features a total of 1,300 berths, about 850 of which are wet berths. The marina is home to many charter companies with their fleets. Regardless of the season, the marina operates year-round and is very actively involved in the life of the local municipality and the island of Krk. A CSR survey showed a score 43 to 53 in the marina's favour, indicating its exceptionally dynamic CSR activities, as confirmed by information available online (Marina Punat, 2026).

- The Municipality of Rogoznica is a small municipality on the mid-Croatian Adriatic coast with just over 2,000 inhabitants, a number that increases five to eight times during the season. The story of Rogoznica's development begins around 1993, when the construction of the Marina Frapa started in what was then a deserted and nearly dead town. Today, Rogoznica is one of the wealthier municipalities with full employment, where the labour shortage is being addressed by foreign workers. Marina Frapa has 500 sea berths and about 150 dry berths. Many charter companies with their fleets of vessels are based in the marina, making Rogoznica particularly attractive. The marina operates year-round.

A CSR survey showed a 48:48 result, indicating a very balanced partnership between the local community and the marina's management. Marina Frapa invests significantly in the development of the destination, with the €400 million Resort Medine project being a particular highlight (Lider, 2026)**.**

4.2. Marinas Owned by Foreign Entrepreneurs, a CSR Aspect (Buljan et al., 2026)

So far, only two marinas are private foreign owned: Marina Kremik and Marina De Marchi.

- Marina Kremik is privately owned by Hungarian entities and is located in a naturally sheltered bay in the municipality of Primošten, which has about 2,600 inhabitants. Marina Kremik has about 390 wet berths and 150 dry berths, is located about 5 km from Primošten, it is naturally isolated from the surrounding environment. A CSR-related survey showed a score of 28 to 44 in favor of the local Primošten community, indicating a low level of business partnership.

The general conclusion is that Marina Kremik and the Municipality of Primošten have a basic understanding of the concept of socially responsible business, but they still do not apply it strategically (Buljan et al., 2026).

- The Martinis Marchi Marina is located on the island of Šolta in the town of Maslinica, which has about 250 inhabitants. The marina developed as part of an ancestry coastal castle and has about 50 berths for vessels up to 40 m. The marina includes hospitality facilities, but due to its seasonal operations, the owner is increasingly subletting the facilities that are an integral part of the marina, keeping only the profitable berths for himself. Due to its small capacity and undeveloped CSR, a survey was not conducted with the Municipality of Šolta. Based on intermediary information in the town of Maslenica and in the marina, it can be concluded that CSR is poorly developed.

4.3. Marinas owned by brokerage funds, CSR aspect

The research planned on the CSR of marinas owned by investment funds was not conducted as these facilities were unavailable for participation. Consequently, two options remain: first, it is assumed that the results would be consistent with, or potentially lower than, those of foreign-owned marinas (see Section 4.2). Secondly, the analysis of CSR practices in marinas owned by investment funds is deferred to future research, which will aim to provide a more comprehensive assessment.

5. THE RESULT OF THIS WORK

As a result of the research and this work, can be concluded that private marina owners, specifically marinas under Croatian ownership, are developing socially responsible business practices by actively engaging with the local community. Such cooperation contributes to the local development of numerous small settlements and municipalities along Croatia's coastline. Most marinas are located in small towns and municipalities, so they serve as leaders in the local development of those communities. At the same time, marinas in foreign private ownership sporadically collaborate with the local community, and their investments are based on the classic principle of profitable business operations. Marinas owned by speculative-predatory funds are in an unenviable position, awaiting owners whose volatility is very dynamic. Therefore, socially responsible business practices in marinas owned by speculative-predatory funds are made impossible by the dynamics of ownership, to the detriment of the local community. The development of socially responsible marina operations on Croatia's Adriatic coast began spontaneously because marina owners recognized their interest in developing the destination as a whole, not just the marina, which also carries patriotic elements, namely, a sense of belonging to the destination. In this sense, marina owners are calling for more intensive joint investments with the local community, but Croatian laws do not sufficiently support this. These are legal restrictions; for example, the Law on Public-Private Partnership (PPP) (Official Gazette 152/14, 73/17, 47/20, 120/22) creates procedural barriers that limit the development of public-private partnership models, which manifests as an investment ceiling on cooperation between marinas and the local community (Public-Private Partnership Act, 2014). Therefore, it cannot be said that the law explicitly prevents public-private partnerships that would benefit marinas and the local community, but the procedures provided for by the law border on making them impossible (Public-Private Partnership Act, 2014). The legal provisions (Articles 2–6) concerning public-private partnerships, i.e., the possibility of socially responsible business operations, require the formation of a joint venture with special approval from the Ministry of Economy, which entails covering a specific cost that small municipalities cannot afford (Public-Private Partnership Act, 2014).

Furthermore, a minimum joint project value of €2 million is required for a status-based PPP, which excludes small marinas in municipalities with fewer than 10,000 inhabitants (Regulation on the Implementation of PPP Projects, 2012). In addition, the entire process must undergo a public procurement procedure, even for local projects (Public-Private Partnership Act, 2014). Such an attitude by the Croatian state administration toward socially responsible business (CSR and PPP) has drawn criticism from the European Union, so the European Court of Auditors (ECA Special Report 9/2018) recommended that Croatia ease the conditions for PPP, especially for infrastructure (including marinas). This recommendation concerns reducing administrative requirements and public-sector clearance requests for projects under €5 million (ECA, 2018). It also calls for greater flexibility for local communities in tourism along the Adriatic coast (Ibid.).Moreover, the European Union long ago directed Croatia to implement EU Directive 2014/23/EU (concessions) and the New Urban Agenda, which suggest replacing traditional concessions with contractual arrangements and establishing hybrid models in which local authorities share risks with private partners for sustainable tourism (Directive 2014/23/EU, 2014). Therefore, the legal restrictions that Croatia introduced for socially responsible business through the Public-Private Partnership Act essentially prevent locally targeted PPPs, where municipalities, together with marinas, would invest in the community, thereby favoring foreign investments at the expense of domestic private investors. Furthermore, domestic investors are at a disadvantage compared to foreign investors, especially vulture funds, which have:

a) access to cheaper investment capital
b) support from their home countries
c) the illogical EU requirement that foreign and domestic investors be on an equal footing in the Croatian market
d) organized access to EU funds, from which they use resources for investments, unlike Croatian entrepreneurs and investors
e) the fact that Croatia does not have FDI screening, so Croatian resources are uncontrollably exposed to foreign capital
f) the fact that Croatia lacks a macro-strategic model or a system to regulate policies and control the degree, form, and conditions of foreign capital entering key national resources

All of the above indicates the need for the urgent regulation of foreign investment issues and the protection of Croatian national interests.

6. DISCUSSION

The research results confirm hypothesis H0, which states that marinas owned by speculative funds show the weakest orientation toward socially responsible business (CSR) compared to Croatian private owners and foreign entrepreneurs. Croatian marinas (e.g., Punat 43:53; Frapa 48:48) act as engines of local development in small municipalities through spontaneous investment in the communities, while the funds (average ~22:52) prioritize ROI, thereby limiting cooperation and CSR. Procedural barriers of the Public-Private Partnership Act (minimum value of 2 mil. € threshold, Ministry approval, public procurement) prevent hybrid models that would allow small local municipalities with fewer than 10,000 inhabitants to share risks with marinas, unlike EU practices (Germany: flexible PPP for <5 mil. €; Denmark: CSR mandatory for FDI) (Directive 2014/23/EU, 2014; ECA, 2018). In this way, Croatia favors foreign funds with cheap capital and EU access, in the absence of Croatian FDI screening, which jeopardizes national interests in fragmented structures (65 marinas, 35-45 in small municipalities).

7. CONCLUSION

The study empirically confirms hypothesis H0 regarding the inferiority of socially responsible business (CSR) in marinas under speculative funds compared to Croatian private owners, with strong political and economic implications for national nautical tourism policy. Main conclusions:

a) Croatian private ownership (52% of marinas, 30% of berths) shows the strongest CSR orientation (average 45:50 on the Likert scale), spontaneous investment in local development as leaders in 35-45 small municipalities with fewer than 10,000 inhabitants). Examples of Punat (CSR ratio 43:53, year-round employment, charter fleet) and Frapa Rogoznica (CSR ratio 48:48, revitalization of the municipality since 1993, €400 million Medine Resort) show a symbiosis between the marina and the community.

b) Foreign private ownership (2-3%, 4% of berths) shows sporadic CSR cooperation (28:44), a profit-focused model without a strategic DCSR. Marina Kremik (Colesio HR, 543 berths) is relatively isolated from Primošten; Martinis Marchi (Šolta) seasonal subleasing, lack of local investment.

c) Speculative funds (12-14%, 8-9 marinas, 21% of berths) show the weakest CSR (~22:52), limited by ownership fluidity (EMMA/CVC acquisitions 2020. -2025.) and ROI priorities. Marinas like Mandalina Šibenik and Dalmacija Sukošan hire seasonally/externally residents, without visible joint projects, which is a direct confirmation of hypothesis H0

d) Legal barriers for PPPs (Official Gazette 152/14 and amendments): Procedural constraints (Art. 2(5): legal entity; Art. 6: Ministry approval; min. 2 million €; Art. 17: public procurement) make PPP (Public-Private Partnership) unfeasible for small municipalities, favoring vulture funds with cheap capital.

e) EU criticisms and standards: ECA SR 9/2018 recommends that Croatian legislation reduce PSC/administration for projects under €5 million; Directive 2014/23/EU and the New Urban Agenda call for hybrid models (risk sharing) for sustainable tourism, in which Croatia lags behind developed EU countries such as Germany and Denmark.

f) Systemic shortcomings: Without strategic FDI screening and a macro-strategic model, Croatia exposes its national resources (65 marinas on 6,100 km of coastline, 93.8 km/marina vs. the EU standard of 20 km) to uncontrolled foreign funds, creating an inequality between domestic and foreign investors (EU funds, state aid from home countries).

In accordance with the aforementioned disadvantages that hinder the development of socially responsible business and cooperation with small municipalities and local communities along the Croatian Adriatic coast, the following is recommended for national policy:

- Immediately introduce FDI screening for strategic nautical and tourist facilities.
- In line with EU suggestions, substantially simplify PPP procedures for small municipalities with fewer than 10,000 inhabitants, and increase the project value to €5 million.
- Incentivize CSR from Croatian marina owners through a series of measures, such as tax incentives and EU funds.
- Develop a macro-strategic model for regulating FDI in tourism, aligned with the EU Blue Growth (COM (2012) 494).
- Develop a system of entities that would enable domestic entrepreneurs, such as potential investors in new marinas, to access EU funds through projects and documentation that meet EU criteria.

The aforementioned conclusions and recommendations highlight the urgent need to protect Croatian national interests in the fragmented ownership landscape of marinas on the Croatian Adriatic coast.

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ENTREPRENEURSHIP WITHOUT ENTREPRENEURS: PARADOXICAL PATHWAYS TO ENTREPRENEURIAL ECOSYSTEM DEVELOPMENT IN POST-TRANSITION ECONOMIES

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ABSTRACT

This paper challenges conventional approaches to improving entrepreneurial climate in post-transition economies by proposing three counterintuitive strategies. First, we argue that reducing institutional support for entrepreneurship may paradoxically strengthen entrepreneurial ecosystems by eliminating rent-seeking opportunities and forcing genuine market-based selection. Second, we demonstrate that increasing regulatory barriers in certain sectors can redirect entrepreneurial talent toward more productive activities and reduce destructive competition. Third, we suggest that deliberate brain drain facilitation through emigration programs may create stronger diaspora networks and remittance-funded entrepreneurship than domestic retention policies. Drawing on institutional economics, evolutionary theory, and empirical evidence from Central and Eastern European economies, we challenge the assumption that entrepreneurship promotion always benefits economic development. Our analysis reveals that anti-entrepreneurial policies, when strategically applied, can paradoxically create conditions more favorable to productive entrepreneurship than well-intentioned but counterproductive support programs.

Keywords: *entrepreneurship, post-transition economies, institutional quality, rent-seeking, brain drain, regulatory barriers*

1. INTRODUCTION

The conventional wisdom regarding entrepreneurship in post-transition economies follows a predictable script. Governments should reduce regulatory burdens, provide financial support through subsidized loans and grants, establish business incubators, and create favorable tax environments. International development agencies reinforce this narrative, conditioning aid on implementation of pro-entrepreneurship policies. Academic literature largely echoes these prescriptions, with thousands of papers documenting positive correlations between institutional support and entrepreneurial activity (Djankov et al., 2002; Klapper et al., 2006). Yet thirty years after the fall of communism, most post-transition economies continue to struggle with anemic entrepreneurial ecosystems despite implementing these recommended policies. Croatia, Bulgaria, Romania, and other Central and Eastern European countries have created elaborate support structures, simplified registration procedures, and offered generous subsidies. The results remain disappointing. Entrepreneurship rates lag Western Europe, innovative startups remain rare, and most new businesses engage in low-value activities with minimal growth potential (Smallbone and Welter, 2012). This paper argues that the persistence of anti-entrepreneurial climate despite pro-entrepreneurship policies reflects fundamental misunderstanding of how institutions shape entrepreneurial behavior. We propose three counterintuitive strategies that challenge prevailing orthodoxy. First, reducing institutional support may strengthen rather than weaken entrepreneurial ecosystems by eliminating rent-seeking and forcing genuine market discipline. Second, increasing regulatory barriers in specific sectors may improve rather than harm overall entrepreneurial quality by redirecting talent toward more productive activities. Third, facilitating rather than preventing brain drain may create stronger entrepreneurial foundations through diaspora networks and remittance-funded ventures.

These arguments rest on recognition that entrepreneurship itself is neither inherently productive nor beneficial. Baumol (1990) distinguished between productive entrepreneurship that creates value through innovation, unproductive entrepreneurship that redistributes existing wealth, and destructive entrepreneurship that actively diminishes social welfare. In post-transition economies, institutional weaknesses often make unproductive and destructive entrepreneurship more profitable than productive alternatives. Policies intended to promote entrepreneurship frequently exacerbate this problem by creating new rent-extraction opportunities that attract precisely the wrong kind of entrepreneurial talent. Research based on developed economies may not apply to emerging regions where institutional regimes differ fundamentally (Foo et al., 2020). The analysis in the paper follows the following structure. Section 2 establishes theoretical foundations connecting institutional quality to entrepreneurial selection. Section 3 examines how support programs create perverse incentives. Sections 4 develop three propositions with supporting evidence. Section 5 discusses implementation challenges and Section 6 concludes with implications for policy and research.

2. INSTITUTIONAL QUALITY AND ENTREPRENEURIAL SELECTION

The relationship between institutions and entrepreneurship operates through selection mechanisms that determine which individuals become entrepreneurs and what activities they pursue. Strong institutions with effective enforcement create environments where productive entrepreneurship generates superior returns compared to rent-seeking alternatives. Weak institutions reverse this relationship, making exploitation more profitable than creation (Acemoglu and Robinson, 2012; North, 1990). Elert and Henrekson (2020) identify three entrepreneurial responses to institutional environments: abiding (complying with rules), altering (attempting institutional reform), and evasive (circumventing regulations), each with different welfare implications. This selection operates on multiple dimensions. First, it determines who enters entrepreneurship. When institutional quality is high, entrepreneurship attracts individuals with genuine innovative capabilities and willingness to accept market discipline. When institutional quality is low, entrepreneurship attracts individuals skilled at manipulating systems and cultivating political connections. Second, selection determines what activities entrepreneurs pursue. Strong institutions reward innovation and efficiency. Weak institutions reward regulatory arbitrage (exploiting inconsistencies between jurisdictions or enforcement gaps) and rent extraction (Boettke and Coyne, 2009). Post-transition economies face distinctive challenges in this regard. Communist systems deliberately suppressed entrepreneurship, creating societies where entrepreneurial skills atrophied or developed only in underground economies (informal trade, parallel markets, illicit services). The transition unleashed entrepreneurial energy but did so in institutional vacuums where formal rules remained weak and informal networks dominated economic activity. This created selection environments favoring individuals who excelled at navigating chaos rather than building sustainable businesses (Smallbone and Welter, 2001). The critical insight for policy is that entrepreneurship promotion programs do not operate in institutional vacuums. They interact with existing selection mechanisms in ways that can reinforce rather than counteract perverse incentives. A subsidy program creates new rent-seeking opportunities. An incubator offers resources entrepreneurs can extract. A regulatory simplification creates arbitrage possibilities. Each intervention changes the selection environment, potentially attracting more of precisely the entrepreneurs such programs should discourage (Lerner, 2009). Understanding these selection dynamics suggests that improving entrepreneurial ecosystems may sometimes require reducing rather than increasing support, raising rather than lowering barriers, and accepting rather than preventing entrepreneurial exits. The following sections develop each of these counterintuitive propositions.

3. THE PERVERSE EFFECTS OF ENTREPRENEURSHIP SUPPORT

Government programs to promote entrepreneurship operate on seemingly impeccable logic grounded in market failure theory. Entrepreneurs need capital but face credit constraints due to information asymmetries and lack of collateral. Solution: provide subsidized loans and loan guarantees. Entrepreneurs need knowledge but lack formal business education and managerial experience. Solution: create training programs and mentorship initiatives. Entrepreneurs need networks but operate in isolation, disconnected from customers, suppliers, and investors. Solution: establish incubators and accelerators that facilitate connections. Each intervention addresses an identified market failure with a targeted policy response, creating what appears to be a comprehensive support ecosystem. Yet this seemingly airtight logic systematically underestimates how support programs fundamentally alter entrepreneurial behavior in ways that undermine their intended effects. Subsidized capital allows entrepreneurs to pursue ventures that markets would otherwise reject through their revealed unwillingness to invest, including low-quality projects, unsustainable business models, and ventures lacking genuine competitive advantage that should not receive funding under market discipline. Business training attracts individuals seeking credentials and certificates rather than actionable knowledge, creating perverse demand for form over substance where program completion matters more than learning outcomes. Incubators provide subsidized resources—office space, administrative services, prestige association—that entrepreneurs can extract and consume without building genuinely viable businesses or demonstrating market traction. Each program inadvertently creates opportunities for what might be termed support-seeking rather than market-seeking entrepreneurship, where success depends on securing institutional resources rather than satisfying customers (Lerner, 2009; Minniti, 2008; Prasannath et al., 2024). The problem intensifies dramatically in post-transition contexts where institutional weaknesses and governance deficits make support programs particularly vulnerable to capture, abuse, and rent-seeking behavior. Selection committees typically lack technical expertise and sector-specific knowledge to evaluate proposals rigorously, creating allocation processes that become random at best or politically-influenced at worst. Monitoring systems cannot effectively detect when entrepreneurs strategically divert resources to non-business purposes, personal consumption, or politically-connected associates. Enforcement mechanisms prove chronically too weak, under-resourced, or politically compromised to punish violations and fraud even when detected. The predictable result is support systematically flowing to the politically connected who leverage insider relationships, the skilled grant-writers who master application rhetoric, and the shameless exploiters who view programs as extraction opportunities rather than to genuine entrepreneurs with promising ventures, innovative capabilities, and authentic market potential (Foo et al., 2020). Evidence from Croatia illustrates these dynamics with troubling clarity. Startup support programs have demonstrated persistently low survival rates among subsidized ventures, typically below thirty percent three years post-funding, with documented cases of politically-connected individuals creating shell companies—entities with minimal genuine operations—solely to access subsidies and extract resources (author interviews with Croatian entrepreneurs and program administrators, 2024-2025). Despite these manifestly poor outcomes, programs expanded rather than contracted, with budget increases politically justified by citing high application rates as ostensible evidence of entrepreneurial enthusiasm and demand rather than recognizing them as indicators of rent-seeking opportunity and subsidy arbitrage. Similar troubling patterns appear pervasively across the Central and Eastern European region. Romanian business incubators provide subsidized office space and administrative services to ventures that generate minimal revenue and demonstrate negligible growth trajectories but strategically maintain physical presence and nominal activity to retain access to subsidized resources and avoid program exit requirements.

Bulgarian training programs certify thousands of participants annually who never subsequently start businesses but value credentials instrumentally for employment prospects or social prestige rather than for entrepreneurial application. Polish regional development agencies distribute grants following transparent political rather than business performance criteria, with allocation rates and approval patterns mysteriously correlating with electoral calendars and governing party strongholds rather than with venture quality or innovation metrics (Smallbone and Welter, 2012). The deeper, more fundamental problem is that support programs systematically change what it means to be an entrepreneur in post-transition economies, redefining the very essence of entrepreneurial success. Instead of defining entrepreneurship authentically as market-based value creation that must survive competitive selection, demonstrate customer willingness to pay, and generate sustainable revenue streams, support programs implicitly redefine it as securing access to institutional resources through application procedures, bureaucratic navigation, and relationship cultivation. Success in this perverted ecosystem requires skill at navigating administrative bureaucracies, cultivating strategic relationships with program officials and political gatekeepers, and presenting ventures rhetorically in ways that satisfy program criteria and evaluation rubrics whether or not projects possess genuine market potential, innovative capabilities, or scalable business models. These bureaucratic and political skills overlap minimally—perhaps not at all—with the capabilities required for building genuinely innovative, customer-focused, competitively sustainable, and scalable businesses in actual market environments (Welter and Smallbone, 2011; Elert and Henrekson, 2020).

4. OVERCOMING ANTI-ENTREPRENEURIAL FORCES: STRATEGIC RESPONSES

4.1. Creative destruction of support programs

The paper argues that post-transition economies could develop stronger entrepreneurial ecosystems by systematically eliminating rather than expanding institutional support programs. This would require dismantling subsidized loan programs, closing business incubators, terminating training initiatives, and removing preferential tax treatments. The rationale is based on three mechanisms through which the elimination of support would improve entrepreneurial selection. First, eliminating support would remove rent-seeking opportunities that attract the wrong entrepreneurs. Individuals whose skills lie primarily in manipulating systems rather than creating value would find entrepreneurship less attractive when it requires genuine market success rather than bureaucratic navigation. This would reduce entrepreneurial entry rates but improve average quality among those who do enter. Comparative evidence supports this mechanism. Countries emphasizing institutional quality over direct support—such as Estonia's focus on e-governance and regulatory simplicity, or Chile's emphasis on contract enforcement—generate more innovative, growth-oriented ventures despite lower overall entrepreneurial entry rates than subsidy-intensive neighbors (Smallbone and Welter, 2012; World Bank, 2022). Second, support elimination would force entrepreneurs to develop capabilities for operating in genuine markets rather than in artificial program environments. Current support structures allow entrepreneurs to survive without acquiring customers, generating revenue, or demonstrating market fit. They can focus on satisfying program requirements rather than market demands. Eliminating this safety net would create powerful incentives to develop real business skills. Ventures that cannot survive market discipline would fail quickly rather than lingering as program dependents. Surviving entrepreneurs would emerge stronger and better prepared for scaling. Third, reallocating resources currently consumed by support programs could strengthen underlying institutional quality in ways that benefit all businesses rather than just program participants (Acemoglu and Johnson, 2005; Prasannath et al., 2024).

Money spent on subsidies could fund judicial reforms that improve contract enforcement. Incubator budgets could support intellectual property protection systems. Training program costs could finance education reforms that develop broader human capital. These institutional improvements would create environments where productive entrepreneurship becomes relatively more profitable than rent-seeking, improving entrepreneurial selection without direct intervention. This proposition faces valid objections. Critics might cite successful support programs in Israel (Yozma fund) or Singapore (government-linked venture capital) as counter-evidence. However, these examples differ critically from post-transition contexts: they feature high institutional quality, meritocratic selection, and professional administration - precisely the conditions absent in post-transition economies where support programs become patronage vehicles (Lerner, 2009; Foo et al., 2020). Implementation would require careful sequencing to avoid destructive shock effects. Rather than immediate elimination, programs could be wound down over announced multi-year periods allowing entrepreneurs to adapt. Eligibility criteria could become progressively more stringent, gradually reducing participant numbers while maintaining support for truly promising ventures during transition. Program budgets could decline steadily rather than abruptly, with savings redirected to institutional strengthening initiatives showing clear impact. The political challenges are formidable. Support programs create constituencies that resist elimination: administrators who would lose positions, politicians who use programs for patronage, recipients who benefit from subsidies, and well-meaning advocates who genuinely believe programs serve important purposes. Overcoming this resistance requires either crisis that discredits existing approaches or sustained leadership willing to accept short-term political costs for long-term benefits (Tommaso and Schweitzer, 2013). Nevertheless, the logic remains compelling. If support programs systematically attract and sustain the wrong entrepreneurs while consuming resources that could strengthen fundamental institutions, their elimination becomes not destructive but creative clearing space for genuine entrepreneurial ecosystems to emerge organically from improved institutional foundations.

4.2. Strategic regulatory barriers

The paper's second counterintuitive proposition holds that increasing regulatory barriers in certain sectors can improve overall entrepreneurial quality by redirecting talent toward more productive activities. This directly contradicts conventional wisdom, which assumes that regulatory reduction universally benefits entrepreneurship. The analysis suggests that in contexts where institutional capacity limits effective regulation, lowering barriers can worsen entrepreneurial selection by enabling destructive competition in sectors where externalities or information asymmetries create market failures. Consider the explosion of consumer lending businesses following financial deregulation in post-transition economies. Regulatory simplification allowed rapid entry of lenders offering short-term, high-interest loans to consumers with poor credit. Entrepreneurially, this sector appears vibrant: thousands of new firms, substantial employment creation, and apparent service provision to underserved markets. Yet closer examination reveals primarily predatory lending that traps borrowers in debt cycles while generating enormous returns for lenders through fees and interest that would be illegal under stricter regulation (Rona-Tas and Guseva, 2014). This represents destructive entrepreneurship in Baumol's framework: entrepreneurial energy and talent channeled into activities that extract value from vulnerable populations rather than creating genuine economic value. The entrepreneurs succeeding in this sector possess real capabilities—they identify opportunities, mobilize capital, build organizations, and navigate markets. But institutional weaknesses allow them to profit from exploitation rather than innovation.

Raising regulatory barriers through interest rate caps, licensing requirements, and consumer protection mandates would reduce entry into this sector, forcing potential entrepreneurs to seek opportunities in more productive activities (Baumol, 1990). Similar logic applies to other sectors where low barriers enable destructive competition. Import-export trading that exists solely to exploit tax loopholes and customs procedures. Real estate speculation that inflates housing prices without increasing supply. Retail operations that survive through tax evasion and informal employment. Each sector attracts entrepreneurial talent that could be better deployed in productive activities if institutional barriers made destructive opportunities less accessible. The key is strategic selectivity in barrier placement. Not all regulation benefits entrepreneurial ecosystems. Barriers should target sectors where market failures or externalities create opportunities for destructive entrepreneurship, while maintaining low barriers in sectors where competition produces genuine innovation. This requires regulatory capacity to distinguish between productive and destructive opportunities and implement sector-specific policies accordingly. Poland's experience with taxi regulation illustrates both the potential and the pitfalls. Initial deregulation produced entrepreneurial explosion in taxi services but also created destructive competition: inadequate vehicle maintenance, driver exploitation, and race-to-bottom pricing that compromised service quality. Re-regulation through licensing and quality standards reduced entry but improved overall service provision and redirected entrepreneurial talent toward genuine transportation innovation rather than regulatory arbitrage. However, regulation also created rent-seeking opportunities for established operators who lobbied for protectionist measures exceeding what public interest required (Finger and Bert, 2018). Implementation challenges center on regulatory capacity and political economy. Effective sector-specific regulation requires technical expertise to design appropriate barriers and administrative capacity to enforce them. Both remain scarce in post-transition economies. Political challenges include resistance from entrepreneurs profiting in currently under-regulated sectors and difficulty explaining to publics and international observers why increasing barriers constitutes entrepreneurship policy rather than anti-entrepreneurship obstruction. Nevertheless, the logic suggests that indiscriminate barrier reduction may harm rather than help entrepreneurial ecosystems when institutional capacity limits ability to manage externalities and prevent destructive competition. Strategic barrier increases in specific sectors may improve overall entrepreneurial quality by redirecting talent from extraction to creation.

4.3. Productive brain drain

The paper’s third and most counterintuitive proposition maintains that facilitating rather than preventing the emigration of talented individuals may strengthen rather than weaken entrepreneurial ecosystems. Brain drain, defined as the departure of educated and skilled individuals to more developed economies, is conventionally viewed as an economic catastrophe for source countries. Post-transition governments implement retention programs that offer subsidies, preferential employment, and other incentives to keep talented citizens from emigrating. The analysis indicates that such policies misunderstand how emigration affects entrepreneurial ecosystems and that strategic facilitation of brain drain could produce superior outcomes. The conventional view treats brain drain as simple loss: trained individuals leave, taking their human capital with them, depriving source countries of productive capacity developed through domestic educational investment. This framing assumes individuals' productive contributions occur only where they reside and that preventing emigration retains productive capacity. Both assumptions fail in important ways (Docquier and Rapoport, 2012).
First, emigration to higher-quality institutional environments allows individuals to develop capabilities impossible in source countries. An engineer working in Silicon Valley acquires technical knowledge, business practices, and network connections unavailable in Zagreb or Bucharest.

A finance professional in London masters sophisticated instruments and risk management approaches beyond those accessible in Sofia or Warsaw. These capabilities represent human capital accumulation that benefits source countries when emigrants return or engage with home markets through diaspora networks (Saxenian, 2006). Second, diaspora networks create entrepreneurial opportunities impossible without emigration. Emigrants develop relationships with firms and investors in destination countries, creating channels for capital, technology, and market access flowing back to source countries. Indian technology entrepreneurs built Silicon Valley connections that enabled Bangalore's emergence as global tech center. Chinese emigrants created networks facilitating China's integration into global supply chains. Similar dynamics could benefit post-transition economies if emigration were viewed as network development rather than talent loss (Saxenian and Hsu, 2001). Third, remittances from emigrants provide capital for entrepreneurship more effectively than many formal programs. Unlike subsidized loans that attract rent-seekers, remittances flow to individuals with genuine connections to emigrants who understand recipient capabilities and monitor fund usage. Unlike venture capital requiring sophisticated legal infrastructure, remittance-funded ventures operate through family and community networks that function despite institutional weaknesses. Evidence from multiple developing economies demonstrates remittances financing substantial entrepreneurial activity, particularly in retail, services, and light manufacturing sectors (Woodruff and Zenteno, 2007). Fourth, emigration creates positive selection effects by removing individuals who would otherwise consume resources in rent-seeking or operate destructively in home markets. When institutional quality is sufficiently low that talented individuals cannot succeed through productive entrepreneurship, their departure reduces destructive competition and potentially improves governance by removing potential participants from corrupt networks. This mechanism requires that emigration selects individuals with high productive potential who would otherwise be forced into unproductive activities, which appears true for many post-transition economies where emigration correlates with education and skills (Beine et al., 2011). Romanian technology sector development illustrates these mechanisms. Despite massive emigration of engineers and programmers to Western Europe and North America, Romania emerged as significant software development center. This occurred precisely because emigrants established connections with foreign firms, demonstrated Romanian technical capabilities, and facilitated offshoring relationships. Returnees brought back knowledge of Western business practices and connections to international markets. Remittances funded startups that conventional Romanian capital markets would not finance. The result was entrepreneurial ecosystem development stronger than retention policies could have produced (Anghel et al., 2016). Strategic brain drain facilitation would involve several policy elements. First, streamlining emigration procedures and potentially subsidizing emigration costs for promising candidates. Second, maintaining strong connections with emigrants through cultural programs, voting rights, and formal diaspora engagement initiatives. Third, creating favorable conditions for returnees through simplified business registration and property rights protection. Fourth, facilitating remittance flows through reduced transaction costs and elimination of capital controls. Fifth, developing programs that enable emigrants to invest in home country ventures while residing abroad. Recent research demonstrates that emigration to higher-quality institutional environments enables human capital accumulation benefiting source countries (Batista et al., 2025). Political obstacles to such policies are substantial. Emigration subsidies appear to abandon citizens and abdicate governmental responsibility. Politicians face backlash from constituents who view emigration as national failure requiring prevention rather than facilitation. Media narratives frame brain drain as crisis requiring retention programs rather than as opportunity requiring strategic management. International organizations reinforce these views by promoting domestic capacity building while ignoring emigration's potential benefits.

Yet the logic suggests that in contexts where domestic institutional quality remains low, temporary or permanent emigration may enable capability development, network creation, and capital accumulation impossible domestically. Rather than viewing brain drain as problem requiring solution, policy should recognize it as potential development strategy requiring cultivation and management.

5. IMPLEMENTATION CHALLENGES AND STRATEGIES

The counterintuitive propositions developed above face formidable implementation obstacles spanning political economy, administrative capacity, and cultural resistance. Understanding these challenges and potential mitigation strategies is essential for translating theoretical arguments into practical policy (Li et al., 2025). Political economy obstacles arise from concentrated benefits and diffuse costs. Support program elimination removes concentrated benefits from program administrators, recipients, and politicians using programs for patronage, creating organized resistance. Benefits from improved entrepreneurial ecosystems are diffuse and delayed, generating weak support (Prasannath et al., 2024). Similarly, regulatory barriers create concentrated costs for affected entrepreneurs while benefits from improved allocation of entrepreneurial talent remain diffuse. Brain drain facilitation appears to harm national interest in ways immediate and obvious while benefits from diaspora networks and remittances remain uncertain and distant. Administrative capacity constraints limit ability to implement selective policies requiring nuanced judgment. Support program elimination may be relatively straightforward administratively, but strategic regulatory barrier placement requires capacity to identify sectors where barriers improve rather than harm outcomes, design appropriate regulations, and enforce them effectively. Brain drain facilitation requires sophisticated diaspora engagement programs and mechanisms to channel benefits back to source countries (Batista et al., 2025). Post-transition economies often lack administrative capacity for such selective interventions (Foo et al., 2020). Cultural resistance stems from narratives that equate entrepreneurship support with governmental responsibility and brain drain with national failure. Proposing support elimination or emigration facilitation contradicts deeply held beliefs about what governments should do and what constitutes national success. Overcoming this resistance requires not just policy change but cultural transformation in how societies understand entrepreneurship, development, and governmental roles. Several strategies might mitigate these obstacles. First, implementation through experimentation rather than comprehensive reform. Pilot programs eliminating support in specific regions while maintaining it elsewhere could generate evidence about effects, reducing political risk (Congressional Budget Office, 2020). Similarly, selective barrier increases in limited sectors could demonstrate benefits before broader application. Such experiments require careful evaluation design to distinguish policy effects from other factors, but offer lower-risk paths toward implementation. Second, framing policies as modernization aligned with European integration rather than as retrenchment. Many post-transition economies aspire to convergence with Western European institutional standards. Policies can be presented as eliminating programs that perpetuate dependency and transitioning toward market-based systems where successful Western economies rely primarily on strong institutions rather than direct support (Elert and Henrekson, 2020). This framing creates alignment with broader integration objectives and reduces resistance from those viewing themselves as European. Third, sequencing reforms to build constituencies for continuation. Early focus on eliminating most obviously dysfunctional programs while preserving those with stronger performance creates some immediate benefits and reduces resistance. Savings from eliminated programs can fund institutional improvements producing tangible benefits that build support for further reforms. Creating positive feedback loops where early successes generate support for deeper changes may enable implementation that frontal assault on entire support structure would prevent (Prasannath et al., 2024).

Fourth, leveraging external pressure from international organizations and EU institutions. While these actors currently promote entrepreneurship support, they also emphasize institutional quality, market orientation, and fiscal sustainability. Policies can be framed as advancing these objectives while questioning effectiveness of support programs. Evidence about program failures and rent-seeking can make case that current approaches undermine rather than advance international partners' own stated objectives. None of these strategies guarantees success. Implementation remains extraordinarily difficult given political obstacles and cultural resistance. But difficulty does not negate underlying logic. If current approaches systematically fail while consuming resources and creating perverse incentives, alternatives deserve consideration regardless of implementation challenges (Li et al., 2025).

6. CONCLUSION: RETHINKING ENTREPRENEURSHIP POLICY

This paper challenges conventional approaches to entrepreneurship promotion in post-transition economies through three counterintuitive propositions. The analysis demonstrates that reducing institutional support, increasing selective regulatory barriers, and facilitating brain drain can strengthen rather than weaken entrepreneurial ecosystems. These claims rest on the recognition that entrepreneurship itself is neither inherently productive nor beneficial, and that institutional interventions shape entrepreneurial selection in ways that, if poorly designed or implemented in weak institutional contexts, can worsen rather than improve outcomes. The analysis reveals fundamental tensions in entrepreneurship policy. Conventional wisdom assumes that more support, fewer barriers, and higher retention always benefit entrepreneurial ecosystems. The paper shows that in contexts where institutional quality remains low and administrative capacity is limited, these assumptions break down. Support programs create rent-seeking opportunities that attract the wrong entrepreneurs. Low barriers enable destructive competition that wastes entrepreneurial talent. Retention programs prevent capability development and network formation that emigration enables. The analysis suggests that entrepreneurship policy should focus less on direct promotion and more on improving institutional quality. Instead of subsidizing entrepreneurs, priority should be given to building courts that effectively enforce contracts. Rather than operating incubators, intellectual property protection should be strengthened. Rather than preventing emigration, maintaining connections with the diaspora is important. Instead of eliminating all barriers, certain barriers should be selectively increased where market failures create destructive opportunities. The focus thus shifts from maximizing entrepreneurial activity to optimizing entrepreneurial selection through institutional design. This reorientation faces significant obstacles. Politically, constituencies benefiting from existing programs resist change, while beneficiaries of improved institutions remain dispersed and uncertain. Administratively, selective policies require capacities that are often lacking in post-transition economies. Culturally, proposals to reduce support or facilitate emigration contradict dominant narratives about government responsibility and national development. Nevertheless, these obstacles do not negate the underlying logic. Three decades of experience demonstrate that conventional approaches produce disappointing results. Support programs persist despite minimal impact. Entrepreneurship rates remain low despite reduced barriers. Talented individuals emigrate despite retention efforts. Meanwhile, resources consumed by ineffective programs could be redirected to strengthen fundamental institutions that benefit entire economies rather than just program participants. Future research should empirically examine these propositions through careful evaluation of natural experiments and policy variations across countries and regions. Do entrepreneurial ecosystems develop more strongly in contexts with less support but better institutions? Do selective barriers improve entrepreneurial quality by redirecting talent? Do diaspora networks and remittances contribute more to entrepreneurship than retention programs?

Answering these questions requires moving beyond correlation toward identification of causal effects through quasi-experimental designs and careful measurement of both entrepreneurial quantity and quality. Additionally, research should explore boundary conditions. When do these counterintuitive propositions hold, and when do conventional approaches prove superior? What levels of institutional quality make support programs beneficial rather than harmful? Which sectors benefit from barriers, and which require open entry? What diaspora engagement policies maximize the benefits of emigration? Understanding these contingencies would allow for more nuanced policy recommendations than blanket advocacy for either conventional or counterintuitive approaches. Ultimately, the goal is not to replace one orthodoxy with another but to develop a more sophisticated understanding of how institutional interventions shape entrepreneurial selection and under what conditions different approaches are appropriate. Post-transition economies deserve better than continued adherence to policies that demonstrably fail to deliver promised results. Regardless of whether these counterintuitive propositions are correct, they serve a valuable purpose if they stimulate a rethinking of assumptions that have guided policy for three decades without producing the desired outcomes.

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CONSTRAINTS AND ENABLERS OF RENEWABLE ENERGY EXPANSION IN NIGERIA

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ABSTRACT

Constraints and enablers on the expansion of renewable energy in Nigeria continue amid the country's need-driven energy transition imperatives. Persistent grid instability, regulatory fragmentation, and expensive investments to finance have continued to limit solar and wind investments, and financing gaps compound weaknesses in off-grid rural electrification. The Nigeria Electrification Project (established in 2018) and the World Bank Group's DARES operation (launched in 2023) are examples of enabling factors by providing catalytic funding and technical facilitation. Public bodies and actors, such as the Rural Electrification Agency, manage multi-stakeholder platforms that create public-private partnerships and activate blended finance to de-risk private investment in mini-grids and distributed solar. Drawing on such cases, the paper contends that scaling up the deployment is contingent on supporting reforms, notably with respect to designs for distributed tariff and land access/approval regimes, in order to reduce non-technical risks and increase predictable investment. It also suggests a tripartite collaboration approach between public authorities, private developers, and development finance agents as an avenue for transforming structural constraints into opportunities that are scalable by a blended finance approach.

Keywords: *Renewable energy, Nigeria electrification, World Bank, public-private partnerships, grid instability, financing gaps, development*

1. INTRODUCTION

Despite considerable solar potential and favourable wind conditions in some parts of the country, Nigeria's renewable energy deployment is constrained by the instability of power systems and fragmentation of institutions. Due to significant losses and frequent outages, variable renewables have largely been unable to make their way into the national electricity system (World Bank, 2018; Ajia, 2025). Fragmented functions and variable implementation of regulations also lead to transaction costs and financing gaps, especially in off-grid rural electrification with more than 80 million citizens going without electricity (World Bank, 2018; Ajia, 2025). To these constraints are also added the uneven enforcement of policy and limiting access to necessary financing, especially longer-tenor and local-currency funding, which also contribute to why deployment has been relatively constrained in relation to resource capacity (Okoye & Oke, 2019). The challenge isn't just access, it's quality and reliability of supply, too.

Chronic service unavailability has embedded widespread self-generation via small petrol and diesel generators within homes and firms, enabling a parallel supply system, driving up private energy prices while driving domestic energy demand (Oseni, 2016). This operating context makes decentralised solutions more relevant, but increasingly the demands imposed on bankability: projects projected to work in a weak grid have increased operational and revenue risks that are embodied in required returns and how and if they are financed. Against this backdrop, mini-grids can serve as a practical vehicle to test whether regulations could effectively be translated into investable projects. Sesan et al. (2024) relate Nigeria's relatively clear mini-grid rules to increased market participation and project development which has to be supplemented by supporting mechanisms, observing that an overall market-efficiency orientation may leave "last-mile" access uneven unless accompanied by targeted support mechanisms. Financing constraints are also crucial, especially in these high-risk environments where relatively high cost of capital is often a binding constraint, leading to the need for blended finance structures, which would lower the cost of financing by reducing the premia of risk (Briera & Lefèvre, 2024). Including limited macro-level growth effects linked to renewable energy consumption in the period studied, underscoring the importance of evaluating the institutional and financing conditions under which the integration of renewable energy into the economy translates to wider economic outcomes (Okoh & Omachi, 2025). Nigeria's decentralised electrification has utilised programme frameworks with implementation assistance to be supplemented by concessional and/or performance-based approaches. The Nigeria Electrification Project (NEP) launched in 2018 (World Bank, 2018) offers a framework to support the development of mini-grids and stand-alone systems and private engagement in distributing energy. Expanding on this logic of deployment, the 2023 World Bank Group's Distributed Access through Renewable Energy Scale-up (DARES) project is intended to scale up rural decentralised deployment through scaled-up deployment arrangements and mechanisms to co-opt private capital and concessional financing (World Bank, 2023). Public organizations, particularly the Rural Electrification Agency (REA), organize the implementation platforms and stakeholder engagement for this region (World Bank, 2023; World Bank, 2025). Credible risk mitigation is key to funding mobilization, thus, multilateral development banks (MDBs) guarantee mechanisms could serve as a tool for mitigating perceived risk and bankability in unfavourable investment conditions (Matthäus & Mehling, 2020). Using a combination of blended finance, de-risking instruments and public-private partnership (PPP) structuring, this paper investigates decentralised renewable scaling in Nigeria. Using NEP and DARES as case studies, it evaluates how concessional resources, performance-based mechanisms, and risk mitigation tools interact with institutional and weak-grid constraints to shape project viability (World Bank, 2018; World Bank, 2023).

Building on this evidence, it argues that complementary reforms; especially in tariff-related design for distributed resources and in land access/approval protocols can reduce non-technical risks and better predict investment. It also recommends a tripartite cooperation framing between government, private developers and MDB financiers as a feasible framework to align risk allocation and financing arrangements with Nigeria's decentralised electrification goals. This paper applies a qualitative, document-based comparative case study methodology. It compares NEP (2018) and DARES (2023) to World Bank project appraisal documents and implementation summaries, and connects the design characteristics of the programme to Nigeria's PPP governance signals, as recorded in the World Bank Benchmarking Infrastructure Development data (World Bank, 2025). The study is based on risk allocation and payment mechanisms, performance-based provisioning grants and guarantees, and institutional capacity constraints through the PPP project cycle.

2. NIGERIA'S CURRENT ENERGY LANDSCAPE: BLENDED FINANCE AND POLICY REFORMS

2.1. Nigeria's Energy Landscape

The Nigerian energy sector is facing critical challenges: only 61% of the population has electricity, accumulated technical, commercial and collection losses exceed 47%, and 86.8 million citizens, a significant segment of whom live in rural areas, are without access to power (World Bank, 2025). But access isn't the only aspect behind the problem. The chronic unreliability has institutionalized widespread self-generation through small petrol and diesel generators across households and firms, forming a "parallel" electricity system that drives up private energy costs while maintaining demand for reliable provision. Evidence suggests that improved grid reliability would materially reduce self-generation; however, even under better service conditions, backup generation is likely to remain prevalent among higher-income users. This means that near-term enhancements in reliability and more decentralised options can coexist rather than replace one another (Oseni, 2016). With a large solar endowment and vast (if still unfilled) wind potential, deployment of renewable energy is not without constraints due to regulatory and institutional fragmentation, high initial investment costs, and lack of access to sustainable finance (Ajia, 2025). Decentralized renewable energy, especially in the form of mini-grids, also serves as a case study for testing the design and the implementation of regulation in this environment. Sesan et al. (2024) found that the more flexible regulations for mini-grid development in Nigeria have encouraged market participation and projects, but noted that a primarily market-focus may risk leaving "last-mile" access uneven if not accompanied by targeted support structures. In parallel, financing constraints remain decisive. In high-risk environments, the cost of capital can be more binding than resource availability, underscoring the role of blended finance structures that reduce financing costs by compressing risk premia (Briera & Lefèvre, 2024). Into this context, this chapter considers Nigeria's energy transition (from a blended finance, and policymaking reform perspective): on instruments and public–private partnership arrangements that can mitigate investment risk and enhance the feasibility of a project. Applying the NEP and the World Bank Group's DARES operation as examples and developing funding models, it shows how present system limitations interact with program design and risk minimization options in determining the development trajectory of renewable energy (World Bank, 2025).

2.2. Public-Private Partnerships in Nigeria

PPPs in Nigeria and particularly in the energy sector encompass a range of contractual arrangements, which diverge by degree of risk transfer, amount of private capital committed, or duration of the contract. At one end are service and management contracts, where the public sector exercises control over assets and investment but contracts operational or managerial functions to private providers. Lease arrangements go farther down the continuum and transfer day-to-day operational and commercial risk to the private operator whilst capital expenditure obligations mostly remain public. At the other end, are concession and BOT (Build-Operate-Transfer) contracts, which are often regarded as integral forms of PPP where private investors incur significant construction, financing, operating and demand risks across long timelines (generally of 20-30 years), with returns to be earned by user tariffs or structured offtake mechanisms (ICRC, 2025). The feasibility of higher-risk PPP forms (e.g., concessions and BOTs) in Nigeria's power and renewable subsectors, in practice and in the wider market, depends on the extent to which key PPP risks (especially offtaker risk, policy uncertainty, and macro-financial exposures) that would increase the required and bankable return could be credibly offset.

The literature indicates the existence of multilateral guarantee mechanisms as a mechanism for risk pooling and risk premia reduction, as well as to enhance bankability and reduce the cost of renewable investment in adverse financing periods (Matthäus & Mehling, 2020). In these ways, PPP typologies are not only descriptive, but are useful in identifying which risks need public assistance, which can be funded by private capital, and which problems would be mitigated through third parties in blended-finance structures. Because PPP performance is strongly related to institutional capacity throughout the life of a project, it would be useful to ground the discussion according to Nigeria's performance on the standardised PPP governance scales. In Figure 1, the thematic score derived from Nigeria's benchmarks on infrastructure development indicators of the World Bank is presented (World Bank, 2025).

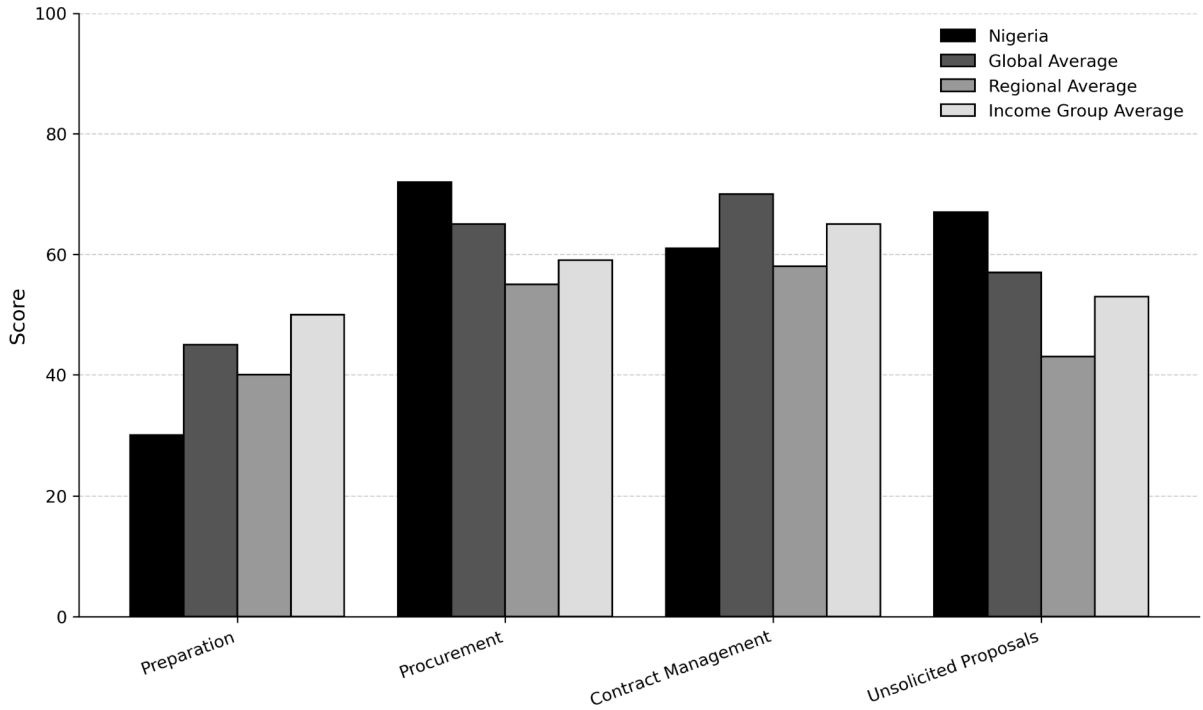

Figure 1: Thematic Scores for PPPs in Nigeria
(Source: Authors' construction based on World Bank, 2025, Benchmarking infrastructure development)

Therefore, the typology in Table 1 is interpreted in the present work as a tool of analysis which connects observed institutional capacity restrictions and the structuring of renewable energy investments in Nigeria. This delineation of PPP forms in risk allocation, financing responsibility, and incentive design facilitates the comparative evaluation of project outcomes against some empirical criteria of the system as a whole (e.g., low PPP preparation capacity, moderate procurement performance, and uneven contract management capacity). By situating renewable projects in this group, we can now more clearly evaluate value-for-money, fiscal exposure, and investment viability in terms of institutional readiness and not assumed market efficiency, thus situating Nigeria's energy transition and infrastructure goals in the concrete dimensions of clear governance.

PPP type	Brief	Public sector role	Private sector role	Investment mandate	Risk allocation	Revenue / payment	Typical duration	Nigeria notes
Service contract	Private performs specific services	Owns assets; overall responsibility	Delivers defined services	Public	Very low	Govt fee	1-3 years	Maintenance, IT, billing
Management contract	Private manages operations	Owns assets; funds capex	Manages operations	Public (capex)	Low	Mgmt fee + incentives	3-5 years	Utilities, hospitals
Lease contract	Private operates service	Owns assets; new capex	Operates & maintains	Public (capex); Private (O&M)	Medium	User tariffs + lease fee	10+ years	Private bears O&M losses
Concession	Private delivers full service	Regulates tariffs & standards	Designs, builds, operates	Private	High	User tariffs; VGF	25-30 years	Roads, ports, power
Build-operate-transfer	Private builds new asset	Sets standards	Finances, builds, operates	Private	Very high	User charges/ offtake	20+ years	Greenfield projects

Table 1: Comparative Classification of Public-Private Partnership (PPP) Models in Nigeria (Source: Authors' construction based on ICRC, 2025)

Table 1 describes PPP arrangements involved in Nigeria's energy infrastructure as follows: from less risky service contracts where public stakeholders bear ownership and investment responsibilities, while independently running discrete aspects of the business, the like, with a transition to more risky BOT agreements, where financing, construction and operational commitments are better off assigned to private partners in renewable greenfield projects (ICRC, 2025). As contracts pass through this scale, the risk is also better allocated from low private exposure to service contracts to high private exposure to demand and performance risk in concessions and BOTs. Revenue from services is primarily recovered through user tariffs, viability gap funding (VGF), or more formalized offtake over longer operating ranges (World Bank, 2025). This way typology is a consistent basis for tying PPP design choices—risk transfer of capital and payment structure, to the investment conditions in Nigeria given its grid constraints and electrification goals (ICRC, 2025).

3. STRUCTURING ENERGY INFRASTRUCTURE PUBLIC-PRIVATE PARTNERSHIPS IN NIGERIA

The effectiveness of these PPP schemes is contingent upon three conditions: preparedness of projects, transparency of procurement, and governance agencies able to manage contingent liabilities and long-term contractual obligations (ICRC, 2025). When those requirements are satisfied, PPPs may enhance infrastructure delivery through the provision of clearer lines of risk distribution, through improving performance incentives throughout the life-cycle of a given project, and through facilitating private capital commitment. In Nigeria's renewable energy sector, this is of relevance not only for construction and commissioning but also for asset performance and the efficient use of public resources within already extant, institutional and grid restrictions (ICRC, 2025). In Figure 2, the financing and institutional relationships are summarised schematically to emphasise their explicit interactions, illustrating the role of public authorities, development finance institutions, and private capital within a single project structure.

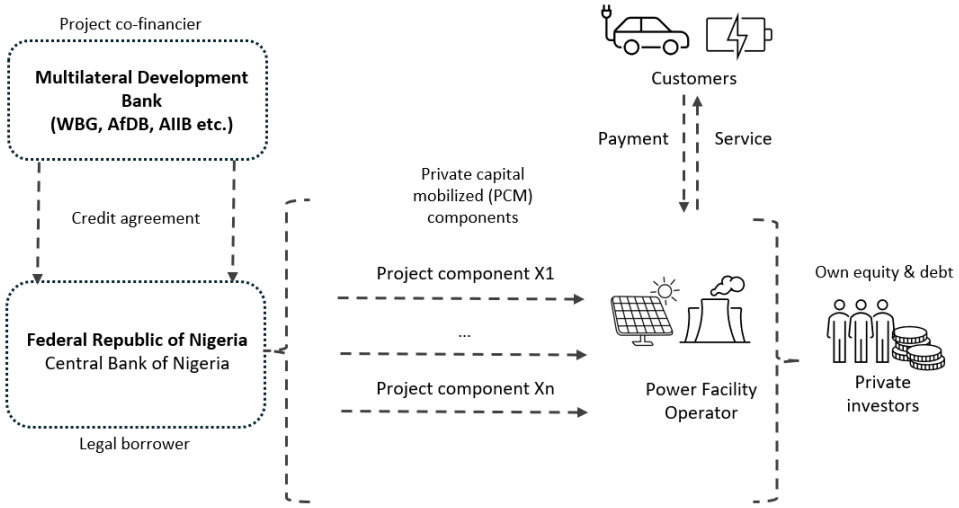

Figure 2: Public energy infrastructure project co-financing by private capital in Nigeria (Source: Authors' construction)

In Figure 2, a blended finance structure for Nigerian energy PPPs is described in which multilateral development banks (MDBs), through the Federal Republic of Nigeria as part of the project's risk mitigation package, provide private investors with concessional credit and legal assistance. Private financing is provided in the form of both equity and debt at the project level to support the construction and operation of assets like solar hybrid mini-grids. Project revenue is created via customer tariffs or structured offtake arrangements and is transferred back to the project company for delivery and operations.

4. CONCLUSION

Accordingly, distinguishing PPP types is a crucial exercise to elucidate which aspects of project risk profiles, funding mechanisms and performance incentives are compatible with Nigeria's aspirations for the energy transition, as well as infrastructure needs and value-for-money considerations (World Bank, 2025). Key enablers in Nigeria's renewable energy sector are strong solar resource availability, declining the costs of solar PV and storage, mobilizing the private sector through programme-based vehicles such as NEP and DARES, as well as policy frameworks like Renewable Energy Master Plan and National Renewable Energy and Energy Efficiency Policy which can underpin mini-grids and solar hybrid solutions (World Bank, 2025; Ajia, 2025). Significant impediments, though, are still formidable. For example, Nigeria's low PPP preparation score (the mark for readiness of the framework is 30/100), regulatory disjunction, institutional vulnerabilities across REA and ICRC, and grid integration barriers linked to ageing infrastructure challenge the prospects of PPP in renewables. These constraints are exacerbated by macroeconomic instability and inadequate technical skills, which inhibit the allocation and pricing of risks across higher-risk arrangements like BOT concessions (World Bank, 2025; Okoye & Oke, 2019). Effectiveness also depends on procurement and contract management beyond preparation. In this respect, procurement performance is relatively impressive (72/100), but results still rely on good project planning, sound processes, and regulatory readiness to mitigate contingent liabilities and long-term contractual obligations (ICRC, 2025). In this context, blended finance is relevant; it enhances project viability under weak-grid and high-risk environments by mitigating investment risk and supporting bankability (World Bank, 2023).

This paper evaluates the association between the viability of renewable energy projects and the use of alternative financing models such as PPPs, and compares NEP and DARES to Nigeria's thematic scores for PPPs to unearth a consistent relationship, indicating a positive relationship between these in relation to the viability of renewable projects, in contrast to full risk-transfer PPP models. This represents a scientific contribution in that it recognizes this financing-performance link as a structural characteristic of weak-grid power systems and thus a quantifiable variable for future comparative and econometric research rather than making a prescriptive policy argument.

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AGILE PROJECT MANAGEMENT AS A SOURCE OF COMPETITIVE ADVANTAGE IN THE LEGAL PROFESSION: EMPIRICAL EVIDENCE FROM CROATIA

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ABSTRACT

The legal profession is increasingly exposed to pressures such as accelerated regulatory change, digitalisation, and rising client expectations regarding speed, transparency, and predictability. Although legal practice is traditionally characterised by formalised procedures and extensive documentation, these trends encourage a reconsideration of how legal services are planned, coordinated, and delivered to improve operational efficiency, strengthen client value, and support competitive advantage. This paper analyses the applicability of agile project management in the legal profession and identifies areas where agile principles can create measurable operational value through better resource allocation, faster decision making, and improved delivery transparency without compromising confidentiality and regulatory compliance. The research combines a literature review with an empirical survey of seven Zagreb based law firms listed in the Legal 500 with 22 valid responses. The survey examined respondents' familiarity with agile concepts, perceived benefits and constraints, and legal workstreams considered suitable for iterative planning and client feedback loops. Findings indicate a predominantly selective adoption of agility. Agile practices are viewed as most useful for managing complexity, stakeholder alignment, and frequent changes in scope, particularly in corporate transactions such as M&A and internal digitalisation initiatives, thereby improving responsiveness, service quality, and overall competitiveness. Conversely, highly formalised proceedings continue to favour traditional approaches due to procedural requirements, risk management, and the need for legal certainty. The paper therefore supports hybrid governance models as a pragmatic pathway, combining agile techniques where adaptability and collaboration enhance value creation and competitive advantage with structured controls where compliance and predictability dominate.

Keywords: *Agile project management; Legal profession; competitive advantage; Hybrid governance model, Organizational Culture*

1. INTRODUCTION

Over the past decade, the legal profession has been undergoing significant transformation driven by accelerated digitalization, increasing regulatory complexity, and growing client expectations regarding the speed, transparency, and predictability of legal service delivery. Traditionally structured legal practice, grounded in formalized procedures, hierarchical organizational structures, and extensive documentation, has long ensured a high level of legal certainty and professional accountability.

However, the contemporary business environment increasingly demands more flexible organizational models and more efficient approaches to managing complex legal engagements. With the expansion of the global legal services market and the growing complexity of corporate transactions, law firms are increasingly confronted with matters that exhibit clear project characteristics. These engagements often involve multiple professionals, strict time constraints, numerous stakeholders, and the need for continuous coordination and adaptation to evolving circumstances. In such an environment, clients expect from law firms not only legal expertise but also structured process management, transparent communication, and efficient value delivery. Agile project management, originally developed in the field of software development as a response to uncertainty and frequent changes in requirements, has gradually expanded into other knowledge-intensive industries. Its core principles such as iterative planning, continuous stakeholder collaboration, and rapid adaptation to change create opportunities to improve work organization and increase operational efficiency in the legal sector as well. Nevertheless, the application of agile approaches within the legal profession remains relatively underexplored, particularly in the context of continental legal systems and smaller national markets such as Croatia. The aim of this paper is to examine whether the adoption of agile project management can represent a source of competitive advantage for law firms through improved resource management, faster decision-making, and greater transparency in the delivery of legal services. The research combines a review of relevant academic and professional literature with an empirical study conducted among Croatian law firms ranked in the international legal directory The Legal 500. Particular emphasis is placed on the level of familiarity of legal professionals with agile concepts, their perceptions of the potential benefits and limitations of such approaches, and the identification of areas of legal practice that may be suitable for iterative and collaborative models of work. The paper assumes that a complete replacement of traditional approaches in legal practice is not realistic due to regulatory requirements, professional responsibility, and the need to ensure legal certainty. Therefore, hybrid management models that combine structured controls with agile methods are considered a potentially sustainable solution, particularly in areas where adaptability and collaboration may contribute to creating additional value and strengthening competitiveness of law firms. In this way, the paper contributes to the broader discussion on the modernization of management practices within the legal profession and provides empirically grounded insights into the potential application of agile principles in the Croatian legal environment.

2. THEORETICAL BACKGROUND AND RESEARCH QUESTION

The contemporary business environment is characterized by a high level of uncertainty, rapid technological development, and increasing complexity of regulatory frameworks, which forces organizations to develop more flexible models for managing work and resources. Such an environment is often described through the concept of VUCA (volatility, uncertainty, complexity, ambiguity), which emphasizes the need for adaptability and faster decision-making (Bennett & Lemoine, 2014). In these conditions, traditional project management models, based on linear planning and stable requirements, increasingly demonstrate significant limitations (PMI, 2017). Agile project management emerged at the end of the twentieth century as a response to the inefficiencies of sequential project management approaches, particularly in industries characterized by frequent changes in requirements and high levels of innovation (Highsmith, 2010). The key theoretical foundation of the agile approach was established with the publication of the Agile Manifesto, which emphasizes the importance of collaboration, iterative value delivery, and responsiveness to change rather than strict adherence to predefined plans (Beck et al., 2001).

Agile approaches are based on empirical learning through short development cycles and continuous user feedback, thereby reducing the risk of developing solutions that do not correspond to actual market needs (Rigby, Sutherland & Takeuchi, 2016). Among the most widely adopted agile frameworks are Scrum and Kanban. Scrum organizes work through time-boxed iterations and clearly defined team roles (Schwaber & Sutherland, 2020), while Kanban emphasizes the visualization of workflow and process optimization through limiting work in progress (Anderson, 2010). The Project Management Institute further integrated agile principles into the broader framework of project management through the publication of the Agile Practice Guide, thereby confirming their applicability beyond the IT industry (PMI, 2017). Numerous studies indicate that agile approaches contribute to greater organizational adaptability, more effective risk management, and higher levels of user satisfaction (Špundak, 2014). Although agile approaches offer significant advantages in dynamic environments, the literature emphasizes that their full implementation is not always appropriate in highly regulated sectors. For this reason, organizations are increasingly developing hybrid models that combine the stability of traditional methods with the flexibility of agile practices (Koudriachov, Tam & Aparicio, 2025). Hybrid models allow organizations to retain formal documentation, quality control, and risk management where these elements are necessary, while agile components are applied in areas that require innovation and rapid adaptation (PMI, 2017). Such an approach has proven particularly relevant in professional service industries, where regulatory requirements coexist with the need for operational efficiency (Reinertsen, 2009). The development of the global legal services market has led to the gradual projectification of legal work, particularly in areas such as corporate law, international arbitration, and transactional matters. Complex legal engagements increasingly involve multidisciplinary teams, numerous stakeholders, and strict time constraints, making them comparable to business projects (Sainati & Castro, 2024). At the same time, the legal profession remains a highly regulated field characterized by professional responsibility and strict confidentiality obligations, which may limit the full implementation of agile methods (Rogers, Dombkins & Bell, 2021). For this reason, research suggests a selective application of agility, whereby formalized court procedures continue to favor traditional working models, while transactional and organizational projects are more suitable for agile approaches. Changes in the legal industry are further driven by increasing competition, the internationalization of markets, and evolving client expectations, which increasingly emphasize cost predictability, transparency, and efficiency in the delivery of legal services (Legal 500, n.d.; Chambers and Partners, n.d.). In strategic management theory, competitive advantage is increasingly associated with organizational agility and the ability to adapt rapidly to environmental changes. Organizations that are able to coordinate resources more effectively, accelerate decision-making processes, and enhance transparency in their operations tend to achieve sustainable market advantages (Rigby, Sutherland & Takeuchi, 2016). In the context of law firms, agile approaches may contribute to improved management of complex cases, more effective communication with clients, and optimized allocation of workload, thereby increasing service quality and the overall competitiveness of the organization. Based on the theoretical framework, this study aims to empirically examine the relationship between the application of agile project management and competitive advantage within the legal profession. The main research question (RQ) is formulated as follows:

To what extent does the application of agile project management contribute to operational efficiency and competitive advantage in Croatian law firms?

From this question, several subsidiary research questions emerge, addressing the extent to which lawyers are familiar with agile methodologies, the benefits and limitations they perceive in their application, which types of legal work are suitable for agile ways of working, and whether a hybrid management model represents the most appropriate approach for legal practice.

3. METHODOLOGY, ANALYSIS AND RESULTS

Research was conducted using a combined methodological approach that includes a review of relevant academic and professional literature as well as an empirical quantitative study. The aim of the research was to examine the applicability of agile project management within the legal profession and to determine its potential contribution to the operational efficiency and competitive advantage of law firms in the Republic of Croatia. Empirical part of the research is based on a cross-sectional research design, where data were collected at a single point in time using a structured survey questionnaire. Research sample consisted of law firms headquartered in Zagreb that are ranked in the international legal directory The Legal 500. This sampling approach assumes that these firms are characterized by a stronger project-based work dynamic, a higher number of complex legal engagements, and greater exposure to international competition and contemporary management practices. Questionnaire was distributed electronically, and a total of 22 valid responses were collected from seven law firms. Respondents were lawyers of different levels of seniority (partners, senior associates, and junior associates), ensuring a diversity of perspectives within the organizations. Participation in the study was voluntary and anonymous, and the data were analyzed exclusively in aggregated form. A structured survey questionnaire specifically designed for the purposes of this research was used as the research instrument. The questionnaire consisted of a combination of closed-ended and semi-open questions and was divided into several thematic sections:

- level of familiarity with the concept of agile project management,
- perception of the relevance of agile methods for legal practice,
- perceived benefits and potential limitations of applying agile approaches,
- areas of legal practice suitable for agile ways of working,
- assessment of the appropriateness of a hybrid management model.

Most statements were measured using an ordinal scale, enabling a quantitative analysis of respondents' perceptions. The collected data were analyzed using descriptive statistics. Frequencies and percentage distributions of responses were calculated, as well as arithmetic means for questions measured on an ordinal scale. Given the sample size, the study primarily focuses on descriptive analysis and the identification of perception patterns rather than on inferential statistical conclusions. The results were interpreted in the context of the theoretical framework on agile project management and the specific characteristics of the legal profession. The study has several limitations. First, the sample size is relatively limited and includes only Zagreb-based law firms ranked in the international legal directory, which may affect the generalizability of the results. Second, the research relies on respondents' self-assessment, which may involve subjective bias in perception. Despite these limitations, the study provides valuable empirical insights into the perception of agile practices within the Croatian legal sector and represents a relevant basis for further, more comprehensive research. Empirical part of the study was conducted through a survey titled "Empirical Research: Agile Project Management in Legal Practice." The sample consists of 22 respondents from seven law firms headquartered in Zagreb, all of which are ranked in the international legal directory The Legal 500. The study included 8 partners (36.4%) and 14 lawyers of different levels of seniority (63.6%).

According to the respondents' primary area of practice, the sample includes mergers and acquisitions (M&A) with 9 respondents (40.9%), real estate law with 5 respondents (22.7%), and dispute resolution with 8 respondents (36.4%). The analysis of the results began with examining respondents' level of familiarity with the concept of agile project management. The collected data show that 5 respondents (22.7%) reported being very familiar with the concept, while 11 respondents (50.0%) indicated that they possess basic knowledge. The remaining 6 respondents (27.3%) stated that they are only superficially familiar with agile management or have not examined it in greater detail. This distribution of responses suggests that the majority of respondents have at least a basic level of awareness of agility; however, a more systematic and in-depth understanding is still not widely developed. Differences were also observed across areas of legal practice. The highest level of familiarity was identified in the field of mergers and acquisitions (M&A), where lawyers are more frequently involved in complex and dynamic projects with a larger number of stakeholders, which encourages the search for more efficient models of coordination and delivery. In the area of real estate law, which is more often characterized by repetitive and highly regulated transactions, the level of familiarity was somewhat lower. In dispute resolution, agility was more often perceived through internal organizational processes rather than through formal knowledge of agile methodologies. The results also indicate the presence of generational differences. Younger lawyers are more frequently exposed to agile concepts through international clients, training outside the legal profession, or experience with digital tools, which makes them more open to new management methods and more inclined to experimentation. Senior lawyers tend to show a stronger preference for traditional working models, which is understandable given their reliance on established procedures that provide stability and reliability. Nevertheless, their strategic experience may contribute to recognizing the long-term benefits of agile elements, such as strengthening competitiveness, attracting younger talent, and increasing client satisfaction. In this sense, generational differences can be viewed as a potential complementarity, where younger professionals bring openness to change, while senior practitioners provide a stable framework and ensure quality control. It is important to note that a limited level of familiarity with the methodology may result in a superficial application of agility, where it remains merely a general concept rather than a practical working framework. Since half of the respondents reported possessing only basic knowledge, there appears to be significant room for professional development and training programs focused on the application of agile management within the specific context of legal practice. The level of familiarity is presented in Table 1.

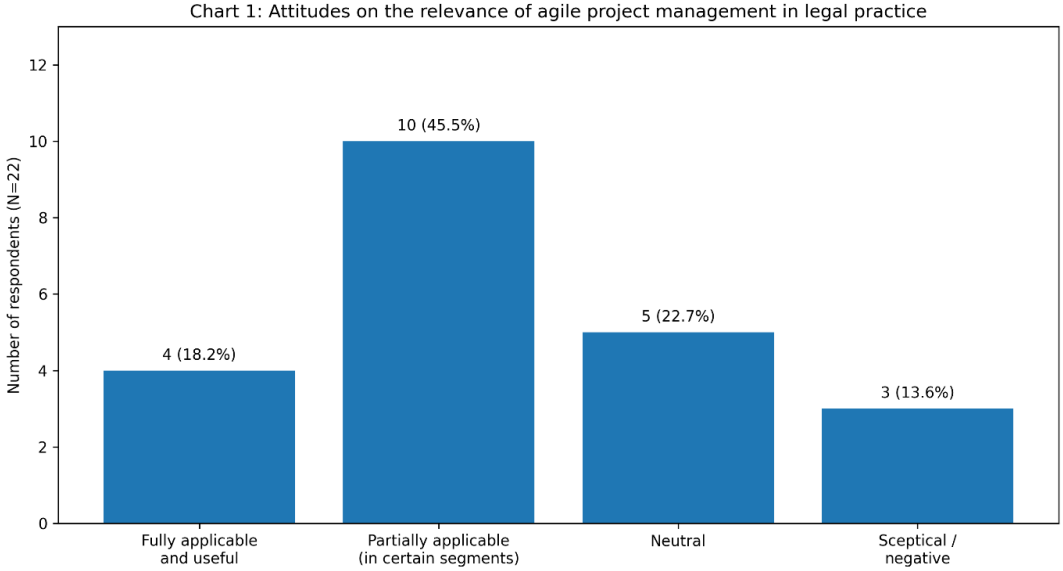
Table 1. Level of Familiarity with Agile Project Management (N = 22)

Level of familiarity	Number of respondents	Percentage (%)
Very familiar with the concept	5	22.7
Possess basic knowledge	11	50.0
Superficially familiar or without detailed knowledge	6	27.3
Total	22	100.0

Source: Author's processing based on the results of the survey "Empirical Research: Agile Project Management in Legal Practice."

Second part of the survey focused on examining attitudes toward the relevance of agile project management for the legal profession. The results show that 4 respondents (18.2%) fully believe that the agile approach is applicable and beneficial for legal practice, while 10 respondents (45.5%) expressed a moderately positive attitude, stating that agility can be useful in certain segments of legal work, but not universally. A neutral position was expressed by 5 respondents (22.7%), emphasizing that applicability depends on the type of project or legal practice area, while 3 respondents (13.6%) expressed skepticism or a negative attitude toward the application of agile management in the legal profession. Findings suggest that the majority of respondents recognize the potential of agile approaches but perceive them as selectively applicable. In this context, agility is more often viewed as a tool for improving internal work organization, business digitalization, or the development of additional services, whereas its applicability to traditional legal tasks, such as conducting formal legal proceedings, is more limited. In mergers and acquisitions (M&A) practice, agility was identified as particularly useful due to the large number of stakeholders involved and the frequent changes that occur during negotiation processes. In real estate law, respondents more often favor a traditional approach, while acknowledging the potential application of agile elements in internal planning and client communication. In dispute resolution, the agile approach was considered relevant primarily in the stages of strategy preparation and task allocation, whereas the conduct of proceedings remains strongly constrained by formal procedural rules and deadlines. Attitudes regarding the relevance of agile management in legal practice are further illustrated in Figure 1.

Chart 1: Attitudes on the relevance of agile project management in legal practice



Third segment of the survey examined the benefits that respondents associate with the application of agile management. Most frequently identified benefit relates to more efficient work organization, reported by 14 respondents (63.6%). Respondents emphasized that an agile approach could contribute to better task planning, quicker identification of bottlenecks, and a clearer distribution of responsibilities within teams. Improved communication and collaboration were mentioned by 12 respondents (54.5%), with the assessment that an iterative approach and more frequent feedback could reduce the risk of misunderstandings both within teams and in interactions with clients. Furthermore, 11 respondents (50.0%) recognized the potential of agile management to increase process transparency. In dynamic projects such as mergers and acquisitions (M&A), the visualization of workflow and a clearer representation of task status may provide clients with better insight into project progress and upcoming steps, thereby strengthening trust. Higher team engagement and motivation were identified by 9 respondents (40.9%), with respondents noting that agile ways of working may encourage

greater autonomy and a stronger sense of progress through shorter delivery cycles. Faster adaptation to change was highlighted by 8 respondents (36.4%), indicating recognition of agility as a mechanism for responding more flexibly to changes in client requirements or regulatory frameworks. Obtained results suggest that respondents primarily perceive the agile approach as a practical tool for operational improvement of existing processes, rather than as a radical transformation of the business model. The emphasis is placed on organization, communication, and transparency, which suggests that the introduction of agility in legal practice would likely occur gradually, through the selective adoption of elements that provide immediate added value. Final part of the survey focused on identifying the main limitations of applying agile management in the legal profession. The most frequently cited limitation relates to regulatory requirements and formal procedures, reported by 13 respondents (59.1%). This limitation is particularly associated with court proceedings and other formalized processes in which it is necessary to follow strictly defined procedures and deadlines, thereby reducing the scope for iterative approaches. Extensive documentation was identified as a limitation by 12 respondents (54.5%). Given that the legal profession relies heavily on detailed records, filings, and formal documents, respondents believe that such requirements are difficult to reconcile with the agile emphasis on flexibility and shorter work cycles. The need for predictability and planning was highlighted by 10 respondents (45.5%), particularly in situations that require long-term structuring of obligations and deadlines. Cultural barriers within the profession were mentioned by 8 respondents (36.4%), referring to deeply embedded working patterns that favor hierarchical structures, formally defined responsibilities, and caution toward change. These findings indicate that, despite recognizing the potential benefits of agile approaches, respondents clearly distinguish between contexts in which agility may be beneficial and those in which traditional models remain dominant. Traditional approaches continue to prevail in areas where legal certainty, formal procedures, and regulatory compliance are priorities, whereas agility demonstrates the greatest potential in internal processes, digitalization projects, and the coordination of complex transactions, particularly mergers and acquisitions (M&A). This confirms that the most feasible direction for development lies in the combination of traditional and agile elements, that is, in hybrid models of application depending on the type of legal work and the objectives of the engagement. A comparative overview of the identified benefits and limitations is presented in Table 3.

Table 3. Identified Benefits and Limitations of the Agile Approach (N = 22)

Identified benefits	Number and percentage	Limitations	Number and percentage
More efficient work organization	14 (63.6%)	Regulatory requirements and formal procedures	13 (59.1%)
Improved communication and collaboration	12 (54.5%)	Extensive documentation	12 (54.5%)
Greater process transparency	11 (50.0%)	Need for predictability and planning	10 (45.5%)
Higher team engagement and motivation	9 (40.9%)	Cultural barriers within the profession	8 (36.4%)
Faster adaptation to change	8 (36.4%)		

Source: Author's processing based on the results of the survey "Empirical Research: Agile Project Management in Legal Practice."

4. DISCUSSION

The results of the research confirm that the legal profession in Croatia is gradually opening up to contemporary management approaches while at the same time maintaining a strong reliance on traditional organizational models of work. The findings are largely consistent with theoretical assumptions regarding the contextual applicability of agile project management, particularly in sectors that combine a high level of professional expertise with an increasing dynamism of market demands. Empirical findings confirm that respondents recognize the need for greater adaptability in segments of legal practice characterized by frequent changes in client requirements and complex stakeholder coordination. This is consistent with the theory of the VUCA environment (Bennett & Lemoine, 2014), according to which organizations must develop the capacity for rapid response and continuous learning in order to maintain competitiveness. Positive perception of agile approaches in areas such as M&A transactions and regulatory compliance supports the argument that agility is particularly suitable in situations characterized by high uncertainty and a changing project scope (Rigby, Sutherland & Takeuchi, 2016). Iterative planning and continuous client communication enable faster adaptation, thereby reducing the risk of unmet expectations and increasing the perceived value of legal services. One of the key findings of the research is the pronounced preference for a hybrid management model. Respondents did not advocate a complete transformation toward a purely agile model but rather a combination of traditional and agile elements. This finding is fully consistent with the literature emphasizing that in regulated and professional sectors a complete agile transformation is often neither feasible nor desirable (PMI, 2017; Špundak, 2014). A hybrid approach allows for the retention of formal documentation, professional accountability, and procedural reliability, which are essential in the legal profession, while agile tools are used to improve coordination and transparency. This supports the theoretical assumption that organizational agility is not necessarily tied to methodological "purity," but rather to the ability to adapt management tools to a specific context (Highsmith, 2010). Research also shows that regulatory requirements and organizational culture are among the main barriers to the implementation of agile methods. This finding corresponds with studies emphasizing that the success of agile transformation is strongly influenced by cultural factors, particularly the level of hierarchical formality and the willingness to embrace change (Rigby, Sutherland & Takeuchi, 2016). Legal profession has traditionally been structured around individual responsibility and formalized procedures, which may hinder the full implementation of self-organizing teams and flexible processes. This supports the argument that in professional services agility must be adapted to institutional constraints and professional standards (Rogers, Dombkins & Bell, 2021). Results suggest that competitive advantage does not arise from the mere application of agile tools, but rather from their ability to improve service quality and client experience. In line with the theory of organizational agility, organizations that are able to coordinate resources more quickly and communicate more effectively with clients achieve greater market differentiation (Rigby, Sutherland & Takeuchi, 2016). In the legal sector, this is reflected through:

- faster decision-making in complex cases,
- clearer prioritization of tasks,
- greater transparency toward clients,
- a reduction in operational bottlenecks.

Such elements directly influence the perceived quality of services and long-term client loyalty, which represents the foundation of a sustainable competitive advantage. Theoretical contribution of this study lies in the empirical confirmation that the applicability of agile project management in the legal profession is selective and context dependent.

The results support assumptions in the literature regarding the need for hybrid management models in regulated sectors and further contribute to the understanding of the projectification of professional services. Research also expands existing literature by providing empirical insights from a continental European legal system, which has been relatively underrepresented in previous studies compared with Anglo-Saxon legal markets.

5. CONCLUSION

The aim of this paper was to examine whether the application of agile project management can represent a source of operational efficiency and competitive advantage in the legal profession, and to what extent such an approach is applicable in the Croatian legal context. Based on the theoretical framework of organizational agility and the projectification of professional services, the research combined a review of relevant literature with an empirical analysis of the perceptions of lawyers from Croatian law firms. Results of the study confirm that agile project management has the potential to improve the management of complex legal engagements, particularly in areas characterized by high dynamism, multiple stakeholders, and changing client requirements. The benefits were especially evident in segments such as corporate transactions, regulatory compliance, and internal organizational projects, where iterative planning, more frequent communication, and a more flexible allocation of resources were recognized as factors that enhance operational efficiency and transparency. At the same time, the research shows that the full implementation of an agile model is neither realistic nor desirable in all segments of legal practice. Formalized court procedures, regulatory requirements, and professional responsibility limit the level of flexibility and require the retention of traditional management elements. In this context, a hybrid management model, combining structured controls with agile tools and practices, appears to be the most appropriate framework for the legal profession. Theoretical contribution of the study lies in confirming that the applicability of agile project management in regulated professional sectors is context-dependent, and that competitive advantage is achieved through the adaptation of management tools to the specific characteristics of the profession rather than through their uncritical implementation. The empirical findings also contribute to the literature by providing insights into the application of agile concepts within a continental European legal system, which has been relatively underrepresented in existing research. From a practical perspective, the results suggest that law firms may achieve measurable benefits by introducing selective agile practices, such as shorter coordination cycles, clearer prioritization of tasks, and more systematic management of client communication. However, the success of such initiatives depends on organizational culture, openness to change, and the level of managerial support. Limitations of the research primarily relate to the sample size and the focus on Zagreb-based law firms, which may limit the generalizability of the findings. Future research could include a broader sample, a comparative analysis of different jurisdictions, or a longitudinal approach aimed at measuring the actual effects of implementing agile practices on organizational performance. In conclusion, agile project management does not represent a universal substitute for traditional working models in the legal profession. However, it constitutes a valuable management tool which, when thoughtfully integrated into existing structures, can contribute to increased organizational efficiency and the long-term competitiveness of law firms in an increasingly dynamic legal and business environment.

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AUGMENTED INTELLIGENCE IN THE BOARDROOM: A REVIEW OF EVOLVING BOARD ROLES

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ABSTRACT

The integration of Artificial Intelligence (AI) marks a transformative shift in corporate governance, challenging the traditional "thinly informed" board anomaly. This review article investigates how AI enhances the boards' control, strategic, and networking roles. Key findings indicate that AI dismantles informational hegemony through real-time monitoring, enables "Blue-Sky" thinking, and redefines stakeholder engagement. However, a critical paradox persists between algorithmic transparency and the potential anonymization of accountability. The study concludes that successful governance requires a "human-in-command" model, ensuring a symbiosis in which technology handles cognitive processing while humans retain non-delegable ethical judgment. The article provides a strategic action plan for practitioners navigating the AI era. This review advances the field by articulating a 'human-in-command' framework that reconciles algorithmic efficiency with fiduciary accountability in the digital era.

Keywords: *artificial intelligence, corporate governance, board of directors, board roles, augmented intelligence*

1. INTRODUCTION

The integration of Artificial Intelligence (AI) represents one of the most profound shifts in contemporary corporate governance. It places corporate boards at a critical juncture where technological innovation meets fiduciary duty (Agnese et al., 2025). Rather than a mere technical utility, AI acts as a "prediction machine" that augments board cognition and systematically dismantles the information asymmetries that have historically hindered effective oversight (Agrawal et al., 2018). Its adoption has become essential for fulfilling fiduciary duties related to overseeing delegated authority (Locke & Bird, 2020; Agnese et al., 2025). Historically, corporate governance has been characterized by "thinly informed" boards. Operating primarily on periodic, management-mediated reports, boards often find themselves in a reactive stance, struggling with the information gaps inherent in traditional reporting cycles (Kourabas & Tsang, 2025; Ivaninskiy & Ivashkovskaya, 2020). The adoption of AI facilitates a transition toward a "Real-Time Advisor" model. By providing unmediated access to organizational data, AI transforms the board from a passive observer into a proactive entity capable of continuous oversight and dynamic adaptation (Larcker et al., 2025).

To analyze this transformation, this review utilizes the triple role framework (Tipurić et al., 2009), which categorizes the boards' core responsibilities into three distinct pillars: (1) The Control Role: ensuring management accountability through the management board selection, as well as monitoring, and evaluation of their performance; (2) The Strategic Role: approving strategic decisions, assessing past decisions, and supporting the creation of the organization's strategic orientation; (3) The Networking Role: managing vital external relationships and securing institutional legitimacy. Given that the integration of AI into boardrooms is a multi-dimensional phenomenon, encompassing legal, cognitive, and relational shifts, this research recognizes the pluralistic theoretical lenses found in contemporary literature. Rather than relying on a single framework, this study acknowledges that a synthesis of various perspectives is necessary to fully interpret the intersection between AI and board processes (See Table 1).

Theory	Focus
Agency	Reducing agency costs through algorithmic monitoring (Saeed, 2025).
Dynamic Capabilities	Enhancing the boards' ability to "sense" and "seize" digital opportunities (Åberg & Shen, 2019).
Resource Dependence	Positioning the board as a link to external digital capital and networks (Oliveira et al., 2022).
Signaling	Using data ethics and transparency as signals of market legitimacy (Hudson & Morgan, 2024).
Augmentation	Treating AI as a cognitive partner that enhances human judgment (Agnese et al., 2025).

Table 1: Theoretical perspective of AI application in boards' processes

While AI's operational deployment has been widely documented, its specific influence on governance-level roles remains critically underexplored (Ahdadou et al., 2025). This study seeks to bridge that gap by addressing the following research question:

How does the integration of AI into board processes support the development of the boards' traditional control, strategic, and networking roles?

2. RETHINKING BOARDS' ROLES IN THE ERA OF AI

2.1. AI in the Boards' Control Role

AI redefines the control role by shifting oversight from retrospective, sample-based reporting to continuous, real-time auditing. By utilizing "people science" dashboards and automated analytics, boards can dismantle the informational hegemony of management (Ivashkovskaya & Ivaninskiy, 2020). The integration of AI into corporate boards' control role marks a major shift in solving agency problems (Nahum, 2026; Saeed, 2025; Teliukov et al., 2024). Instead of relying on periodic reports and sampled data, boards can access continuous, real-time information about company activities and results (Hilb, 2020; Ivashkovskaya & Ivaninskiy, 2020). However, this shift mandates a "human-in-command" model to counter the risks of "erosion of human ethical responsibility" and algorithmic bias (Bensultana, 2021; Hickman & Petrin, 2021). The boards' fiduciary duty is no longer limited to financial performance; it must also encompass oversight of the AI lifecycle and algorithmic ethics to prevent system vulnerabilities and ensure digital accountability (Birkstedt et al., 2023; Caluwe et al., 2024).

Table 2 highlights the primary areas of the boards' control role, which academic literature recognizes as key domains for AI applications.

Activity	AI Application	Author (Year)
Appointment of Board Members	The application of AI to mitigate bias in candidate selection processes and enhance board independence.	Li (2024); Ivaninskiy and Ivashkovskaya (2020)
Monitoring Performance	Monitoring managerial activities and behavior; utilizing "People science" dashboards; and promoting transparency in reporting practices.	Agnese et al. (2025); Oliveira et al. (2022); Shaban and Omoush (2025)
Executive Compensation	Conducting real-time pay sensitivity analyses, benchmarking procedures, and utilizing ESG incentives.	Li (2024); Larcker et al. (2025); van Giffen and Ludwig (2023)
Internal Control Systems	Minimizing earnings manipulation, enhancing early fraud detection, and automating audit and compliance procedures.	Saeed (2025); Locke and Bird (2020); Mutitu (2024); Afroze et al. (2025)
Other	Ensuring informed oversight by the board involves managing and mitigating the risks of groupthink in decision-making processes and preventing greenwashing.	Tshabalala (2023); Ahdadou et al. (2024); Ren et al. (2025)

Table 2: Application of AI in the Boards' Control Role

2.2. AI in the Boards' Strategic Role

Integrating AI into the strategic role of corporate boards can be examined through the framework of dynamic capabilities theory, which refers to the ability to sense opportunities, seize strategic initiatives, and reconfigure resources accordingly (Åberg & Shen, 2019). AI enhances these capabilities primarily by serving as a "prediction machine," thereby improving the detection of emerging trends and facilitating scenario analyses that significantly inform strategic decision-making (Agnese et al., 2025; Åberg & Shen, 2019). It also enables boards to move beyond incremental planning toward "Blue-Sky" thinking (Oliveira et al., 2022; van Giffen & Ludwig, 2023). These tools enable the simulation of business scenarios and the testing of management assumptions, ensuring that strategic decisions are based on data-driven foresight rather than intuition.

However, incorporating AI in the board's strategic role requires a careful approach, given that boards have a supervisory mandate and their direct involvement in decision-making is naturally limited. Interfering with management functions could undermine effective corporate governance, highlighting the importance of well-defined boundaries and an understanding of AI's strategic significance. Table 3 summarizes research on the application of AI to various activities related to the boards' strategic role.

Activity	AI Application	Author (Year)
Approval of Proposed Strategic Decisions	Scenario planning and testing management assumptions; strategy approval and financial oversight; authorizing significant transactions with AI support; monitoring the implementation of business and IT strategies.	Larcker et al. (2025); van Giffen and Ludwig (2023); Petrin (2019); Li et al. (2021); Agnese et al. (2025)
Assessment of Past Strategic Decisions	Early identification of opportunities and threats (sensing) and responding to them (seizing); simulation of business scenarios; strategic shifts (pivoting); development of valid scenarios through predictive models.	Engstam et al. (2024); Agnese et al. (2025); Åberg and Shen (2019); Hilb (2020); Caluwe et al. (2024)
Advisory Role	AI as a partner for presentation analysis; insights for data-driven decision-making; augmented intelligence for enhancing cognitive capabilities; long-term planning and "blue-sky strategizing".	Agnese et al. (2025); Shekshnia and Yakubovich (2025); Hilb (2020); Ahdadou et al. (2024); Oliveira et al. (2022)
Support to Management	Aligning vision and mission with AI's technological potential; establishing objectives and guiding investments through the "AI orientation" framework.	Deloitte (2023); Bensultana (2021); Li et al. (2021)
Strategic Direction	Actively fostering innovation; developing maturity models; prioritizing investments; modeling AI governance scenarios and identifying market trends.	Engstam et al. (2024); Fornasiero et al. (2025); Larcker et al. (2025); Hilb (2020); Agnese et al. (2025)
Transformation of Decision-Making Processes	Transitioning from solving problems to evaluating solutions; autonomous decision-making via "artificial fiduciaries"; faster and unbiased decision-making in uncertain situations.	Aguilera & Castillo (2025); Yang et al. (2024); Li (2024); Ahdadou et al. (2024); Zhao & Gómez Fariñas (2023)
Reconfiguration of the Resource Base	Purposely creating and modifying the resource base; revitalizing dynamic capabilities; boards acting as the company's resource.	Helfat & Peteraf (2009); Åberg & Shen (2019); van Giffen & Ludwig (2023); Leeroy & Leeroy (2025)

Table 3: Application of AI in the Boards' Strategic Role

2.3. AI in the Boards' Networking Role

The AI in the boards' networking role emphasizes cognitive enhancement rather than simple representation, enabling a deeper understanding and better engagement with stakeholders. The integration of AI systems facilitates real-time stakeholder feedback, contributing to a more participatory model of shareholder democracy within the broader framework of corporate governance.

Empirical evidence indicates that AI transforms communication into interactive and dialogic exchanges, significantly enhancing stakeholder engagement (Shaban & Omoush, 2025).

Activity	AI Application	Author (Year)
Strengthening Shareholder Engagement	AI systems for direct feedback and strengthening shareholder democracy.	Lee & Underwood (2021); Shaban & Omoush (2025)
Access to Network Capital	Information exchange about digital innovations through board interlocks.	Choi & Pang (2025); Hudson & Morgan (2024)
Reducing Information Asymmetry	Disclosing information about AI practices to reduce capital market gaps.	Shiyyab et al. (2023); Mgbemena et al. (2025)
Building Trust and Legitimacy	Real-time financial insights; proving corporate digital responsibility (CDR) through transparency.	Shaban & Omoush (2025); Bonsón et al. (2023)
Forging External Partnerships	Identifying partnerships to secure digital resources and skill development.	Oliveira et al. (2022); Caluwe et al. (2024)
Consultation and Ethical Implementation	Informing affected groups during the implementation of AI systems.	Hickman & Petrin (2021); Deloitte (2023)
Alignment with Social Goals	Using AI metrics to track Sustainable Development Goals (SDGs).	Brusseau (2020); Spagnuolo et al. (2024)
Strategic Network Expansion	Exploiting directors' network influences to gather external intelligence.	Petrin (2019); Hudson & Morgan (2024)

Table 4: Application of AI in the Boards' Networking Role

3. DISCUSSION

In addressing the central research question of how AI supports board's roles development, this discussion argues that the integration of augmented intelligence does not merely supplement existing processes but fundamentally reconfigures the boards' traditional control, strategic, and networking roles into a more proactive and data-driven governance model.

3.1. Evolution of the Control Role in the AI Era

The integration of AI into corporate governance facilitates a paradigm shift in the boards' control role, transitioning from retrospective, periodic oversight toward continuous, real-time monitoring through interactive dashboards (Ivashkovskaya & Ivaninskiy, 2020; Hilb, 2020) (see Table 5). While this evolution addresses traditional agency problems by reducing information asymmetry, it introduces critical risks, including overreliance on automated data and diminished human critical judgment (Ivashkovskaya & Ivaninskiy, 2020; Saeed, 2025). AI is frequently portrayed as an "objective fiduciary" designed to neutralize human cognitive biases, such as groupthink, yet these systems remain susceptible to prejudices subtly embedded in algorithmic design and datasets (Ahdadou et al., 2024; Li, 2024). Furthermore, it also prompts critical reflection on whether technological substitution truly enhances oversight or merely shifts responsibilities.

The move from narrative-based trust to algorithmic transparency in auditing aims to improve financial integrity, though it may inadvertently anonymize decision-making processes and obscure accountability channels (Hilb, 2020; Larcker et al., 2025). To maintain board independence, algorithmic member selection and "people science" dashboards are utilized to replace subjective networks with data-driven appointments, despite ongoing scrutiny regarding the interpretability of such visualizations (Ivaninskiy & Ivashkovskaya, 2020; Oliveira et al., 2022; Li, 2024). While AI-enhanced monitoring offers precise benchmarking for executive compensation and sustainability disclosures, there is a distinct risk that quantitative indicators may overlook qualitative factors essential to organizational ethics (van Giffen & Ludwig, 2023; Ren et al., 2025). The scope of the control role has consequently expanded beyond financial metrics to include the behavioral oversight of IT decisions, algorithmic ethics, and cyber resilience (Larsson, 2020; Caluwe et al., 2024; Afroze et al., 2025). To uphold the "human-in-command" model, boards must ensure that moral and ethical responsibilities are not fully delegated to machine logic, thereby avoiding the dangers of algorithmic complacency (Hickman & Petrin, 2021; Mutitu, 2024; Agnese et al., 2025). Ultimately, the transition to proactive oversight via predictive modeling requires a rigorous balance to ensure technology strengthens governance without creating new systemic vulnerabilities (Saeed, 2025; Afroze et al., 2025). As these technological advances reshape the primary governance mechanism, the quality of data and the strength of the underlying algorithms become increasingly important (Ren et al., 2025).

Traditional Activity	Transformed Activity	Author (Year)
Oversight based on periodic reports and samples.	Continuous oversight and real-time analysis of all data.	Ivashkovskaya & Ivaninskiy (2020); Hilb (2020)
Reliance on information from management and consultants.	Direct insight into operations via AI dashboards	Larcker et al. (2025); Oliveira et al. (2022); Tshabalala (2023)
Retrospective control focused on past results.	Proactive oversight focused on future trends and risks	Hilb (2020); Agnese et al. (2025); Pelenk (2024)
Subjective member selection and appointments (networks of acquaintances).	Algorithmic selection based on machine learning	Ivaninskiy & Ivashkovskaya (2020); Li (2024)
Groupthink and biases.	Combating groupthink through augmented intelligence	Ahdadou et al. (2024)
Manual compliance monitoring and regular audits.	Automated compliance and audit analytics	Mutitu (2024); Saeed (2025); Chinoperekweyi et al. (2019)
Focus on financial control and earnings manipulation.	Oversight of algorithmic ethics, cyber resilience, and ecology	Larsson (2020); Afroze et al. (2025); Ren et al. (2025)
Monitoring without insight into IT risks.	Behavioral control of IT decisions and AI lifecycle oversight	Caluwe et al. (2024, 5); Birkstedt et al. (2023)

Table 5: Evolution of the Boards' Control Role

3.2. Evolution of the Strategic Role in the AI Era

The augmentation theory signifies a paradigm shift in boards' strategic role, transforming boards from reactive oversight bodies into proactive strategic entities (Åberg & Shen, 2019; Hilb, 2020) (see Table 6). By leveraging the dynamic capabilities framework, boards emerge as "ambidextrous" entities capable of simultaneously safeguarding established operations and reconfiguring resources for digital innovation (Engstam et al., 2024; Rigolini et al., 2021). Within this framework, AI serves as a cognitive "digital partner" that alleviates data-processing burdens, allowing boards to concentrate on inherently human domains such as moral reasoning, ethical considerations, and visionary strategic vision (Ahdadou et al., 2024; Agnese et al., 2025; Oliveira et al., 2022). Consequently, the traditionally "thinly informed" board evolves into a collective intelligence characterized by increased transparency and bias-resistant decision-making through predictive modeling and sophisticated simulations (Li, 2024; Shekshnia & Yakubovich, 2025; Larcker et al., 2025). These technological advancements facilitate early trend detection and "Blue-Sky" thinking, enabling the systematic exercise of cognitive agility in volatile markets (Åberg & Shen, 2020; Engstam et al., 2024; Oliveira et al., 2022). Boards are moving away from the passive approval of management proposals toward active, continuous AI-driven evaluations that help mitigate persistent information asymmetry (Agnese et al., 2025; Caluwe et al., 2024). AI also serves as an "ontological bridge," aligning organizational missions with technological capabilities to promote strategic coherence and precise goal-setting (Deloitte, 2025a; Bensultana, 2021). Furthermore, this transformation incorporates sustainability and Sustainable Development Goals (SDGs) into the core of AI strategy, shifting focus beyond purely financial profit (Spagnuolo et al., 2024). While the deployment of autonomous "artificial fiduciaries" could enhance transparency, boards must remain cautious to avoid direct interference in management functions, thereby safeguarding effective governance (Li, 2024; Agnese et al., 2025). Ultimately, the future trajectory of strategic management depends on fostering a symbiotic relationship between automation and human oversight to ensure long-term organizational resilience (Agnese et al., 2025; Shekshnia & Yakubovich, 2025).

Traditional Activity	Transformed Activity	Author (Year)
Maintaining current advantages	Proactively promoting innovation.	Bensultana (2021); Engstam et al. (2024)
Limited data analysis and intuitive planning.	Predictive modeling and enhanced data access for scenario planning.	Larcker et al. (2025); Hilb (2020)
Formal and passive approval of management proposals.	Proactive AI evaluation of management proposals.	Caluwe et al. (2024)
Purely human judgment and the cognitive effort	Augmented intelligence where AI acts as a "partner."	Ahdadou et al. (2024); Leeroy & Leeroy (2025)
Focus on generating solutions.	Concentrate on evaluating and choosing the best solutions.	Ahdadou et al. (2024)
Separate and static management of current and upcoming actions	Ambidexterity: simultaneous management of current operations and the exploration of new opportunities.	Rigolini et al. (2021)

Traditional Activity	Transformed Activity	Author (Year)
Exclusively human fiduciary oversight	Artificial fiduciaries that can make decisions on their own.	Li (2024)
Prioritize financial profit	Incorporating sustainability (SDGs) into the core of AI strategy	Spagnuolo et al. (2024)

Table 6: Evolution of the Strategic Role

3.3. Evolution of the Networking Role in the AI Era

The integration of AI redefines the boards' networking role from reactive relationship maintenance to proactive, strategic management of expanded stakeholder networks (Agnese et al., 2025) (see Table 7). This transformation allows boards to operationalize "enlightened shareholder value" by embedding community and employee interests directly into algorithmic decision-making frameworks (Agnese et al., 2025; Grove & Lockhart, 2019). AI-driven behavioral analytics permit boards to move beyond passive communication, fostering interactive exchanges that strengthen shareholder democracy through real-time feedback (Shaban & Omoush, 2025; Lee & Underwood, 2021). Board interlocks are reconceptualized as network sensors, enabling directors to identify technological opportunities and mitigate informational asymmetries (Choi & Pang, 2025; Hudson & Morgan, 2024). According to Signaling Theory, the transparent AI disclosures serve as a vital market signal that reduces information gaps between corporations and capital markets (Afroze et al., 2025; Bonsón et al., 2023). Demonstrating adherence to Corporate Digital Responsibility (CDR) bolsters social legitimacy by aligning data management practices with ethical societal standards (Bonsón et al., 2023; Agnese et al., 2025). AI also enhances the boards' capacity to form strategic alliances, facilitating access to critical digital resources and talent without substantial internal investment (Oliveira et al., 2022; Torre et al., 2023). Ethical considerations are addressed through human-centric approaches that ensure stakeholders affected by AI are actively involved in the governance process (Hickman & Petrin, 2021; Kourabas & Tsang, 2025). This paradigm shift is further supported by AI-driven metrics that facilitate the monitoring of Sustainable Development Goals (SDGs), moving beyond a purely profit-driven orientation (Aguilera & Ruiz Castillo, 2025; Grove & Lockhart, 2019). By leveraging digital innovation flows, boards can forge strategic partnerships that markedly enhance organizational resilience in uncertain environments (Oliveira et al., 2022; Caluwe et al., 2024). Ultimately, this transition positions reputation as a strategic asset, with digital legitimacy, achieved through algorithm transparency, extending relational value beyond traditional financial metrics (Bonsón et al., 2023; Hudson & Morgan, 2024).

Traditional Activity	Transformed Activity	Author (Year)
Reactive maintenance of relationships with external stakeholders.	Proactive maintenance of the network beyond the circle of shareholders.	Agnese et al. (2025)
Limited and mediated information flow from the environment.	An information bridge utilizing AI for external data integration.	Hudson & Morgan (2024); Oliveira et al. (2022)
Passive ommunication with shareholders (annual meetings).	Strengthening shareholder democracy via real-time feedback.	Lee & Underwood (2021); Agnese et al. (2025)

Traditional Activity	Transformed Activity	Author (Year)
Board interlocks for general exchange.	Channels for digital innovation flows and technological opportunities.	Choi & Pang (2025); Hudson & Morgan (2024)
Legitimation based on reputation and member diversity.	Digital legitimation through algorithm transparency and data ethics.	Bonsón et al. (2023); Stahl et al. (2022); Deloitte (2023)
Informal advice on market opportunities.	Strategic forging of partnerships for digital capacities and skills.	Oliveira et al. (2022); Caluwe et al. (2024); Petrin (2019)

Table 7: Evolution of the Boards' Networking Role

The synthesis of these transformations positions AI as an agent that enables the board to function as a "collective mind" (Agnese et al., 2025). This shift represents a fundamental reconfiguration of the board's cognitive schema, moving from individual human limitations to a hybrid system of augmented intelligence. In this new paradigm, algorithmic precision handles the cognitive load of data processing, while humans concentrate on the non-delegable realms of moral reasoning and visionary foresight (Agnese et al., 2025). This "ontological bridge" ensures that fiduciary duties are met through a combination of objectivity and ethical judgment.

3.4. Boards' Action Plan in the AI Era

Recommendations for practitioners, based on academic research, highlight the importance of incorporating the risk dimension. They do not endorse automation that removes human oversight; instead, they support the development of "augmented intelligence," ensuring that the board of directors continues to serve as the moral and strategic guiding body in corporate governance. To achieve fiduciary excellence in the AI era, corporate boards should transition from passive observers to proactive initiators by shifting from "thin informedness" to "thick informedness" (see Table 8). This transition requires structural adaptation, specifically through the establishment of specialized ad-hoc AI committees to ensure institutional accountability and align technology with overarching strategic objectives (Agnese et al., 2025; Birkstedt, 2024). Furthermore, appointing directors with proven digital literacy and cybersecurity expertise facilitates more effective oversight of algorithmic processes and the identification of organizational vulnerabilities (Afroze et al., 2025; Agnese et al., 2025). Operational integration is achieved by utilizing AI tools as digital partners during meetings to test management assumptions and generate real-time scenario simulations (Shekshnia & Yakubovich, 2025). To overcome cognitive resistance, boards should implement individualized tutorials that foster enthusiasm for technological augmentation (Shekshnia & Yakubovich, 2025). Strategic oversight must simultaneously shift from mere IT harmonization toward visionary issues, such as evolving business models and disintermediation risks (van Giffen & Ludwig, 2023). To maintain digital legitimacy, boards must institutionalize Corporate Digital Responsibility (CDR), using radical transparency to explain the logic behind algorithmic decisions to stakeholders (Bonsón et al., 2023; Agnese et al., 2025). The development of "artificial fiduciaries" using reinforcement learning further equips systems to navigate the organization's specific ethical dilemmas (Li, 2024). Additionally, linking AI-driven performance metrics with executive compensation motivates management to achieve results aligned with objective data and sustainability (Shaban & Omoush, 2025). Ultimately, these imperatives promote "augmented intelligence," ensuring that the board remains the definitive moral and strategic guiding body within corporate governance.

Action point	Key Recommendation	Rationale	Authors
Structural Adaptation	Establishment of specialized ad-hoc committees (e.g., AI Committee).	Ensuring an institutional point of accountability and coordinating technology with strategic goals.	Agnese et al. (2025); Birkstedt (2024)
	Appointment of management and board members with proven digital literacy and experience in cybersecurity.	More effective identification of organizational vulnerabilities and critical oversight of algorithmic processes.	Afroze et al. (2025); Agnese et al. (2025)
	Strengthening human capital on boards as a social driver of knowledge exchange.	Encouraging the functions of sensing and seizing technological opportunities.	Åberg & Shen (2020)
Operational Integration	Introduction of AI tools as digital partners during meetings.	Testing management assumptions and generating real-time scenario simulations.	Shekshnia & Yakubovich (2025)
	Conducting individualized tutorials for directors (1-on-1 AI trainers).	Overcoming cognitive resistance and developing enthusiasm for technological augmentation.	Shekshnia & Yakubovich (2025)
	Shifting focus to strategic issues instead of IT harmonization.	Avoiding an undue focus on operational details and fostering visionary strategizing.	van Giffen & Ludwig (2023)
Ethical Integrity and CDR	Institutionalization of Corporate Digital Responsibility and Transparency.	Building stakeholder trust by explaining the logic behind algorithmic decisions.	Bonsón et al. (2023); Agnese et al. (2025)
	Developing “artificial fiduciaries” using Reinforcement Learning from Human Feedback (RLHF) techniques.	Equipping AI systems to navigate the organization’s specific ethical dilemmas.	Li (2024)
	Linking AI metrics with executive compensation.	Motivating executive teams to achieve results aligned with objective data and sustainability.	Shaban & Omoush (2025)

Table 8: Action Plan for AI Era Boards

4. CONCLUSION

This review demonstrates that the integration of AI transforms corporate boards from a "thinly informed" reactive entity into a proactive "collective mind" across control, strategic, and networking roles. By dismantling informational hegemony and enabling real-time oversight, AI addresses core agency problems while simultaneously enhancing the boards' dynamic capabilities to "sense and seize" digital opportunities. However, a significant paradox emerges in the literature: while AI is positioned as an "objective fiduciary" to neutralize human bias, it introduces new risks of algorithmic prejudice and "groupthink 2.0" through data opacity. Furthermore, an inconsistency exists between the theoretical promise of "artificial fiduciaries" and the practical necessity of the "human-in-command" model required to maintain ethical accountability. A primary limitation of current research is the lack of empirical longitudinal studies on how AI adoption specifically alters boards and qualitative decision-making over time. Future research should prioritize empirical investigations to move beyond current theoretical frameworks, as the specific influence of AI on governance-level roles remains critically underexplored. Additionally, studies must examine how Corporate Digital Responsibility (CDR) serves as a bridge between algorithmic efficiency and societal trust. Ultimately, the success of this transition depends on a symbiotic relationship where technology handles the cognitive load while humans retain non-delegable moral and visionary foresight.

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CORPORATE COMMUNICATION AS A STRATEGIC INSTRUMENT OF REPUTATION MANAGEMENT

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ABSTRACT

Corporate reputation is increasingly understood as a dynamic and communication-dependent construct shaped through complex and ongoing stakeholder interactions, processes of legitimacy construction, and digitally mediated visibility. In contemporary organizations, reputation can no longer be treated as a residual effect of performance or a mere by-product of marketing activity, but must be approached as a strategic intangible asset requiring continuous communicative management. This paper examines corporate communication as a strategic instrument of reputation management by analyzing its role in the formation, maintenance, and protection of reputational capital. Drawing on foundational perspectives in stakeholder theory and legitimacy theory, the analysis integrates recent research on crisis communication, stakeholder engagement, opinion mining, and ESG communication. The paper argues that corporate communication has evolved from an operational support function focused on message dissemination to a strategic process embedded in organizational governance. In digital, data-driven environments, stakeholders actively participate in the co-creation of reputational meanings, reducing organizational control over linear messaging. The study highlights that while data analytics and artificial intelligence enhance the capacity to monitor stakeholder perceptions, they cannot replace the necessity for contextual understanding and interpretive judgment. Furthermore, the growing importance of sustainability and ESG frameworks positions communication as a central mechanism for negotiating authenticity and normative appropriateness. Any misalignment between communicated values and actual practices is identified as a significant reputational risk in highly transparent environments. By positioning communication as a central mechanism of strategic coordination, the paper contributes to a more comprehensive understanding of reputation management as a constitutive process of organizational reality.

Keywords*: corporate communication, corporate reputation, ESG communication, legitimacy, stakeholder engagement*

1. INTRODUCTION

Corporate reputation is widely recognized as a key intangible asset shaped by stakeholder perceptions, organizational conduct, and communication processes. Stakeholder theory and legitimacy theory emphasize that organizations are evaluated not only by their performance, but also by their ability to meet stakeholder expectations and align with broader social norms (Freeman, 1984; Suchman, 1995). Classical research defines reputation as a collective assessment of organizational credibility formed through the interaction between organizational behavior and stakeholder interpretation (Fombrun, 1996; Chun, 2005). Recent research shows that the conditions of reputation formation have changed substantially. In digitally mediated environments, reputation is shaped through continuous information flows, online interaction, and intensified public scrutiny, making it more dynamic and communication-dependent than earlier models assumed. Nuortimo et al. (2024) show that stakeholders rely on multiple information sources and online discussions that directly influence reputational outcomes, while Castilla-Polo et al. (2025) highlight the growing importance of stakeholder engagement, sustainability, and competitive differentiation. Reputation is therefore increasingly understood as an evolving construct negotiated through communication.

This transformation is reinforced by developments in public relations research. Lim and Zhang (2025) demonstrate that stakeholder engagement and perceived authenticity shape reputation through moral and pragmatic legitimacy, indicating that communication must be credible and normatively appropriate. At the same time, Molavi and Zhang (2024) show the growing relevance of opinion mining and sentiment analysis in crisis communication, highlighting the importance of digitally expressed stakeholder perceptions for understanding reputational dynamics. The link between reputation, sustainability, and communication further strengthens this shift. Casalegno et al. (2024) show that ESG communication requires careful balance, as both over- and under-communication may damage reputation. Strauß et al. (2025) position ESG communication as a strategic public relations function integrated with issue monitoring and crisis communication. Under these conditions, corporate communication can no longer be treated as an operational support activity, but must be understood as a strategic mechanism for interpreting stakeholder expectations, negotiating legitimacy, and shaping reputational outcomes. Building on these perspectives, this paper examines corporate communication as a strategic instrument of reputation management. It analyzes how communication contributes to the formation, maintenance, and protection of corporate reputation in contemporary organizations, based on a qualitative review of relevant literature in communication studies, public relations, and reputation research.

2. CORPORATE REPUTATION AS A DYNAMIC INTANGIBLE ASSET

2.1. Conceptual Foundations of Corporate Reputation

Corporate reputation is widely recognized as a strategic intangible asset that significantly influences organizational performance, stakeholder trust, and long-term sustainability. Unlike tangible resources, reputation is inherently perceptual and relational, emerging from stakeholders' cumulative evaluations of an organization's actions, communication, and broader societal role (Fombrun, 1996; Chun, 2005). It reflects not only what organizations do, but how their actions are interpreted, evaluated, and remembered across different stakeholder groups. A key characteristic of corporate reputation is its cumulative nature. Reputation is formed over time through repeated interactions between organizations and stakeholders, making it path-dependent and difficult to replicate. This cumulative dimension explains why reputation is often associated with competitive advantage, as it represents a unique configuration of trust, credibility, and symbolic value that cannot be easily imitated by competitors. At the same time, this accumulated nature makes reputation particularly vulnerable, since negative events or communication failures can rapidly undermine long-established perceptions. Reputation is also closely linked to legitimacy. Viewed in this way, organizations are evaluated not only based on performance outcomes but also on whether their actions are perceived as appropriate and aligned with broader societal norms and expectations (Suchman, 1995). Stakeholder theory further reinforces this view by emphasizing that different stakeholder groups may hold distinct and sometimes conflicting evaluative criteria (Freeman, 1984). Consequently, reputation must be understood as a multi-dimensional construct shaped through ongoing negotiation between organizations and their publics.

2.2. Contemporary Transformations of Reputation in Digital and Data-Driven Environments

Contemporary research emphasizes that corporate reputation cannot be understood as a stable construct. Instead, it is increasingly conceptualized as a dynamic and continuously negotiated outcome of communication processes. Castilla-Polo et al. (2025) highlight that recent research has shifted toward stakeholder engagement, sustainability, and contextual complexity, indicating that reputation management has become more fragmented and situationally dependent. This transformation is particularly evident in digitally mediated environments.

As Nuortimo et al. (2024) show, stakeholders rely on diverse and rapidly changing information sources, including social media and peer-generated content, which results in a continuous process of reputational construction. In such environments, organizational messages are no longer controlled in a linear manner but are interpreted, contested, and redistributed within networked communication structures. At the same time, advances in data analytics have introduced new approaches to observing and measuring reputation. Molavi and Zhang (2024) demonstrate the growing use of opinion mining and sentiment analysis in crisis communication research, highlighting the increasing importance of real-time data derived from digital communication platforms. While these approaches provide new analytical possibilities, they also introduce methodological limitations, particularly in reducing complex communicative processes to quantifiable indicators. Recent research also reinforces the growing connection between reputation, legitimacy, and value-based communication. Lim and Zhang (2025) show that stakeholder engagement and perceived authenticity shape corporate reputation through moral and pragmatic legitimacy, indicating that reputational outcomes depend on whether communication is perceived as credible and normatively appropriate. In parallel, the increasing importance of ESG communication further intensifies the strategic role of communication in reputation management. Casalegno et al. (2024) emphasize that both over-communication and under-communication of sustainability initiatives may negatively affect reputation, while Strauß et al. (2025) position ESG communication as a strategic public relations function integrated with broader organizational processes. In this context, corporate reputation should be understood as a dynamic, communication-dependent, and legitimacy-driven construct shaped within complex digital environments. This perspective provides the foundation for analyzing corporate communication as a central mechanism in the strategic management of reputation.

3. CORPORATE COMMUNICATION IN CONTEMPORARY ORGANIZATIONS

3.1. Traditional Models and Functions of Corporate Communication

Corporate communication has traditionally been understood as a managerial function responsible for transmitting organizational messages to internal and external stakeholders. Viewed in this way, communication was primarily conceptualized as a tool for information dissemination, image management, and coordination of organizational identity across different channels. Classical approaches emphasize the importance of consistency, clarity, and alignment between organizational identity, corporate image, and stakeholder perceptions (Argenti, 2007; Cornelissen, 2020). In public relations theory, this understanding is reflected in models that distinguish between one-way and two-way communication processes. Early models of public relations, particularly press agentry and public information models, were based on asymmetrical communication, where organizations acted as dominant senders and stakeholders as passive receivers of information (Grunig and Hunt, 1984). Later developments introduced the concept of two-way communication, particularly the two-way symmetrical model, which emphasizes dialogue, mutual understanding, and relationship-building between organizations and their publics. Despite these theoretical advances, in practice corporate communication has often remained largely instrumental and organization-centered. Communication functions have frequently been positioned as support activities focused on reputation protection, media relations, and message control, rather than as integral components of strategic decision-making processes. As a result, communication has often been reactive rather than proactive, particularly in situations of crisis or reputational risk. This traditional understanding, while still relevant in certain contexts, is increasingly insufficient for explaining communication processes in contemporary organizational environments. The growing complexity of stakeholder relationships, the speed of information flows, and the fragmentation of communication channels have challenged the effectiveness of linear, sender-oriented communication models.

3.2. Transformation of Corporate Communication in Digital, Data-Driven and ESG Contexts

Recent developments have fundamentally transformed the role of corporate communication. In digitally networked environments, communication is no longer a linear process of message transmission but a continuous, multi-directional interaction in which stakeholders actively participate in the creation and circulation of meaning. As shown by Nuortimo et al. (2024), stakeholders engage in online discussions, interpret organizational messages, and contribute to reputational dynamics through digital platforms, which reduces organizational control over communication processes. These changes become more pronounced with the increasing use of data analytics and artificial intelligence. Molavi and Zhang (2024) highlight the growing importance of opinion mining and sentiment analysis in understanding stakeholder perceptions, particularly in crisis communication contexts. These tools enable real-time monitoring of communication environments but also introduce new challenges related to data interpretation, representativeness, and ethical considerations. At the same time, corporate communication is increasingly shaped by expectations related to legitimacy, authenticity, and value alignment. Lim and Zhang (2025) demonstrate that stakeholder evaluations depend not only on communication visibility but also on perceived authenticity and normative appropriateness, particularly in contexts such as corporate social advocacy. This indicates a shift toward communication as a legitimacy-building process rather than a purely informational activity. The growing importance of sustainability and ESG frameworks has further reinforced the strategic role of communication. Casalegno et al. (2024) show that communication of sustainability initiatives requires a careful balance, as both over-communication and under-communication may negatively affect corporate reputation. Strauß et al. (2025) extend this perspective by conceptualizing ESG communication as a strategic public relations function integrated with issue monitoring, crisis communication, and organizational coordination. Collectively, these changes show that corporate communication has evolved from an operational function focused on message dissemination to a strategic process embedded in organizational governance and stakeholder relationship management. Communication is no longer limited to representing organizational actions, but plays an active role in shaping how these actions are interpreted, evaluated, and legitimized in public discourse. This shift provides the basis for understanding corporate communication as a central mechanism of reputation management, which is examined in the following section.

4. CORPORATE COMMUNICATION AS A STRATEGIC INSTRUMENT OF REPUTATION MANAGEMENT

4.1. From Operational Function to Strategic Integration

Corporate communication in contemporary organizations can no longer be understood as a peripheral or supportive function. Instead, it operates as a strategic mechanism through which organizations actively shape reputational outcomes by influencing how stakeholders interpret organizational actions, values, and intentions. This reflects a broader shift in strategic communication research, where communication is increasingly conceptualized as constitutive of organizational reality rather than merely representative of it (Cornelissen, 2020; Falkheimer and Heide, 2022). In this context, reputation management is not limited to protecting or repairing organizational image, but involves the continuous alignment between organizational behavior, communication practices, and stakeholder expectations. Zerfass et al. (2018) argue that communication is increasingly embedded in strategic management processes, particularly in environments characterized by uncertainty and intensified stakeholder scrutiny. As a result, communication becomes a central mechanism through which reputational risks and opportunities are generated and managed.

4.2. Stakeholder Interaction and the Co-Creation of Reputation

A key dimension of contemporary reputation management is the shift from message control to meaning negotiation. In digitally networked environments, organizations no longer have exclusive authority over the interpretation of their communication. Instead, reputational meanings emerge through interaction between organizations and stakeholders, who actively interpret, share, and contest communicative content. This development requires organizations to adopt a dialogic approach to communication, emphasizing responsiveness, engagement, and continuous interaction. Reputation is thus co-created through communicative processes rather than produced unilaterally. This aligns with broader public relations paradigms that conceptualize communication as relationship management under conditions of uncertainty and information abundance.

4.3. Data-Driven Communication and the Limits of Measurement

The increasing use of data analytics and artificial intelligence has significantly transformed how organizations monitor and manage reputation. Tools such as sentiment analysis, opinion mining, and real-time monitoring enable organizations to capture stakeholder perceptions at scale and respond more rapidly to emerging issues (Molavi and Zhang, 2024). However, these developments also introduce important limitations. Data-driven approaches tend to prioritize measurable signals over contextual meaning, potentially reducing complex communicative dynamics to simplified indicators. As a result, effective reputation management requires combining quantitative data with qualitative interpretation, ensuring that communication strategies remain sensitive to context, discourse, and stakeholder diversity. While data-driven insights expand the capacity to monitor large-scale communication environments, they do not eliminate the need for contextual interpretation. Effective reputation management still depends on human judgment capable of recognizing cultural nuance, discursive complexity, and stakeholder diversity.

4.4. Legitimacy, Authenticity, and Value-Based Communication

Recent research emphasizes that corporate reputation is increasingly shaped by perceptions of legitimacy and authenticity. Organizations are evaluated not only on their performance, but on whether their communication is perceived as credible, consistent, and aligned with societal expectations. Lim and Zhang (2025) demonstrate that corporate social advocacy influences reputation through moral and pragmatic legitimacy, highlighting the importance of value alignment in communication processes. The increasing use of automated communication tools may also affect how authenticity is perceived. If organizational responses appear mechanical or detached, efforts to build legitimacy may be weakened rather than strengthened. These changes place additional pressure on organizations to ensure coherence between communicated messages and actual practices. Any discrepancy between the two may lead to reputational risks, particularly in highly transparent communication environments where stakeholders can easily verify and challenge organizational claims.

4.5. ESG Communication and Reputational Risk Management

The growing importance of environmental, social, and governance (ESG) frameworks has further reinforced the strategic role of communication. ESG-related communication has become a key factor in shaping stakeholder trust and organizational legitimacy, positioning communication as a central component of sustainability governance (Strauß et al., 2025). At the same time, ESG communication presents specific reputational risks. Casalegno et al. (2024) show that both over-communication and under-communication of sustainability initiatives may negatively affect reputation, either through accusations of greenwashing or perceptions of insufficient commitment.

This requires organizations to carefully balance transparency, credibility, and strategic intent in their communication practices. In this sense, organizations face a communication dilemma: limited disclosure may be interpreted as insufficient commitment, while exaggerated or promotional ESG messaging may trigger accusations of greenwashing. Strategic coordination is therefore required to ensure that ESG claims are both visible and credible.

4.6. Crisis Communication and Reputational Resilience

Crisis situations represent a critical context in which the strategic role of communication becomes particularly visible. As shown by Nuortimo et al. (2024), the speed, consistency, and quality of communication responses significantly influence reputational outcomes during crises. In digital environments, where information spreads rapidly and stakeholder reactions are immediate, ineffective communication can amplify reputational damage. Consequently, crisis communication must be understood as an integral component of reputation management, requiring preparedness, continuous monitoring, and coordinated response strategies.

4.7. Corporate Communication as a Mechanism of Strategic Coordination

Collectively, these changes show that corporate communication functions as a strategic interface between organizations and their stakeholders. It mediates the processes through which reputation is constructed, maintained, and transformed. Effective reputation management therefore depends on the organization's ability to integrate communication into decision-making processes, align communication with organizational behavior, and engage stakeholders in a continuous and responsive manner. In this sense, corporate communication is not merely instrumental, but constitutive of the processes through which reputational capital is produced and sustained.

5. CONCLUSION AND IMPLICATIONS

This paper has examined corporate communication as a strategic instrument of reputation management in contemporary organizations. Building on foundational theories of stakeholders, legitimacy, and reputation, as well as recent research on digital communication, data-driven analysis, and ESG frameworks, the analysis demonstrates that corporate reputation is a dynamic, communication-dependent, and relational construct shaped within complex and rapidly evolving environments. The central argument of the paper is that corporate communication can no longer be understood as a secondary or operational function. Instead, it constitutes a strategic mechanism through which organizations interpret stakeholder expectations, negotiate legitimacy, and shape reputational outcomes. This shift is particularly evident in digitally mediated environments, where stakeholders actively participate in the construction of reputational meaning, and where communication processes unfold in real time across multiple, interconnected platforms. The findings contribute to communication and public relations research by reinforcing the conceptualization of communication as constitutive of organizational reality rather than merely representative of it. In this context, reputation emerges not as a stable outcome of past performance, but as an ongoing process of meaning negotiation between organizations and stakeholders. The integration of recent research on opinion mining, stakeholder engagement, legitimacy, and ESG communication further demonstrates that reputation management increasingly depends on the alignment between organizational behavior, communication practices, and societal expectations. This paper extends existing approaches by conceptualizing corporate communication not only as a mediating function between organizations and stakeholders, but as a structuring mechanism that shapes the conditions under which reputational evaluations emerge. In this sense, reputation is not simply managed through communication, but constituted within communicative processes that organize visibility, interpretation, and legitimacy in digitally mediated environments.

This perspective contributes to bridging the gap between traditional asset-based views of reputation and process-oriented approaches that emphasize communication, interaction, and meaning construction. From a theoretical perspective, the paper advances the understanding of reputation management by positioning corporate communication as a mechanism of strategic coordination that connects organizational decision-making, stakeholder relationships, and public evaluation processes. This perspective bridges traditional approaches to reputation as an intangible asset with contemporary views that emphasize communication processes, digital interaction, and legitimacy dynamics. From a practical perspective, the findings suggest that organizations must move beyond message-oriented communication strategies and adopt integrated, dialogic, and data-informed approaches. Effective reputation management requires continuous monitoring of communication environments, responsiveness to stakeholder feedback, and consistency between communicated values and actual practices. Particular attention should be given to ESG communication, where transparency and credibility are critical, and where misalignment may lead to significant reputational risks. At the same time, the increasing reliance on data-driven communication tools calls for critical reflection. While analytics and artificial intelligence enhance the capacity to monitor stakeholder perceptions, they cannot replace the need for contextual understanding and interpretive judgment. Organizations must therefore combine quantitative insights with qualitative analysis in order to manage reputation effectively. Future research could extend this work by applying empirical methods to examine how organizations integrate communication into strategic decision-making processes, particularly in relation to crisis situations and ESG communication practices. Additionally, further research is needed to explore the ethical implications of data-driven reputation management and the role of artificial intelligence in shaping communication strategies. Future research should also pay greater attention to internal stakeholders, particularly employees, whose public communication and perceived alignment with organizational values may play an increasingly important role in reputation management. In conclusion, corporate communication should be understood as a central element of contemporary organizational governance. Its role extends beyond information dissemination to include the continuous shaping of meaning, legitimacy, and stakeholder relationships. As such, it represents a critical strategic resource for managing reputation in environments characterized by digital interactivity, increased transparency, and evolving societal expectations.

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IF BUSINESS CONSULTING WERE A STOCK, WOULD IT BE TIME TO SHORT IT? WHY MAJOR CONSULTING FIRMS ARE UNDER GROWING PRESSURE – AND WHY THEY ARE NOT

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ABSTRACT

The business consulting industry is facing increasing criticism: large firms are seen as too expensive, slow to deliver, and often serving their own profits rather than their clients' interests. In recent years, the sector has been hit by two major shocks, particularly in the United States. On the one hand, governments have traditionally been its largest clients, yet under President Trump public consulting contracts were drastically cut, a trend that has also been reflected in consulting firms' stock prices. On the other hand, artificial intelligence is developing so rapidly that it can complete in minutes what previously required days or weeks and dozens of junior consultants. All this suggests that if business consulting were a stock, it would be time to short it. At the same time, the picture is not that simple: large firms' networks and relational capital remain enormous, and the demand for expert knowledge and external perspectives has not disappeared, only taken new forms. Time-based billing is increasingly being replaced by outcome-based contracts, which may ultimately strengthen the best consulting firms. This study explores this duality by outlining both potential negative and positive future scenarios.

Keywords: *business consulting industry; management consulting; artificial intelligence (AI); digital transformation; consulting business models; outcome-based contracting; industry disruption; organizational change; future of consulting*

1. INTRODUCTION

The business consulting industry has reached a historical turning point. The past role of major consulting firms was undeniably enormous: they shaped corporate strategies, transformed organisations, and at times even intervened in how entire industries operated. Today, however, more and more voices question how much real value creation has actually stood behind all this. "If the consulting business was a stock, I'd be shorting it right now." – says Peter Thiel (Nocera, 2025). And why is he worth listening to? Because Thiel is not speaking as an outsider, nor is he merely theorising. He is one of Silicon Valley's best known entrepreneurs and investors, a co founder of PayPal, and an early backer of technology firms such as Facebook. His best known current stake is Palantir Technologies, which built a multibillion dollar business from government and corporate data analytics, especially through defence, security, and public sector contracts. In other words, he comes from precisely the data driven, automated world that is now one of the consulting industry's biggest challengers. Moreover, if we look at financial market movements, there is some truth to what he says. In this context, it is worth comparing the performance of the S&P 500 index, that is, the performance of the 500 largest publicly listed companies in the United States, with the share prices of consulting firms. The S&P 500, which also serves as one of the most important indicators of the economy's condition and future outlook, rose by 88 per cent between November 2020 and November 2025, nearly doubling. By contrast, what happened to consulting firms' shares? Only two major consulting companies are listed on the stock market, so their performance is worth examining more closely. As the figures show, Accenture's price is, overall, at the same level even after five years, and the situation is similar for Booz Allen Hamilton.

The charts clearly indicate that there were periods of growth, but from late 2024 the share prices fell sharply. According to Joe Nocera (2025), this is not a temporary correction but a warning sign of a deeper industry crisis. In his article published in The Free Press, the author explicitly speaks of a "crash" in consulting, driven simultaneously by the pullback in government contracts and the rapid development of artificial intelligence. Consulting firms' former informational and methodological advantage is eroding quickly, while their business model is becoming harder and harder to sustain. All this creates the impression that the challenges facing the consulting industry are not cyclical this time, but structural. It is entirely possible that current trends do not signal a temporary downturn, but the end of an era. Indeed, it may even be that the hardest part is only just beginning. This study examines the topic through the analysis of publicly available information, including books, academic journal articles, other professional publications, media coverage, as well as consulting firms' responses and documents. It thoroughly reviews earlier problems and criticisms related to major consulting firms, discusses current challenges such as cost cutting and artificial intelligence, and also looks ahead by outlining both negative and positive scenarios.

2. CRITICAL VOICES ON THE FUNCTIONING OF THE CONSULTING INDUSTRY

The golden age of business consulting in the United States began in the 1980s. The wave of corporate takeovers, mergers, and aggressive restructurings created unprecedented demand for external experts (Nocera, 2025; McKenna, 2006). Corporate cultures had to be integrated, organisations downsized or redesigned, costs reduced, and efficiency improved. For management, consultants simultaneously provided an objective external perspective, expert methodologies, and a way to legitimise and implement painful decisions (Kipping & Clark, 2012). It was during this period that the global consulting firms that later became industry icons truly rose to prominence, such as McKinsey, KPMG, Deloitte, Ernst & Young (now EY), PricewaterhouseCoopers (PwC), the Boston Consulting Group (BCG), and Arthur Andersen (part of which later became Accenture). Partly as a result of consultants' involvement, by the 1990s many major US corporations had undergone significant organisational restructuring, improved operational efficiency, and reduced visible inefficiencies in their cost structures and processes. At first glance, this might have suggested that demand for consultants would decline. Yet this did not happen. On the contrary, consulting firms continued to grow. They expanded into new services, from strategic consulting to IT transformation, from operational improvement to change management (Nocera, 2025; Christensen et al., 2013). Rather than remaining temporary "firefighters" during transitional periods, large consulting firms increasingly became permanent partners in the lives of major corporations. Over time, long-term client relationships became the core of the model, and some observers felt that senior consulting partners increasingly focused less on completing individual projects and more on retaining clients for as long as twenty years. (Christensen et al., 2013). In the United States, annual consulting fees of 15 to 20 million dollars per large corporation were already not uncommon at the time (Nocera, 2025), even though the dollar was worth significantly more than today. Consultants gradually became deeply embedded in organisational operations, often to such an extent that strategic decisions were difficult to make without them. From a business perspective, this was extremely profitable. The remaining question was whether rising fees were matched by proportional value creation. This doubt was sharply articulated by Peter Thiel when he labelled the consulting industry a "scam" (Nocera, 2025). With this term, he did not suggest that every consultant was a fraud, but rather that the industry's business logic had in many cases drifted away from genuine value creation, even as large consulting firms' profits continued to grow.

In this sense, “scam” refers to the fact that consulting firms often sell extremely expensive projects packaged in impressive presentations, complex methodologies, and elite branding, while the outcomes frequently amount to trivial insights or the repackaging of problems that were already well known. Clients are not paying for concrete solutions, but for the prestige of the “best and brightest”, the illusion of structured thinking, and external validation. According to Thiel’s criticism, the system becomes particularly distorted because consultants are usually not incentivised by business outcomes, but by prolonging projects and generating new engagements. The focus therefore shifts away from solving problems quickly and effectively toward selling as many billable hours as possible. In this interpretation, the “scam” is not outright deception, but an overpriced, self sustaining model that often delivers less real value than it claims. It is important to stress that neither Thiel nor other critics argue that every consulting project is useless. Rather, they point out that the system’s incentives push firms toward longer engagements, constant presence, and ever larger volumes of work, regardless of whether these are truly necessary for clients (Christensen et al., 2013; Kipping & Clark, 2012). The vulnerability of this consulting model is particularly visible in cases where historic failures occurred despite the involvement of the largest consulting firms:
One of the most famous examples is the merger of AOL and Time Warner. The transaction was supported by consultants from McKinsey & Company and Bain & Company, yet it became one of the largest corporate failures in history. In 2002 alone, losses of nearly 98.7 billion dollars were recorded (BBC News, 2003; Nocera, 2025).

A similarly telling case was the CNN+ streaming service, which launched with McKinsey’s involvement but collapsed completely within a matter of weeks (Sherman, 2022; Nocera, 2025). Perhaps the most severe consequences emerged from Purdue Pharma’s opioid strategy, where McKinsey & Company’s consulting recommendations contributed to an aggressive sales model. The consulting firm earned around 93 million dollars in fees but later had to pay a 650 million dollar fine, while the societal damage proved incalculable (AP News, 2024; Nocera, 2025). The risks of consulting influence had already been dramatically illustrated earlier by the collapse of Enron. In the late 1990s and early 2000s, the company sought to maintain the appearance of success through complex financial structures and aggressive growth strategies, while real economic performance increasingly diverged from reported results (Healy & Palepu, 2003; Swartz, 2004). A key role in this process was played by one of the largest auditing and consulting firms of the time, Arthur Andersen, which worked closely with Enron’s management not only as auditor but also as strategic advisor (Healy & Palepu, 2003). The scandal that erupted in 2001 ultimately led not only to Enron’s bankruptcy but also to the complete collapse of Arthur Andersen, which within a few years effectively ceased to exist (Swartz, 2004). Interestingly, however, the firm’s consulting division had already been spun off earlier and continued operations as an independent company under the name Accenture. Thus, while the auditing giant disappeared from the market, the consulting business survived the scandal. The Enron case therefore sharply illustrates the systemic risks that arise when consulting incentives and corporate growth pressures become detached from economic realities. When consulting firms are criticised, McKinsey & Company most frequently stands at the centre of public debate. In both media and public discourse, a recurring narrative suggests that the firm is often hired to identify problems or generate recommendations for issues that may not even exist. When no obvious problem is present, one is effectively brought in, after which clients, often including government bodies, pay substantial fees for the proposed solutions. Another frequent criticism in the press is that consulting firms charge enormous sums for solutions that could have been developed through common sense, and essentially for free. A recent example occurred in 2022, when New York City commissioned a study on street waste management.

According to Gothamist (Chang, 2022), the contract was worth approximately four million dollars, and McKinsey's recommendation was that, as in many other major cities and even small towns worldwide, New York should no longer rely solely on placing trash bags on the street, but should instead use closed, lidded containers. As the ironic headline of an article published on 444.hu put it (Szily, 2024): "New York has realised that it's not a good idea to throw garbage onto the street, so it introduces a new invention: the trash bin." As the article sarcastically notes: "Now you can bang your head against the wall for not having been asked for advice instead of McKinsey, one of the world's major corporations. They accepted the assignment without laughing, and after countless intense meetings, brainstorming sessions and innovative idea workshops, and following two years of intensive research, they finally produced the revolutionary, space-age solution". The Guardian also highlighted McKinsey's role in the case, pointing out that the study involved substantial costs and appeared disproportionate to the actual work delivered (Mahdawi, 2024). This further reinforced the criticism that clients are paying enormous sums for solutions that could have been reached through basic reasoning, far more cheaply, or even at no cost. The problems of the system are increasingly articulated not only by outsiders but also by industry insiders themselves. Former consultants frequently report that young and inexperienced teams often worked on strategic issues for multi-billion-dollar corporations, while methodological polish, visually impressive presentations, and elite consulting branding mattered more than deep industry specific knowledge and practical experience. Angela Duckworth, in her book Grit: The Power of Passion and Perseverance, reflects on a former consulting experience that offers a strikingly candid insight into how the myth of "the best and the brightest" operated in practice: "As I put together slides for a set of bold recommendations to a multibillion-dollar medical-products conglomerate, I realized that I had no idea what I was talking about. There were older consultants on the team who might have known more, but there were also younger ones, fresh out of college, who certainly knew less. Why were they paying us so much money? Part of it was that, as outsiders, we weren't infected by internal politics. Another part was that we had a method for solving business problems based on hypotheses and data. Surely there were many good reasons why CEOs called McKinsey. But I think one of them was that we were supposed to be smarter than the people already there. Hiring McKinsey meant bringing in 'the best and the brightest,' as if being the smartest also meant being the best." (Duckworth, 2016). A similar point is made even more clearly by a well known joke (Szepi.hu, 2025):

"Once there was a shepherd herding his sheep.
One day, a brand new metallic grey Audi pulls up beside him.
The driver, a confident young man in an Armani suit, asks the shepherd:
'If I can tell you exactly how many sheep you have, will you give me one?'
The shepherd looks at the man, then at the flock, and replies:
'All right.'
The young man goes back to his Audi, connects his mobile phone to his laptop, logs onto the internet, accesses NASA's website, downloads satellite images of the area using GPS positioning, opens a database, runs a scanning program to count the sheep, prints out the results, and turns to the shepherd:
'You have exactly 87 sheep here.'
'You're right', says the shepherd. 'Go ahead and take one.'
The young man selects a nice looking animal with thick wool, not too big, and puts it into the trunk of the Audi.
The shepherd watches him for a moment, thinks, then says:
'If I can tell you what your profession is, will you give it back?'
The young man nods confidently.

'You're a consultant', says the shepherd.
'How did you know?' the man asks.
'It wasn't difficult', replies the shepherd.
'First, you came here even though nobody called you.
Second, you charged me a sheep to tell me something I already knew.
Third, as a consultant, you have absolutely no idea what I actually do.
So now please give me back my sheepdog.'"

Interestingly, the very same joke was told in late September 2025 by one of Hungary's prime ministerial candidates in the context of consulting, during a podcast conversation with the well known advisor responsible for coordinating government preparations (MPH, 2025). At the same time, the candidate made it clear that the criticism was directed specifically at the McKinsey & Company type of consulting model: expensive analyses, impressive methodologies, but often limited real added value. It is important to emphasise that even critics themselves acknowledge that consulting can in many cases have substantial value, as demonstrated by a range of successful projects. For example, the consulting firm Booz Allen Hamilton has carried out several long term engagements for the US Veterans Administration, where digital modernisation, data management, and strategic development improved service processes and customer experience, producing tangible practical benefits for the organisation (Nocera, 2025). At the same time, many companies feel that consultants can at times cause more harm than benefit, especially when consulting does not focus on solving concrete problems but instead serves to maintain processes "organically" or generate further long term projects and collaborations.

3. THE TWO MAIN CHALLENGES FACING MAJOR CONSULTING FIRMS IN THE COMING YEARS

If the above has not yet provided sufficient criticism of the consulting industry, two additional recent factors are exerting serious pressure: the reduction of government spending on consulting services and the rapid expansion of artificial intelligence (Salicetti, 2025). These trends are most visible in the United States. Since November 2024, when Trump was elected president, significant efforts have been launched to cut what are perceived as unnecessary consulting expenditures (Financial Times, 2025). The General Services Administration (GSA) has explicitly instructed major consulting firms to identify which contracts are unnecessary or overpriced and to outline potential cost saving and automation opportunities (Miller, 2025). In practice, this meant asking firms to propose ways to reduce their own revenues. They were required to present concrete solutions indicating where immediate savings could be achieved, otherwise their responses were not considered credible or "aligned" with government objectives. Particular attention was directed toward projects linked to DEI (diversity, equity, and inclusion) initiatives as well as those related to climate change. In the first round, ten major firms were asked to provide detailed breakdowns of their contracts, project costs, and savings opportunities. These included Accenture Federal Services, Booz Allen Hamilton, Deloitte Consulting, CGI Federal, General Dynamics, Guidehouse, HII Mission Technologies, IBM, Leidos, and Science Applications International Corporation (SAIC). The list illustrates that not only traditional strategy consultancies but also large scale IT and management service providers became targets of the review (Mitchell, 2025). Subsequently, the GSA expanded the review to additional firms that also held significant government contracts and or performed consulting related activities (Wakeman, 2025). These included ASGN Inc. (holding company of ECS Federal), Chemonics International, FCN Inc., ManTech International Corp., Minburn Technology Group LLC, Peraton, Salient CRGT (GovCIO), Smartronix LLC, and V3Gate LLC.

It is important to reiterate that in the GSA letters the firms were asked not merely to provide general statements, but to present concrete cost saving proposals and structural rationalisation measures, including through automation or contract restructuring. If they failed to do so, their responses were not considered "aligned" with the government's cost reduction objectives. This created a particularly interesting situation, as consulting firms were effectively required to argue against their own revenues. Yet alongside government cost cutting, an even greater challenge confronts the consulting industry: the rise of artificial intelligence. The rapid development of AI and automated analytical tools has fundamentally undermined the traditional time based consulting model. An increasing number of technologies are now capable of producing in minutes analyses that previously required weeks of work, thereby calling into question consultants' "exclusive knowledge" and billable hours. As one commentator bluntly put it: A SWOT analysis no longer takes two weeks, but two minutes. (Nocera, 2025). This transformation is not merely symbolic. Early stages of consulting work, such as large scale data collection, preliminary analysis, and the preparation of structured presentations, can already be performed faster and more cheaply by AI tools than by junior consulting teams. More importantly, knowledge itself is becoming democratised. Tools that were once part of consulting firms' "closed methodologies" are now widely accessible: AI generates reports, models scenarios, and conducts predictive analysis. As a result, the core tasks previously performed by junior consultants on an hourly basis increasingly require far fewer human resources, if any at all. This shift is already leading to concrete workforce rationalisation. Across the globe, major consulting firms are hiring fewer people, particularly for entry level positions. Industry analyses indicate that in 2025 job postings at strategy consulting firms declined significantly, while the number of entry level roles dropped sharply, partly due to AI driven automation. In other words, the base of the traditional "pyramid model" is being replaced by technology (Nocera, 2025). A concrete example is McKinsey & Company, which implemented workforce reductions exceeding 10 per cent as part of a major restructuring programme, one of the drivers being technological transformation and the integration of AI tools into operations. This move represents one of the largest reorganisations in the firm's history and clearly signals that the traditional labour intensive model is becoming increasingly unsustainable (Charles, 2025). The classic consulting "pyramid model", in which large numbers of junior consultants conduct basic research and data processing, mid level consultants synthesise analyses, and senior partners craft final recommendations, is rapidly eroding under the advance of AI. Tasks that once required weeks of human effort can now be completed in minutes by generative AI, reducing the value of human billable hours and reshaping consultants' traditional contribution. Industry actors increasingly view AI not merely as a tool, but as a catalyst fundamentally transforming the consulting value chain. In this environment, the market is shifting toward outcome based contracts. Clients are now able to perform many activities internally using AI supported resources (Salicetti, 2025). They are no longer willing to pay hourly fees for routine work; instead, they expect consultants to deliver solutions and business results that generate measurable value. This transition signals the decline of the traditional input focused model and the emergence of a new paradigm centred on performance, efficiency, and output.

4. PESSIMISTIC AND OPTIMISTIC FUTURE SCENARIOS

In light of the above, it is worth attempting to assess where the consulting industry, particularly large consulting firms, may be heading.

Based on current criticisms and trends, the pessimistic scenario can be summarised as follows:

- The consulting profession will not disappear entirely, but it is likely to become significantly less profitable, as competition and AI driven automation compress profit margins.

- Prestige will decline, and fewer young talents will choose consulting careers, since AI automation rapidly replaces entry level tasks.
- AI will increasingly take over many activities, especially those based on routine analysis and data processing, shifting consultants' roles toward higher level strategic issues and creative problem solving.
- Many former client organisations are building internal capabilities supported by AI technologies that allow them to perform an increasing share of analytical and strategic work without relying on traditional consulting firms. This internal capability building is becoming a serious source of competition for external consultants (Salicetti, 2025).
- Overall, AI is not merely a technological tool but one of the primary drivers of the structural transformation of the consulting industry.

Alongside this negative outlook, however, it is equally important to outline a positive scenario. As Mark Twain ironically observed: "For our own health, it is better to be optimists and wrong than pessimists and right."

This idea is particularly relevant in the context of artificial intelligence. While many see AI as the end of the consulting profession, the positive scenario suggests the opposite: it is not AI that will replace consultants, but consultants who will make AI usable for the business world. For most organisations, the adoption of artificial intelligence is not primarily a technological challenge, but an organisational, strategic, and cultural one. The problem is not the lack of algorithms, but how to turn them into real business value. In this respect, large consulting firms possess precisely the methodological, change management, and implementation capabilities without which many AI initiatives tend to stall. According to Deloitte (2025), the main barriers to AI adoption are not technical, but relate to data readiness, leadership support, organisational processes, and skills shortages. These are precisely the areas in which consultants have traditionally been strong: transforming processes, setting strategic direction, and managing complex organisational change. Similar conclusions are drawn in McKinsey & Company's (2025) AI research, which suggests that organisations that achieve genuine competitive advantage from artificial intelligence are those that do not treat it as an experimental project but embed it deeply into decision making, operational processes, and strategic planning. This requires structural transformation rather than the simple introduction of new software. From this perspective, the role of consultants does not diminish but evolves. They become not analysts and slide creators, but leaders of AI driven transformations who help clients to:

- understand the business value of AI,
- embed the technology strategically,
- redesign organisational operations, and
- achieve real, measurable results.

The positive scenario therefore does not deny the profession's difficulties but argues that the consulting industry may be capable of renewal. Firms that adapt rapidly may emerge not as losers but as winners of the AI revolution. In this interpretation, artificial intelligence does not signal the end of consulting, but rather its greatest transformation to date. As Niels Bohr famously remarked, "Prediction is very difficult, especially if it's about the future." This wry observation is often quoted in fast-changing, uncertain environments, and it fits the current state of the consulting industry perfectly. While no one can know with certainty where the sector is headed, industry analyses and market movements nevertheless reveal several clear directions.

The main consulting trends for 2025 include the following (Gosling, 2025):
1) AI and data-driven transformation: Consulting firms are rapidly embedding AI into both their internal operations and client engagements, automating routine tasks, supporting decision-making with artificial intelligence, and offering advanced analytics. Ethical AI frameworks and governance are becoming increasingly important to ensure responsible technology use.
2) Boutique consultancies and private equity-backed disruptors: Agile, mid-sized firms founded by former partners of larger consultancies are expanding quickly. These organisations are more flexible, cost-efficient, and run leaner operations with the help of AI, making them particularly attractive to cost-sensitive clients.
3) Sustainability and ESG compliance wave: Stricter regulation and rising social expectations are driving strong growth in ESG advisory services. The focus is shifting from simple reporting toward the strategic integration of sustainability into core business models.
4) Cybersecurity and resilience: With growing cyber threats and regulatory pressure, demand for cybersecurity consulting, risk management expertise, and employee awareness programmes such as "human firewall" training is strengthening.
5) M&A rebound and deal advisory: Although geopolitical uncertainty has slowed expected recovery, significant capital is waiting to be deployed, especially in healthcare and from private equity. As a result, demand is expected to return for due diligence, integration advisory, and value-creation projects in mergers and acquisitions.
6) Agile micro-engagements and outcome-based models: Clients increasingly favour shorter, risk-averse projects such as sprints, proofs of concept, and "try before you buy" engagements. Pricing is moving toward fixed fees and outcome-based contracts, reducing reliance on traditional billable hours.
7) Regional expansion and remote talent: Consulting firms are opening more offices outside their home countries and building remote or hybrid workforces. The Middle East — including places such as Dubai, Saudi Arabia, and Bahrain — has become a key growth region, with rising demand for consulting services and a preference for engaging local talent.
8) Broader talent pools and skills-based hiring: The focus is shifting from elite university credentials to concrete competencies. In 2025, the most sought-after skills include AI literacy, digital transformation expertise, ESG capability, and cybersecurity knowledge. Flexible working arrangements are often valued more highly than traditional career paths or salary levels.

Debates about the future of consulting interestingly reconnect with an older but increasingly relevant professional dilemma: the tension between deep specialisation and broad, integrative knowledge, in other words, whether organisations need specialists or generalists.
The power of specialisation is strongly emphasised in the research of Anders Ericsson and Robert Pool, which underpins their book Peak: The New Science of Expertise (2016). According to Ericsson and Pool, exceptional performance is built on long term deliberate practice and extremely deep domain specific knowledge. This logic can also apply to consulting, implying that:
9) Specialist consultants remain essential. Specialists bring deep, detailed, and precise expertise in specific domains that neither AI nor generalists can fully replace. Many organisations do not primarily need broad strategic thinking, but highly accurate problem solving. Specialists understand technological particularities, industry specific risks, and the underlying logic of complex systems. Such deep expertise is especially valuable in contexts where mistakes are costly or systems are highly complex, such as in legal, IT, financial, or healthcare domains. Precision reduces risk and leads to more robust solutions.

From a very different angle, David Epstein's book Range: Why Generalists Triumph in a Specialized World (2019) argues that in complex and rapidly changing environments, success often favours those who can connect knowledge across multiple fields rather than narrow specialists. Accordingly:
10) Generalist consultants also remain essential. While AI increasingly automates routine specialist tasks, it cannot interpret complex problems within their broader context. Generalists are able to integrate insights across domains, formulate new questions, and recognise patterns and interdependencies. Creativity, strategic thinking, and "connecting the dots" remain fundamentally human capabilities (Drobny-Burján, 2025). In the AI era, those who can move across disciplines and transform seemingly "useless" broad knowledge into innovation may become particular winners.

The future of consulting, therefore, is not about choosing between specialists and generalists, but about finding a new balance between specialist depth and generalist integrative thinking.

5. CONCLUSION: TO SHORT OR NOT TO SHORT?

It is worth returning to the statement quoted at the beginning of this article: "If the consulting business was a stock, I'd be shorting it right now", declares Peter Thiel. In other words, if consulting were a tradable stock, he believes it would be time to bet on its decline. The phrasing is deliberately provocative, but it captures a growing sentiment that the traditional consulting model is under serious pressure. As this study has shown, however, reality is far more complex. Pessimistic scenarios undeniably exist: the reduction of government contracts, the disappearance of billable hours due to AI automation, the weakening of the traditional pyramid model, the gradual erosion of consulting prestige, and the replacement of external advisors by internal capabilities within client organisations. These represent genuine structural challenges that consulting firms must address. At the same time, optimistic trajectories are equally present. AI does not only destroy value but also creates new opportunities for faster analysis, improved decision support, and more effective implementation. Moreover, who is better positioned to integrate these technologies into organisations than consulting firms themselves? The rise of outcome based contracts may bring consulting closer to real business impact, while a new equilibrium between specialist expertise and generalist integrative thinking may lead to a stronger and more relevant profession. Consulting therefore does not appear to be disappearing, but rather transforming. As with most technological turning points, the winners will not be those who defend the old billable hour logic at all costs, but those who can redefine what genuine value creation means for clients. It is also worth viewing the original prophecy about shorting consulting firms with some critical distance. Peter Thiel is not a neutral observer but a co founder of Palantir Technologies, a company built on data driven decision support for government and corporate clients, effectively offering an alternative to parts of the traditional consulting industry. Moreover, while Thiel would short consulting, Palantir itself ranks among the most heavily shorted stocks. According to Business Insider, one of those betting against the company is Michael Burry, who famously anticipated the 2008 financial crisis and whose story became widely known through the book and film The Big Short (Lewis, 2010). Thus, while Thiel predicts the decline of consulting, many investors are simultaneously questioning the future of the company he helped build. This paradox perhaps best captures the current state of the consulting industry: caught between crisis and renewal. Traditional models are clearly under strain, yet the demand for value creation has not disappeared. The outcome remains open. The real question is not whether consulting will exist in the future, but in what form, delivered by whom, and under what business logic. In this sense, the future of consulting is unlikely to be a simple story of collapse or triumph, but rather a profound transformation process, with both winners and losers along the way.

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THE ALGORITHMIC GAP: ENSURING SDG 16 COMPLIANCE IN PUBLIC SECTOR DECISION-MAKING

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ABSTRACT
Artificial intelligence (AI) is increasingly being deployed in public sector organizations to support critical decision-making in areas such as welfare eligibility, public health, urban planning, and criminal justice. While AI offers great potential for increased efficiency and resource optimization, it introduces substantial risks of algorithmic bias, black-box concerns, and further deepening of system inequalities. Public oversight bodies and organizational boards are now facing a new challenge: how to ensure automated systems uphold social equity, public value, and maintain institutional transparency and accountability? While risks in the private sector are guided by ESG principles, the public sector is bound by the UN Sustainable Development Goals, such as SDG 16, which targets transparency, accountability, and inclusivity. However, there is limited understanding of how to effectively translate these commitments into concrete AI governance frameworks. We address this gap by analysing public-sector AI challenges through the lens of SDG 16 compliance, highlighting the governance mechanisms needed to mitigate ethical risks without stifling innovation.
Keywords: *AI, algorithmic bias, digital governance, public sector, SDG 16*

1. INTRODUCTION

AI applications in public sector decision-making are transforming how governments deliver public services, design policies, and allocate resources. As governments face demands for resource optimization and faster service delivery while also addressing complex social challenges, they increasingly turn to algorithms in their deliberations. With the promise of greater efficiency and administrative capacity while fostering innovation, AI systems are increasingly deployed to support decision-making across a wide range of areas, including welfare administration, tax policy, migration policy, healthcare planning, and urban governance (Ibrahim, Truby & Farah, 2026; Wirtz, Weyerer & Sturm, 2020). Despite the potential AI offers, the growing use of automated decision-making systems raises questions about public values like equality and justice. Datafication of governance and the use of algorithmic tools can amplify biases present in training datasets, leading to discriminatory outcomes in most sensitive fields such as social transfers and the justice department (Chen et al., 2023; Wirtz, Weyerer & Sturm, 2020). Moreover, many AI systems operate through complex statistical models that obscure traceability of decisions, making them often referred to as opaque »black boxes«. Latter makes it difficult for individuals, oversight boards, and legislators to assign accountability (Gao et al., 2026; Yuan & Chen, 2025). Several high-profile failures of algorithmic decision-making in government, such as the Dutch childcare benefits scandal, Australia's Robodebt scheme, and Denmark's digital welfare system, have demonstrated the risks associated with automated decision-making.

These cases highlight how the transparency vacuum threatens fundamental democratic principles, especially when algorithms affect citizens' rights to access public services. Since institutional legitimacy in the public sector rests on public trust, governments must address complex questions about accountability, explainability, and equity in the application of AI technologies. Strong and legitimate institutions lay a foundation for prosperity and all aspects of development, as embedded in the UN Sustainable Development Goals (United Nations, 2015). SDG 16, particularly target 16.6 address effective, transparent, and accountable public institutions, thus closely connecting with concerns about the governance of AI use in the public sector. Over the recent years, there has been a growing body of research on ethical and responsible AI deployment for public-sector decision-making. While most studies advocate for transparency and accountability, only a few address actionable governance tools, suggesting a need for operational implementation mechanisms that move beyond abstract principles (Gill & Germann, 2021; Wirtz, Weyerer & Sturm, 2020). We define this challenge as the 'algorithmic gap' – the mismatch that arises from the disconnect between the technical efficiency of automated systems and the governance mechanisms necessary to guarantee that such systems uphold democratic legitimacy and public value. This paper aims to address this gap by examining how the principles of SDG 16.6 can inform the governance of AI systems in the public sector. Drawing on a comparative analysis of three prominent cases of automated decision-making in welfare administration, the goal is to identify governance failures and propose mechanisms to improve algorithmic oversight.

2. AI IN PUBLIC SECTOR DECISION MAKING

The integration of AI into public administration has accelerated in recent years as governments seek to improve operational efficiency and gain economic benefits by optimizing operations, processes, and procedures, reducing costs, and shortening service delivery times (Wirtz & Müller, 2019). AI systems are increasingly used across sectors to manage individuals' applications and requests (e.g. social welfare applications), predict risks (e.g. fraud detection or risk scoring), outline potential sanctions (e.g. automated welfare debt recovery), automate repetitive tasks (e.g. document classification), and communicate decisions (e.g. automated notifications). One of the most frequent uses involves the application of algorithmic systems that rely on complex computational models to analyse large datasets and generate predictions or recommendations for administrative decision-making. The problem with these systems is that humans remain outside the decision-making process; they supply input data (often containing embedded biases) and the desired result but are not aware of the complex process (which might amplify existing biases) that produces it (Bignami, 2022). A large portion of the AI governance literature focuses on the lack of transparency and accountability in algorithmic decision-making, as well as on concerns about inequality and bias in such decisions (Yuan & Chen, 2025; Chen et al., 2023). These studies, along with real-world examples, show that algorithmic tools used in public administration can disproportionately affect marginalized populations, thereby further deepening existing systemic inequalities. Furthermore, governments are often unaware of such malfunctions due to the loss of traceability of steps in such decision-making. Traditionally, administrative accountability relies on clear decision procedures, documentation, and the ability to backtrack and review decisions; however, algorithmic tools complicate these mechanisms (Bracci, 2023). This opacity calls into question the democratic legitimacy of automated decision-making in public service and confuses established bureaucratic accountability systems. The challenge of algorithmic accountability is compounded by the fact that many AI systems are developed in collaboration with private vendors. As Bignami (2022) notes, "public algorithm is an algorithm which is used in public administration whether it was internally or externally designed" (p. 315) yet when a system is designed externally it doesn't always align with public values like equality and justice and in

the promise of great technological utility, regulators might lag behind in assessing their societal impact (Ibrahim, Truby, Farah, 2026, p. 19). To assess the governance implications of AI in public administration, we refer to Moore's public value theory, which advocates that the legitimacy of public institutions depends on their ability to create value for society through trustworthy governance. Moore's framework conceptualizes public value creation through the strategic triangle, aligning operational capacity, legitimacy and support, and public value outcomes. In this sense, operational capacity is the ability of governmental institutions to deliver services and implement policies effectively. Legitimacy and support are related to public trust and the political authorization required for government action. Lastly, public value outcomes represent the broader social benefits generated by public entities (Moore, 1995). Subsequent scholars have further developed this framework by emphasizing the importance of balancing efficiency and innovation with democratic accountability and citizen trust. On this note, Bozeman argues that public value is created when government activities spur collective societal goals rather than focusing purely on economic efficiency (Bozeman, 2007). Further, Benington adds to this discussion, stating that public value materializes through interactions between governments, citizens, and societal institutions that shape collective welfare (Benington & Moore, 2010). The public value theoretical perspective is particularly relevant in the context of AI governance, as AI has the potential to boost effectiveness, innovation, and competitiveness, but it also needs to promote and respect several good governance principles, such as transparency, fairness, accountability, and inclusiveness (Kwilinski et al., 2025). Public value theory suggests that improvements in operational efficiency alone do not guarantee the creation of public value if technological innovation compromises the legitimacy dimension. Understanding this conflict is crucial for evaluating whether AI deployment positively contributes to the broader objectives of public governance (Hjaltalin & Sigurdarson, 2024).

3. GOVERNANCE MECHANISMS FOR RESPONSIBLE AI

Since the deployment of AI tools in the public sector, we have witnessed several high-profile cases of AI failure. To illustrate potential gaps between traditional institutional governance metrics and emerging risks associated with algorithmic decision-making, we first conducted an exploratory comparison of SDG 16.6 institutional indicators with documented AI governance failures in 10 countries that deployed AI algorithmic tools in public-sector decision-making. Institutional performance indicators were obtained from the OECD trust in government dataset and World Bank Worldwide Governance Indicators dataset. Data was collected for the year prior to the public exposure of each case to capture the institutional conditions under which the AI systems were deployed, and to avoid potential bias resulting from changes in public trust or institutional perception following the scandals.

Country	Governance Effectiveness	Trust in Government	Case
Netherlands	85,39	51	Childcare benefits fraud detection
Australia	84,88	46,3	Automated debt calculation and recovery system Robodebt
Denmark	89,37	54,5	Welfare fraud detection
Canada	87,01	60,3	Automated visa eligibility assessment
France	77,62	41,5	Unemployment benefits automation
United Kingdom	73,47	34,5	Child protection risk scoring
Italy	59,80	22	Social aid eligibility
Spain	72,15	31	Predictive policing deployment
Sweden	84,26	52	Social services case prioritization
New Zeland	84,46	64,3	Child support payment automation

Figure 1: institutional indicators of documented AI failures
(Source: Authors' construction based on World Bank, 2025 and OECD, 2026)

Examining data from selected countries that reported AI failures, we observe relatively high institutional capacity across cases, with an average score of 79,8 indicating strong administrative capacity, policy implementation ability, and public service quality. On the other hand, the public trust measure remains moderate, averaging around 46%, which suggests that strong institutional capacity does not necessarily translate into high public trust. Cases such as the Netherlands, Sweden, and Denmark illustrate that AI governance failures can occur even within high-performing administrative systems, indicating that strong institutions alone are insufficient to prevent risks associated with algorithmic decision-making. This comparison suggests that efficiency-driven adoption of AI does not necessarily create institutional trust, a key factor for generating public value. In response to these challenges, more attention is being paid to developing strategies and frameworks to ensure ethical AI deployment in the public sector, securing the benefits of technological innovation while addressing governance challenges associated with algorithmic decision-making. These objectives are closely related to Sustainable Development Goals, which promote sustainable economic growth, ensuring equity and inclusion, particularly Goal 16.6, sheltering the following principles: effective, accountable, and transparent institutions (United Nations, 2015). Aligning AI governance with the SDG 16.6 principles could thus help governments strengthen the public value generated by digital innovation. Indeed, many governments globally have developed national AI strategies over the past decade to guide the use of AI in the public sector, most of them motivated by three policy goals: economic competitiveness, the digital transformation of public administration, and ethical and regulatory governance (Hjaltalin & Sigurdarson, 2024). Yet the majority of these strategies rely on normative principles aligned with international frameworks such as the OECD and the EC but remain vague about how public agencies should govern AI systems in practice (Gill & Germann, 2021).

3.1 Comparative case analysis of AI failures in the public sector decision making

To identify governance gaps that lead to failure of AI systems in practice, we conducted a structured comparative case analysis of the three well-documented AI failures in the public sector: Denmark's digital welfare system, the Dutch child-care benefits system, and Australia's welfare-fraud detection system. We draw the analysis on publicly available official reports and investigative documentation, including Amnesty International investigations, parliamentary inquiries, European Commission opinions, and official government reports. Cases were selected based on government efficiency scores to identify patterns across similar institutional contexts – all three cases score highly on the Worldwide Governance Indicators, suggesting that AI failures cannot be attributed to weak administrative capacity or poor institutional quality. Moreover, all cases depict AI deployment in public welfare administration, thereby allowing a focus on the same policy domain and reducing sectoral variation. To capture both technical and organizational causes of the failure, each case was analysed through the following categories: technical design issues, data problems, organizational governance, human oversight, and regulatory context. We map each of these categories to our theoretical grounding in Moore's strategic triangle: technical design and data problems to operational capacity; organizational governance and regulatory context to legitimacy and support; and human oversight to the protection of public value outcomes. Each studied case reveals different manifestations of algorithmic governance failure, offering insight into how socio-technical shortcomings in automated decision-making affected citizens' social rights. Figure 2 summarizes the key identified shortcomings of the AI system analysed across five socio-technical dimensions for each of the three cases.

Dimension	Netherlands – Childcare Benefits Algorithm	Denmark – Welfare Fraud Detection Algorithms	Australia – Robodebt Automated Debt System
Technical design issues	Black-box fraud detection algorithm with self-learning components. Decision logic inaccessible to civil servants. Minor administrative errors triggered extreme penalties (benefit termination, full repayment).	Risk-scoring models based on statistical outlier detection and subjective risk indicators. Very small training datasets (30 cases). High false-positive rates (54%). Technical documentation heavily redacted.	Income-averaging algorithm used annual tax data to estimate fortnightly earnings. Generated artificial income values, systematically inflating welfare debts. Automated debt notices issued without verified calculations.
Data problems	Model trained on historical fraud investigations, reproducing prior enforcement biases. Nationality used as risk indicator. Disproportionate targeting of low-income households and ethnic minorities.	Extensive data integration across multiple government databases (CPR, BBR, municipal records). Historical datasets overwritten, preventing reproducibility and bias auditing. Personal data shared across agencies and private actors.	Reliance on annual PAYG tax data lacking temporal income distribution. System assumed income evenly spread across the year, attributing earnings to periods of unemployment. Produced incorrect debt calculations.
Organizational failures	No human-rights impact assessment before deployment. Strong institutional pressure to demonstrate efficiency through fraud detection. Oversight bodies reported obstruction and fragmented supervision.	Fragmented governance between Udbetaling Danmark, ATP, and private IT providers. Procurement exemptions reduced accountability. Joint Data Unit integrated datasets without sufficient oversight.	Program implemented under political pressure to increase welfare compliance and debt recovery. Internal legal concerns about legality of income averaging were not addressed. Limited policy oversight during implementation.
Human oversight	Citizens denied explanation of investigation triggers. Civil servants unable to interpret algorithmic outputs. Oversight institutions faced restricted access to system documentation.	Caseworkers formally reviewed algorithmic outputs but lacked authority, training, and bias-mitigation guidance. Strong reliance on automated risk scores limited independent judgment.	Automation replaced traditional compliance investigations. Debt notices generated automatically. Burden shifted to citizens to prove debts were incorrect by providing historical documentation.
Regulatory context	Multiple regulatory and oversight frameworks existed, but weak enforcement and transparency gaps allowed discriminatory algorithmic practices to persist for years.	Danish legislation allows extensive data sharing and predictive fraud detection. Oversight by the Data Protection Authority largely reactive and complaint-based. Compliance relies heavily on self-regulation.	System conflicted with requirements of the Social Security Act 1991 to calculate benefits based on actual income. Legal concerns raised internally years before the scheme was terminated following public controversy.

Figure 2: Comparative case analysis
(Source: Authors' Construction)

Looking at **technical design** issues and **data problems**, Australia's and the Netherlands' systems, both resembled black-box models, making it difficult for individuals to understand the generated outcomes or challenge them. In the Netherlands' case, civil servants couldn't access any details about which information was used as the basis for assigning a specific risk score to an applicant, while in Australia's' case, it resulted in burdening the recipients of automated debt notice to prove the mistakes the algorithm made without having a clear explanation of how the debt amount had been calculated in the first place. Denmark's system, although also showing some transparency concerns due to heavy redaction of technical documentation, failed mainly because of its technical design, stemming from the use of an inadequate training dataset. Furthermore, data was obtained from an unreliable, integrated database and was not properly managed. We observe similar inadequate use of data and model choice in Australia and the Netherlands as well.

The Australia Robodebt system relied heavily on annual PAYG income data reported by employers to the Australian Tax Office, which lacked temporal information about income distribution, forcing the system to assume uniform earnings across the year. This assumption meant that the system frequently treated individuals as earning income during periods when they were unemployed or receiving welfare benefits, resulting in incorrect overpayment calculations. Although PAYG information had historically been used only as a trigger for manual compliance reviews, not as the primary evidence to raise debts, in Robodebt the data became the primary basis for automated debt creation without corroborating evidence. The Netherlands system used a classification model developed by comparing historical examples of correct and incorrect applications, perpetuating historical biases embedded in past fraud investigations and creating a feedback loop that reinforced discrimination. Nationality in the input data was used as a direct risk factor, linking certain nationalities to fraudulent behaviour and resulting in discriminatory outputs that reinforce stereotypes. Intersectional discrimination particularly affected low-income families and ethnic minorities. Further deepening the problem, affected families were denied information from authorities about why they were investigated and about the workings of the system. These design choices show how technical simplification and opacity can lead to systemic errors that disproportionately affect already marginalised groups in high-stakes public-sector decision-making. A critical contributing factor to technical failures across all three cases appeared to be incomplete or biased data infrastructure, which directly translated into unfair outcomes. Regarding **organizational governance failures**, all three cases were linked to insufficient institutional checks on algorithmic decision systems both before and during deployment. In the Netherlands, the Dutch tax authorities did not assess potential human rights risks and impacts before using the childcare benefits risk classification model. Institutional pressure to prove the efficiency of their data-driven fraud detection system created a perverse incentive to seize as many funds as possible, regardless of the accuracy of the fraud accusations, to cover deployment costs. A similar situation happened in Australia, where the Robodebt program was implemented under strong political and organizational pressure to increase welfare compliance and recover debts. Internal momentum to implement the program continued even after legal and policy concerns were raised about the income-averaging method's legality. Government departments proceeded with development and implementation without adequate consultation with the Department of Social Services, which was responsible for policy oversight. The Royal Commission found that there was little interest in ensuring the scheme's legality and that its implementation was rushed, reflecting a broader failure of public administration processes. Evidence also showed that internal legal advice indicating that the method might be unlawful was not adequately acted upon during development. In addition, decision-making processes within the program lacked proper documentation and accountability trails, making it difficult to determine who was responsible for key decisions regarding the design and continuation of the scheme. The Danish system reflected fragmented governance structures and a dispersed pattern of responsibilities. The Danish government centralized welfare payments through UDK and delegated operational control to ATP, a private entity providing staff and IT infrastructure. UDK's board of directors did not exercise supervisory oversight over ATP's daily data and algorithmic practices, allowing the collection of data from residents receiving benefits and their household members without their consent. ATP partnered with NNIT (a multinational corporation) to develop fraud control models, without requirements for third-party suppliers of its IT systems to comply with data protection and human rights requirements. The Ministry of Employment did not oversee the day-to-day activities of UDK and ATP, including the Joint Data Unit's tasks. Lack of oversight and reliance on self-regulation dramatically reduced accountability. **Human oversight** was also severely limited in all three cases.

In Denmark, algorithms generated lists of high-risk cases for caseworker review, yet caseworkers' competence and authority to intervene in the fraud investigation and decision-making processes remained questionable. No anti-biased or anti-discrimination staff training was provided for caseworkers to allow adequate scrutiny of algorithmic outputs. The report highlights the risk of automation bias, inadequate capacity to intervene effectively, and human over-reliance on automated systems. In addition, there was a lack of independent oversight since UDK refused to provide the data necessary for independent bias and fairness testing. The Dutch oversight bodies have been obstructed by the tax authorities' continuing lack of transparency and unwillingness to cooperate; The Dutch Data Protection Authority has stated that it was repeatedly misled by the tax authorities during investigations. Oversight was fragmented, and a lack of binding mechanisms was evident. The Robodebt process significantly reduced human involvement in compliance investigations by automating debt identification and notification. Instead of compliance officers verifying discrepancies between reported income and tax records, the system automatically generated debts based on averaged data. This removed the traditional manual review process in which officers examined pay slips and other evidence to verify actual income patterns. The **regulatory environments** differed across the cases but shared limitations in proactive oversight of algorithmic governance. In the Netherlands, despite several regulatory frameworks and opinions from independent agencies, there were significant implementation gaps, weak enforcement mechanisms, and inadequate national legislation, allowing the discriminatory system to operate for years without effective legal constraints. Danish legislation enabled extensive data sharing and predictive fraud detection, while regulatory supervision remained largely reactive (complaint-driven). Proactive oversight was limited due to the overreliance on existing regulations on self-regulation under GDPR Article 24. In Australia, the Robodebt system conflicted with the Social Security Act 1991, but despite the 2014 legal advice, it continued to operate for several years before it was eventually abandoned in 2019, following significant public criticism and legal challenges. The Royal Commission later concluded it lacked a legal foundation and failed institutional checks and balances. The case analysis shows that systemic failure rarely arises from technical issues alone but rather from a combination of technical design, data infrastructure, organizational incentives, limited human oversight, and weak regulatory controls. Across the three cases, algorithmic systems were deployed in environments where institutional incentives prioritized efficiency or enforcement of compliance over the principles of transparency and accountability. Strengthening transparency, accountability, and fairness mechanisms is therefore essential to support effective and trustworthy AI deployment in public administration. These insights lead us to develop a conceptual model linking AI governance mechanisms to the SDG 16.6 principles of accountable, fair, and transparent institutions.

4. MITIGATING FUTURE RISKS

We propose a conceptual model that bridges the gap between the institutional targets of SDG 16.6 and practical mechanisms for public sector AI governance. The model implies that responsible AI in public administration occurs when institutional governance mechanisms translate the normative concepts of SDG 16.6 into operational safeguards addressing sociotechnical vulnerabilities in algorithmic decision systems. We position the SDG 16.6 principles as a normative foundation, further operationalized through three public-sector AI governance dimensions: transparency, accountability, and inclusivity & fairness. Derived from socio-technical case analysis, the conceptual framework addresses core governance risks in algorithmic decision-making: technical and data issues that primarily undermine transparency, while organizational and regulatory gaps erode accountability, collectively threatening fairness.

It suggests that integrating technical governance mechanisms with institutional accountability structures enables governments to responsibly deploy AI in ways aligned with SDG 16.6 principles. The comparative analysis in the previous section suggests that algorithmic failures occur when governance mechanisms are either absent, weak, or poorly implemented. We thus derive a set of potential governance mechanisms for each principle to mitigate risks associated with algorithmic decision-making in the public sector, including mandatory algorithmic impact assessments, public algorithm registers, human-in-the-loop protocols, and independent audit trails.

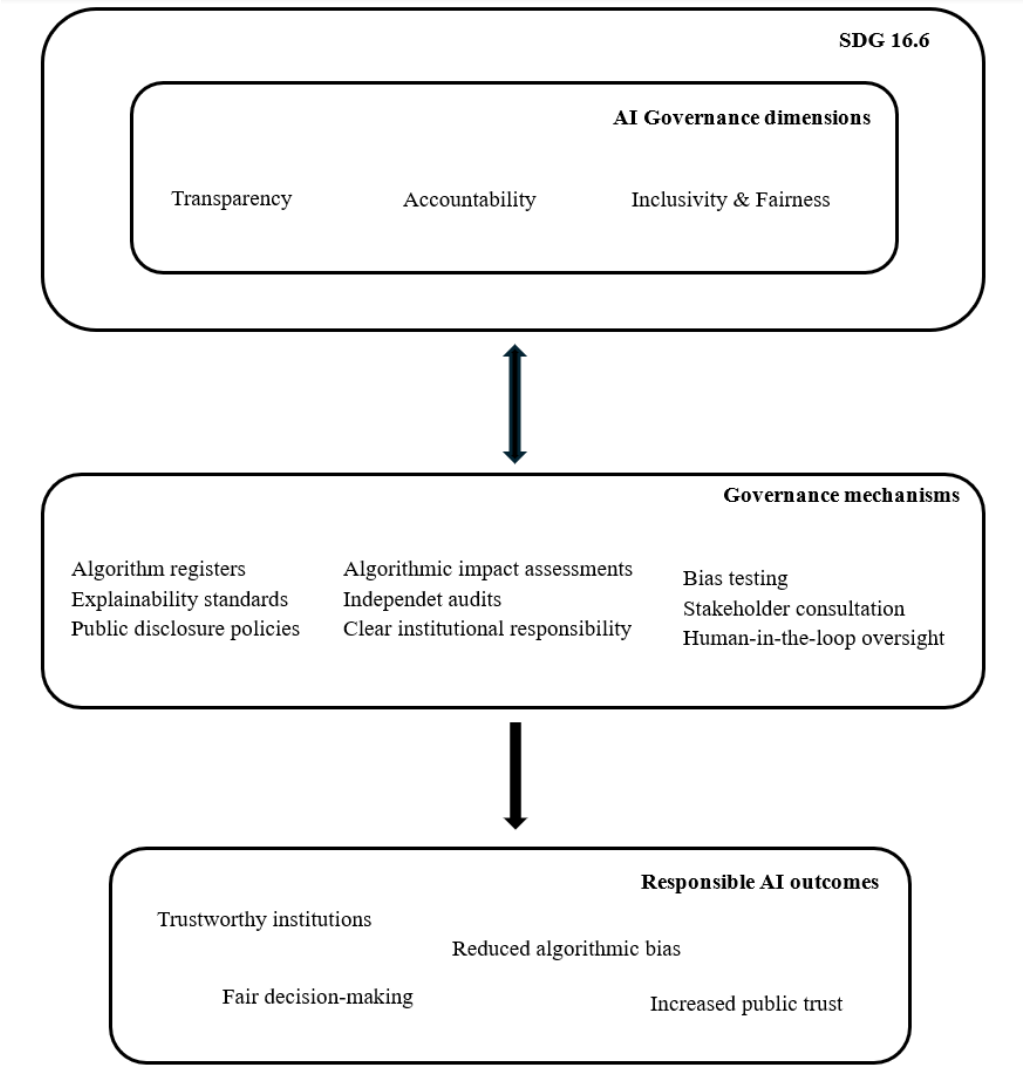

Figure 3: Conceptual framework for responsible AI
(Source: Authors' construction)

5. CONCLUSION

Algorithmic governance introduces a new dimension of institutional accountability that should be addressed to ensure the continuation of ethical technical innovation. Our analysis suggests that even robust administrative frameworks can struggle with assigning responsibility when decision-making is delegated to algorithmic systems, jeopardising the democratic legitimacy of such public service delivery. Furthermore, we find that institutional quality alone is insufficient to ensure automated systems uphold social equity, public value, and maintain institutional transparency and accountability. Consequently, new governance mechanisms specifically designed for public sector AI systems are required.

To bridge the 'algorithmic gap' and ensure SDG 16.6 compliance, public sector organizations must implement operational safeguards that directly address socio-technical vulnerabilities. Integrating technical transparency with rigorous human oversight and ethical constraints is essential to ensure that AI deployment serves public interest and maintains the trust necessary for effective governance. We acknowledge limitations of this study, mainly the limited generalizability of these findings, especially to different institutional contexts or to developing economies. Secondly, our qualitative comparison focuses specifically on welfare administration; while this allows for a detailed sectoral analysis, the governance mechanisms proposed may require adaptation when applied to other domains of public decision-making. Finally, the conceptual framework presented is derived from retrospective case analysis and necessitates further empirical testing to validate its efficacy in preventing future algorithmic risks. We would also add that given the rapid evolution of AI systems, global progress toward responsible AI will likely remain an ongoing challenge.

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LEADERSHIP AS A CATALYST FOR DIGITAL TRANSFORMATION IN INTERNAL AUDITING

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ABSTRACT

The digital transformation of internal auditing represents a strategic shift that extends beyond the mere implementation of advanced technologies. This paper explores the critical role that leadership styles play in successfully navigating this transition, proceeding from the hypothesis that technological solutions alone are insufficient to achieve digital maturity without an appropriate governance framework. The central part of the paper analyzes transformational and transactional leadership styles and their specific contributions to the internal auditing process. The aim of this research is to critically evaluate the pivotal role of leadership styles in facilitating the successful integration of digital technologies within the internal auditing function. The qualitative content analysis conducted in this research explores how specific leadership behaviors act as a catalyst for digital transformation, examining their interplay with the organizational readiness of internal auditors to adopt CAATTs, Artificial Intelligence, or other emerging auditing technologies. Primary insights derived from this research show that both leadership styles positively impact organizational change. Proper implementation of these styles enhances employee attitudes and behaviors, leading to improved organizational competitiveness. While technological infrastructure is essential, the success of digital transformation is primarily determined by a leader's ability to foster a culture of innovation, mitigate employee resistance, and provide the agile strategic direction needed to navigate a rapidly evolving risk environment. In conclusion, the paper suggests that aligning leadership styles through a hybrid model enables internal auditing leaders to more effectively manage the digital pivot. Such an approach not only ensures technical efficiency but also redefines internal auditing from a reactive control function into a proactive strategic advisor. Future research should focus on the evolving nature of leadership, specifically exploring how reverse mentoring functions as a dynamic that alters traditional hierarchical structures during digital transformation.

Keywords: *digital transformation, internal auditing, leadership styles, transactional leadership, transformational leadership*

1. INTRODUCTION

The use of advanced technologies is no longer a strategic choice but a fundamental condition for survival in the global economic ecosystem. Within this framework, internal auditing is undergoing the most significant evolution since its inception. Internal auditing serves as a vital governance mechanism designed to mitigate organizational risks, optimize operational performance, and ensure rigorous regulatory compliance. By evaluating the integrity of financial systems and identifying systemic inefficiencies, this function provides management with strategic insights that safeguard the organization’s reputation and long-term financial stability. Traditional internal auditing, focused solely on verifying historical transactions and ex-post compliance, is becoming obsolete. In a world dominated by algorithms, decentralized finance, and cyber threats, internal auditing ceases to be a passive analyzer of the past and becomes a proactive partner that anticipates risks before they occur.

Digital transformation (DT) represents the strategic integration of advanced technologies across all organizational strata, fundamentally redefining operational models and value delivery (Atieh et al., 2025). DT is defined as the strategic integration of digital technologies across all organizational functions to enhance processes, optimize operational efficiency, and develop new business avenues (Sacavém et al., 2025). Key pillars of DT are technology, digital strategy, organizational resources and structure, and culture (Dióssy et al., 2025). By synthesizing automation, data analytics, and digital infrastructure into a cohesive framework, it transcends simple technological adoption to create a unified ecosystem of innovation. DT of internal auditing involves a fundamental reevaluation of how internal auditing value is created and delivered within an organization. This evolution necessitates a transition from traditional, periodic sampling toward continuous auditing and real-time risk monitoring. Software, regardless of its price or processing power, is devoid of value if it is not accompanied by a profound change in organizational mindset and leadership styles. Technology is only an accelerator; the direction of movement is still determined by the human factor. The implementation of the most dominant emerging auditing technologies, such as advanced Computer-Assisted Audit Tools and Techniques (CAATTs), Machine Learning (ML), Robotic Process Automation (RPA), Cloud Computing, Blockchain, Big Data Analytics or Artificial Intelligence (AI), cannot automatically solve all operational challenges (Bani et al., 2025). Instead, the key prerequisite is a strong governance framework that serves as a strategic bridge between technological potential and human capital. A key shift in DT occurred with the transition from the traditional, retrospective auditing to continuous auditing, which enables real-time risk identification. While earlier versions of CAATTs were primarily employed for data extraction and basic statistical tests, modern CAATTs are integrated directly into an organization's ERP (Enterprise Resource Planning) systems. They allow auditors to test entire data populations instead of relying on statistical samples, drastically reducing the risk of misjudgment and enhancing the precision of findings (Ahmad and Zakaria, 2023). Furthermore, the implementation of AI enables a level of analysis that was previously unattainable. AI tools today are leveraged for: predictive analytics, which recognizes patterns that indicate potential future risks or fraud before they occur; unstructured data analysis, utilizing Natural Language Processing (NLP) to audit text documents that were once inaccessible to automation; and anomaly detection, employing algorithms that alert internal auditors to any deviation, thereby shifting the audit focus from routine checks to solving complex incidents (Dawood and Almagtome, 2025). Organizational management often believes that automation alone will eliminate human error or bias. However, without adequate oversight, emerging auditing technologies may only accelerate the spread of erroneous algorithmic conclusions. Therefore, the implementation of digital tools is inseparable from a strong governance framework. A governance framework functions to ensure that technology serves as a strategic enabler of organizational goals, preventing technological adoption from becoming an end in itself. Lacking frameworks for digital oversight and data interpretation, technological adoption remains a superficial effort without achieving a sustainable return on investment. DT in internal auditing is not a static event with a defined end point, but an ongoing strategic orientation towards agile business (Delioğlu and Uysal, 2022). The success of the DT depends as much on leadership and organizational culture as it does on technical infrastructure. CAATTs and AI provide infrastructural power, but only in synergy with clearly defined processes and ethical management standards can they enable internal auditing to fulfill its new role. Omol (2024) maintains that DT is reshaping the governance framework, requiring new protocols to ensure the integrity and security of automated audit trails. By leveraging these tools, internal auditing can pivot toward high-value areas such as ESG (Environmental, Social, and Governance) reporting and cybersecurity resilience.

Ultimately, DT is an ongoing process that aligns technological capabilities with a renewed vision of organizational transparency and accountability. This study is guided by the following research question: To what extent do leadership styles - specifically transactional and transformational - serve as catalysts for the successful digital transformation and its subsequent strategic value within the internal auditing domain? Structurally, this paper proceeds from the methodological framework in Section 2 to Section 3, which provides a comprehensive content analysis of leadership paradigms in internal auditing. Section 4 then examines leadership as the cornerstone of digital transformation, while Section 5 presents the concluding remarks.

2. METHODOLOGY

Through a literature review, this research harmonizes insights from across the academic landscape to provide a comprehensive state-of-the-art overview. By bridging gaps between individual studies, the review creates a critical roadmap for future research directions. Information was gathered from major databases - Scopus, ScienceDirect, IEEE Xplore, and Google Scholar - utilizing Boolean search strings (AND, OR) and wildcards (*) to ensure high-quality results. Key search terms included: digital transformation, internal auditing, leadership styles, transactional leadership, and transformational leadership. The selection procedure was organized into several key stages: initially, 346 relevant documents were identified; following the removal of 109 duplicates, 237 documents underwent title and abstract screening. Subsequently, 71 full texts were assessed for eligibility, resulting in a final sample of 30 documents for inclusion in the content analysis. The selected research sources provide a robust foundation for content analysis, while the principles of synthesis and evaluation are systematically applied to derive theoretical conclusions. By prioritizing transparency and replicability, this methodology ensures a balanced application of structural rigor and the adaptive flexibility necessitated by contemporary academic standards. Studies were included based on the following criteria: a primary focus on at least one targeted leadership style; the provision of empirical data or theoretical analysis within contemporary organizational settings; and publication in peer-reviewed journals. Conversely, articles were excluded if they lacked a clear conceptual link to transformational or transactional leadership, or failed to address digital, organizational, or internal auditing contexts.

3. LEADERSHIP AND LEADERSHIP SYTLES AS A CATALYST FOR DIGITAL TRANSFORMATION IN INTERNAL AUDITING

Northouse (2016) defines leadership as a process of individual influence aimed at achieving common goals, involving a dynamic relationship between the leaders who initiate the process and the followers toward whom it is directed. Leadership is inherently a relational construct, predicated on the dynamic interplay between leaders and followers. It is a critical determinant of organizational efficacy and strategic success (Zainol et al., 2021). Sacavém et al. (2025) identify leadership as a pivotal determinant in the digital transition, as the efficacy of DT is contingent upon the strategic guidance of teams through the inherent complexities. The role of leadership as a catalyst for change necessitates a proactive approach to ensure the successful integration of new strategic objectives. It plays a pivotal role in bridging the gap between complex technological innovations and the daily operational practices of internal auditors. By modeling the adoption of digital tools themselves, leaders serve as exemplary figures who cultivate trust in new methodologies. Ultimately, a leader’s ability to synchronize technological capabilities with organizational culture determines whether DT succeeds or remains merely a collection of underutilized tools. Leadership style is the practical application of a leader’s internal philosophy, reflecting the unique preferences and principles that drive their interpersonal influence (Bwayla, 2023).

Aziz (2020) defines leadership style as a critical factor influencing employee performance, as it shapes how expectations are managed, how failures are addressed, and how adopted technologies are maintained within an organization. Management literature identifies transactional and transformational leadership as pivotal frameworks, each emphasizing distinct dimensions necessary to navigate and drive organizational transformation (Schiuma et al., 2024). This research will analyze transformational and transactional leadership styles as they represent a complementary duality: the former drives the innovation and cultural shift necessary for DT, while the latter ensures the structural discipline and regulatory compliance essential for the internal auditing (Theenadhayalan, 2025). Evidence suggests that both leadership styles positively correlate with effective organizational change, providing the necessary balance between vision and structure (Long and Mao, 2008). Transformational and transactional style differ in their methods, but their contributions are complementary and essential for a high-functioning internal auditing. The difference between transformational and transactional leadership is reflected in the very nature of managerial activities. While transformational leaders focus on building shared values and developing a long-term vision, transactional leaders prioritize operational efficiency. They precisely define roles, adhere to established frameworks and financial controls, and employ a system of transactions (rewards and punishments) to ensure task completion (Bwayla, 2023; Sikavica, Bahtijarević-Šiber, and Pološki Vokić, 2008).

3.1. Transformational leadership

Burns (1978) conceptualized transformational leadership as a process in which leaders and followers mutually elevate one another to higher levels of morale and motivation. In contrast to the transactional model, which relies on pragmatic exchange ("give-and-take"), the transformational approach leverages the leader's character and vision to redefine employee values and aspirations. According to Northouse (2016), transformational leadership is deeply rooted in morals and values, which are also foundational tenets of internal auditing. While transactional leaders operate within established organizational frameworks, transformational leaders seek to fundamentally reshape culture, acting as moral exemplars dedicated to the collective good. Transformational leaders in internal auditing act as agents of change (Khikmah, Rohman, and Januarti, 2023). Their primary task is not merely to supervise the execution of tasks, but to inspire and motivate the team to abandon traditional work methods. Bass (1985) expanded upon Burns' framework by elucidating the psychological mechanisms underlying leadership and developing formal metrics for their assessment. A pivotal departure from Burns' theory is Bass's assertion that leaders can employ transformational and transactional styles simultaneously. Bass posits that transformational leaders motivate followers through four primary components: idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration. By leveraging these mechanisms, transformational leaders cultivate deep trust and loyalty, inspiring employees to exceed conventional expectations and challenge the status quo in pursuit of collective success (Akbari et al., 2017). Within the framework of DT, idealized influence (charisma) manifests when leaders proactively adopt new digital tools, thereby modeling technological literacy as a fundamental competency for the modern internal auditor (Bani et al., 2025). Rather than deep technical expertise, effective leadership in DT hinges on understanding the strategic impact of technology on organizational processes and operations (Živković, 2022). Transformational leadership redefines the internal auditor's role from a traditional compliance focus to that of a strategic advisor, thereby ensuring internal auditing activities are synchronized with organizational objectives (Bani et al., 2025; Khikmah, 2023; Suphattanakul, 2017). In this context, inspirational motivation is utilized to demonstrate how emerging audit technologies can reclaim operational capacity from repetitive tasks for high-value analysis.

Furthermore, through intellectual stimulation, leaders empower internal auditors to interrogate legacy processes and propose autonomous solutions using analytical frameworks such as CAATTs, Big Data, and AI. This fosters an environment where innovation is prioritized over legacy internal auditing methodologies. Finally, individualized consideration serves as a catalyst for cultural change by acknowledging the varying degrees of digital literacy within the internal audit team. Laidoune, Zid, and Sahraoui (2022) state that effective leadership actively mitigates the psychological resistance to change - a barrier historically ingrained in conservative professions such as internal auditing. The primary advantages of transformational leadership include fostering high levels of follower motivation and commitment, driving outstanding organizational results through innovation, and creating inclusive, supportive environments that effectively facilitate systemic change (Bwayla, 2023). Notable disadvantages of transformational leadership include follower over-reliance on the leader's guidance, potential burnout for both parties due to excessive expectations, and resistance from individuals who find it difficult to adapt to a constant vision of change (Bwayla, 2023; Raza, 2025). Transformational leadership emphasizes long-term organizational evolution and cultural alignment, focusing on the underlying purpose and strategic value of the internal auditing process.

3.2. Transactional leadership

Transactional leadership defines the professional relationship as a transactional exchange, where employees trade compliance for the avoidance of disciplinary action (Ekiyor and Dapper, 2019). The leader's dominance is manifested through centralized control over information and outcomes, often subordinating individual contributions to the authority of the superior. Consequently, the system is structured so that failures are directly sanctioned, while collective successes are credited to the leadership. Despite the prevailing emphasis on transformational models, transactional leadership continues to be indispensable for maintaining the rigor and procedural integrity inherent to internal auditing. Internal auditing, by its very nature, requires a high level of structure, accuracy, and compliance with regulatory frameworks. In contrast to the visionary focus of transformational models, transactional leadership emphasizes the operational mechanics of the internal auditing, ensuring the precision and adherence to standards requisite for reliable reporting. This contribution is realized through procedural rigor, mandating that internal audit engagements strictly follow professional frameworks, such as The Institute of Internal Auditors' (IIA) International Professional Practices Framework (IPPF), to prevent any compromise in quality (Netshifhefhe et al., 2024). In the digitalized landscape of internal auditing, the transactional leader focuses on two primary factors - management by exception (active or passive) and contingent reward. Through the application of management by exception, this style safeguards data integrity, ensuring that any deviations from digital protocols are identified and rectified instantaneously. Transactional leaders also enhance goal clarity through the use of contingent rewards (Aga, 2016). In the context of internal auditing, this involves establishing measurable KPIs for technical milestones, such as the timely deployment of CAATTs modules. Ultimately, this approach provides the systemic reliability and structural discipline necessary to maintain a secure, transparent, and legally defensible audit trail. In the era of DT, the transactional leader ensures that technology operates within the strictly defined boundaries of the governance framework. Without this discipline, DT could lead to a loss of the audit trail or a violation of ethical standards. The primary advantages of transactional leadership include the provision of clear expectations and performance standards, increased efficiency and productivity through adherence to established procedures, a rigorous focus on goal achievement, and the ability to facilitate quick decision-making based on existing protocols (Bwayla, 2023). In the context of internal auditing, these attributes ensure that audit engagements are executed with high methodological consistency, allowing departments to meet strict annual audit plans and regulatory deadlines with predictable accuracy.

The core disadvantages of transactional leadership include a tendency to stifle creativity and innovation by focusing strictly on predetermined targets, a potential lack of sustained long-term motivation due to a reliance on short-term rewards, and limited adaptability to change caused by a rigid adherence to established rules (Brown, Marinan, and Partridge, 2020; Bwayla, 2023). For internal auditing, such limitations can be detrimental, as they may blind auditors to digital risks and hinder the adoption of emerging auditing techniques.

4. LEADERSHIP AS THE CORNERSTONE OF DIGITAL TRANSFORMATION

The effective navigation of digital transformation within the internal auditing necessitates a dual approach to leadership (Dal Mas and Barac, 2018). While transformational leadership provides the strategic incentive for change, transactional leadership ensures the operational stability and technical precision required by professional standards. Table 1 maps contributions of both leadership styles to the key dimensions of digital transformation in internal auditing.

Dimension	Transformational Contribution	Transactional Contribution
Primary Goal	Innovation and Strategic Value	Compliance and Accuracy
Technology Approach	Inspiring a Digital Mindset	Enforcing Digital Protocols
Risk Management	Identifying Emerging Risks	Ensuring Control Consistency
Result	Growth and Adaptability	Reliability and Integrity

Table 1: Contributions of Leadership Styles to Digital Transformation in Internal Auditing (Source: Author)

The most successful digital integrations occur when leadership styles are strategically balanced, creating a dynamic equilibrium that harmonizes innovative ambition with the systemic reliability essential for the digital transformation process (Dixit and Agarwal, 2025). In the initial adoption stage, a transformational style is dominant, as it is essential for cultivating organizational support and establishing the strategic incentive for digital evolution (Oliveira and Favaretto, 2025). As the process moves into implementation, the focus shifts to a transactional approach to codify operational protocols and enforce performance indicators for technical alignment. This transactional style remains critical during the verification phase, where the priority is validating systemic integrity and ensuring the accuracy and security of algorithmic outputs. Finally, the stage of continuous evaluation necessitates a return to transformational leadership to promote a digital mindset that leverages data-driven insights for long-term strategic value (Theenadhayalan, 2025). The synergy between these leadership styles acts as a critical risk-mitigation mechanism during the digital transformation. While transformational leadership prevents the risk of stagnation by fostering a culture of adaptability and strategic foresight (Oliveira and Favaretto, 2025), transactional leadership mitigates the risk of operational failure by maintaining the technical rigor and procedural transparency essential to the audit profession (Dong, 2023). This leadership approach increasingly leverages data-driven decision-making, utilizing advanced technological tools as critical catalysts for organizational value creation (Pattnaik et al., 2022). Ultimately, transformational leadership ensures that the internal audit function wants to change, while transactional leadership ensures that the change is executed accurately. Without transformational leadership technology remains an unused expense; and without transactional leadership technology becomes a risk to the integrity of the auditing trail. The contemporary volatile, uncertain, complex and ambiguous (VUCA) environment necessitates flexible organizational structures that can be seamlessly dissolved and reconfigured as circumstances dictate (Tagscherer and Carbon, 2023). Achieving such agility requires leadership capable of embracing change while maintaining operational stability until a strategic pivot becomes necessary.

Consequently, a hybrid approach is recommended, one that effectively integrates the dimensions of both transformational and transactional styles. Dartey-Baah (2015) suggests a need for a resilient leadership approach designed to meet the rigors of an unstable and unpredictable global landscape. Resilient leadership is the ability to sustain current performance while simultaneously driving innovation and adaptation to turbulent change. By synthesizing transformational and transactional leadership elements, organizations can develop a resilient leadership model capable of maintaining stability while driving innovation. To critically evaluate the linkage between leadership and digital transformation, Table 2 maps leadership styles and dimensions against specific emerging audit technologies and their impact on the strategic value of internal auditing. This alignment demonstrates that while transformational leadership drives the shift toward predictive and visionary internal auditing, transactional leadership provides the necessary rigor to ensure that these automated processes remain compliant, secure, and operationally efficient.

Leadership Style / Dimension	**Emerging Auditing Technologies**	**Process Outcome & Strategic Value**
Transformational: Idealized Influence	Cloud-Based Audit Management Systems	Cultivation of a collaborative digital environment where real-time document sharing and remote internal auditing become the organizational standard
Transformational: Inspirational Motivation	Big Data	Expansion of internal audit coverage from traditional sampling to 100% population testing, significantly increasing the level of assurance provided
Transformational: Intellectual Stimulation	Artificial Intelligence & Machine Learning	Transition from reactive analysis to predictive auditing, enabling the identification of emerging risks before they materialize
Transformational: Individualized Consideration	Advanced Visualization Tools	Improvement in stakeholder communication by translating complex data findings into intuitive, interactive dashboards for executive management
Transactional: Contingent Reward	CAATTs	Standardization of substantive testing procedures, ensuring high-speed data extraction and consistent verification of financial records
Transactional: Management by Exception	Robotic Process Automation	Deployment of "digital bots" for continuous control monitoring (CCM), allowing for the instantaneous detection of policy overrides or system breaches
Transactional: Passive Management (as a risk to be avoided)	Blockchain & Smart Contracts	Prevention of technical debt and security gaps by ensuring that distributed ledger audits are governed by strict access protocols and immutable audit trails

Table 2: Correlation Matrix of Leadership Dimensions, Emerging Audit Technologies, and Strategic Internal Auditing Value
(Source: Author)

Beyond technical execution, internal auditors must possess the analytical proficiency to interpret automated results while upholding the fundamental integrity of the internal auditing process. The capacity of digital audits to fortify accountability structures is strictly conditional on the adoption of a sustainable execution strategy (Bani et al., 2025).

Effective leadership extends beyond organizational limits to influence broader societal outcomes by synthesizing technical expertise with strategic foresight. This approach fosters an environment of innovation and adaptability, essential for navigating the complexities of technological progression.

5. CONCLUSION

Internal auditors capable of processing extensive datasets efficiently contribute significantly to organizational competitiveness. A leadership style that fosters agility and technological receptivity enables the internal auditing function to respond more effectively to regulatory shifts and emerging cybersecurity threats. This underscores that organizational readiness is a dynamic asset, managed through an optimal synthesis of motivational engagement (the transformational approach) and structured oversight (the transactional approach). The successful integration of technology and leadership facilitates the evolution of internal auditing from a reactive control function to a proactive strategic advisor. By establishing a robust governance framework, leaders allow audit teams to pivot from labor-intensive data collection and validation toward the interpretation of strategic trends. Within this framework, the internal auditor emerges as an advisor capable of informing management not only of historical failures but also of systemic vulnerabilities that may jeopardize future stability. This paradigm shift directly enhances organizational agility and resilience within volatile market environments. While transactional elements ensure that digital insights are based on accurate, verifiable data and regulatory compliance, transformational elements enable the internal auditor to communicate those insights in a way that drives organizational change. The implementation of hybrid leadership acts as a catalyst for strategic progress, as the use of CAATTs, AI, and predictive analytics enables internal auditing to identify risks in real time. Future research should explore one of the most effective ways modern internal audit leaders build organizational readiness - reverse mentoring.

This concept directly challenges traditional hierarchical structures, where knowledge historically flowed exclusively from senior to junior auditors. Younger internal auditors possess an intuitive understanding of algorithms and data analytics that more experienced colleagues may lack. By fostering reverse mentoring, leaders facilitate accelerated knowledge transfer and mitigate generational friction, while simultaneously empowering junior internal auditors to directly influence the organization's strategic direction. Reverse mentoring acts as a key factor in horizontal connectivity. By breaking down traditional hierarchies, the internal auditing becomes more fluid. Information regarding emerging technological risks (e.g., the risks of generative AI) flows more rapidly from junior operatives to decision-makers. Such a transfer of digital knowledge ensures that internal auditing stays one step ahead of technological threats, thus justifying its role as a cornerstone of organizational governance. In conclusion, the digital transformation of internal auditing is a process fundamentally predicated on human capital. This research confirms that technological solutions remain insufficient in the absence of a robust management framework and adaptive leadership. Modern internal auditing demands more than technical proficiency; it requires leaders who recognize that digital evolution is a continuous progression where organizational resistance is mitigated through empathetic engagement and stakeholder alignment, rather than through the imposition of top-down directives. Without this focus on precision and established protocols, organizations risk compromising data integrity and the security of automated audit trails. Ultimately, the integration of both leadership styles fosters a critical balance between visionary growth and the technical reliability of the audit system.

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THE IMPACT OF STRATEGIC HUMAN RESOURCE MANAGEMENT ON ORGANIZATIONAL INNOVATIVENESS

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ABSTRACT

In the contemporary business environment characterized by globalization, digital transformation, and increasing competition, organizational innovativeness has become a key factor for long-term sustainability and competitive advantage. In such conditions, the importance of human resource management strategy is increasingly emphasized, as it enables organizations to develop employees' knowledge, competencies, and creative potential.The aim of this paper is to present and analyze the impact of human resource strategy on organizational innovativeness through a theoretical analysis of relevant scientific literature and a review of empirical research in the fields of human resource management and innovation management. The paper is based on the assumption that strategically aligned human resource management practices such as employee competency development, participative decision-making, reward systems, and an organizational culture that encourages creativity have a significant impact on employees' innovative behavior and the overall innovativeness of organizations.The results of the literature analysis and available empirical studies indicate a strong relationship between strategic human resource management practices and the innovation performance of organizations. In conclusion, the paper emphasizes the importance of integrating human resource strategy with the overall business strategy of the organization in order to foster the development of employees' innovative potential and achieve sustainable competitive advantage.

Keywords: *human resource strategy, organizational innovativeness, human resource management, organizational culture, innovation*

1.INTRODUCTION

Market globalization, rapid technological development, and digital transformation have led to significant changes in the way organizations operate, with innovativeness becoming one of the most important factors of long-term organizational success. Organizations that are capable of continuously developing new products, services, and processes achieve greater competitive advantage in the market (Tidd & Bessant, 2021). In such an environment, increasing attention is being devoted to human resource management as a key strategic resource of the organization. Human resources represent a source of knowledge, creativity, and innovation that enables organizations to adapt to environmental changes and develop new business models. According to the resource-based view of the firm, human resources can represent a unique and difficult-to-imitate source of competitive advantage for organizations (Barney, 1991).

Human resource management strategy refers to the long-term planning and implementation of policies and practices that enable an organization to achieve its business objectives through effective management of employees. This strategy encompasses various activities such as recruitment, competency development, performance management, employee motivation, and the development of organizational culture (Armstrong, 2020). Numerous studies confirm that human resource management strategy has a significant impact on organizational innovativeness. Organizations that encourage knowledge development, teamwork, and open communication among employees have greater opportunities to develop innovations and achieve competitive advantage (Chen & Huang, 2009). In the contemporary business environment, organizations operate under conditions of constant change resulting from rapid technological development, digitalization of business processes, globalization of markets, and increased competition. Such changes require organizations to continuously adapt and develop new products, services, and business processes in order to maintain competitiveness and long-term sustainability. In this context, organizational innovativeness becomes one of the key determinants of successful business operations and organizational development (Crossan & Apaydin, 2010). Organizational innovativeness represents the ability of an organization to generate, develop, and implement new ideas that can contribute to creating new value for the organization and its stakeholders. It can manifest through the development of new products and services, improvement of business processes, adoption of new technologies, or the development of new organizational practices (West & Farr, 1990). Organizations that are capable of developing innovations have greater opportunities to adapt to environmental changes and achieve sustainable competitive advantage. In recent decades, increasing attention in the scientific literature has been devoted to the role of human resources in the development of innovation. Employees are increasingly viewed as key carriers of knowledge and creativity within organizations, and their ability to generate new ideas represents an important source of organizational innovativeness. For this reason, human resource management has gained a more pronounced strategic dimension in contemporary organizations (Lengnick-Hall et al., 2009). Human resource management strategy refers to the long-term planning and implementation of policies and practices that enable organizations to manage employees effectively in order to achieve organizational objectives. Such an approach includes the development of employee competencies, encouragement of creativity and innovative behavior, and the creation of an organizational environment that supports the development of new ideas and innovative solutions (Becker & Huselid, 2006). Empirical research indicates that organizations that apply a strategic approach to human resource management have a greater capacity to develop innovations. In particular, practices such as continuous employee education, teamwork, participative decision-making, and reward systems that encourage employee creativity are emphasized. Such practices can significantly contribute to the development of innovative employee behavior and the enhancement of organizational innovation capacity (Boselie, Dietz & Boon, 2005). Despite the growing interest in this topic within the scientific literature, there is still a need for more detailed research on the relationship between human resource management strategy and organizational innovativeness. In particular, it is important to understand how specific human resource management practices influence the development of innovative employee behavior and the innovation outcomes of organizations. Considering the above, the research problem of this paper can be identified as the need for a better understanding of how human resource management strategy contributes to the development of organizational innovativeness. Although numerous studies confirm the existence of a relationship between human resource management and innovation, it is still not entirely clear which specific human resource anagement practices have the greatest impact on the innovation performance of organizations.

Accordingly, the aim of this paper is to analyze the impact of human resource management strategy on organizational innovativeness through a review of relevant theoretical literature and empirical research in the fields of human resource management and innovation management. Based on the defined research problem, the following research questions are formulated:

1. How does human resource management strategy influence organizational innovativeness?
2. Which human resource management practices have the greatest impact on the development of innovative employee behavior?
3. How does the integration of human resource management strategy with organizational business strategy contribute to the development of innovation?

The answers to these research questions may contribute to a better understanding of the role of human resource management strategy in the development of organizational innovativeness and provide guidelines for managers on how to manage human resources more effectively in order to encourage innovation.

2. HUMAN RESOURCE MANAGEMENT

Human resource management (HRM) strategy represents an integrated approach to managing employees that is aligned with the long-term objectives of an organization. According to Armstrong, strategic human resource management refers to the design of policies and practices that enable organizations to achieve competitive advantage through the effective management of employees (Armstrong, 2020). Human resource management strategy encompasses a variety of activities, including:

- human resource planning
- recruitment and employee selection
- competency development and training
- performance management
- employee motivation and reward systems
- development of organizational culture.

In contemporary organizations, human resource strategy increasingly acquires a strategic dimension and becomes an important component of overall business strategy. Organizations that successfully integrate human resource strategy with business strategy achieve better organizational performance and higher levels of innovativeness (Becker & Huselid, 2006).According to Shipton et al. (2006), strategic human resource management practices have a significant influence on the development of organizational innovation capabilities because they enable knowledge development, information sharing, and the encouragement of creativity among employees. Human resource management strategy represents one of the key elements of modern strategic management. In conditions of global competition, rapid technological change, and an increasing need for innovation, organizations increasingly recognize the importance of human resources as a fundamental source of competitive advantage. The traditional approach to human resource management, which was primarily focused on administrative functions such as recruitment, employee records, and payroll administration, has gradually evolved into a strategic approach in which human resources become a key factor in achieving organizational objectives (Armstrong, 2020). Human resource management strategy can be defined as a set of long-term plans, policies, and activities through which organizations manage their employees in order to achieve business goals and develop organizational competencies. According to Armstrong (2020), strategic human resource management represents a systematic approach to managing employees that ensures alignment between organizational strategy and human resource management policies.

Such an approach emphasizes the need for integrating HR strategy with the overall business strategy of the organization in order to ensure the effective realization of strategic goals. One of the most important theoretical approaches explaining the significance of human resources in organizations is the Resource-Based View (RBV) of the firm. According to this theory, an organization's competitive advantage derives from resources that are valuable, rare, inimitable, and non-substitutable (Barney, 1991). Human resources often meet these criteria because employees' knowledge, experience, and creativity are difficult to replicate or replace. For this reason, organizations increasingly invest in the development of employee competencies and the creation of an organizational environment that encourages creativity and innovativeness. Human resource management strategy includes a number of interconnected activities that enable organizations to manage employees effectively throughout the entire employee lifecycle. Among the most important activities of HR strategy are human resource planning, recruitment and selection, employee development and training, performance management, motivation and reward systems, and the development of organizational culture (Noe et al., 2021). Human resource planning represents a process through which organizations assess future workforce needs and develop strategies to ensure the availability of the necessary competencies. This process enables organizations to respond promptly to changes in the business environment and to secure the human resources required for the achievement of business objectives. Recruitment and employee selection also have a significant strategic dimension because they enable organizations to attract and select candidates who possess the required knowledge, skills, and abilities. Organizations that apply a strategic approach to employee selection frequently use various competency assessment methods to identify candidates who can contribute to the innovative development of the organization (Boxall & Purcell, 2016). Employee competency development represents one of the most important elements of human resource management strategy. In contemporary organizations, continuous education and professional development of employees have become essential for maintaining organizational competitiveness. The development of new knowledge and skills enables employees to adapt to technological changes and actively participate in innovation processes (Tidd & Bessant, 2021). Performance management systems also play an important role in HR strategy. These systems enable organizations to monitor and evaluate employee performance and identify areas where additional competency development is needed. Effective performance management systems can significantly contribute to the development of innovative employee behavior because they establish clear goals and encourage employees to continuously improve work processes. Motivation and reward systems represent another important element of human resource management strategy. Organizations that develop incentive-based reward systems can motivate employees to generate new ideas and actively participate in innovation processes. Empirical research indicates that organizations that apply participative reward systems and encourage employees to participate in decision-making achieve higher levels of innovativeness (Laursen & Foss, 2003). Organizational culture also has a significant impact on the effectiveness of human resource management strategy. Organizational culture shapes employee values, norms, and behaviors and can either stimulate or limit the development of innovation within organizations. Organizations that foster a culture of open communication, collaboration, and knowledge sharing create a supportive environment for the development of employee creativity and innovativeness (Damanpour, 2010). In the contemporary business environment, the concept of strategic integration of human resource management with other organizational functions is becoming increasingly important. In this context, HR management is no longer viewed solely as a functional area but rather as a strategic partner of management that actively participates in shaping and implementing the organization's business strategy (Ulrich & Dulebohn, 2015). In conclusion, human resource management strategy represents a key instrument through which organizations can develop and sustain competitive advantage.

Through effective employee management, competency development, and the creation of a supportive organizational environment, organizations can stimulate innovative employee behavior and ensure long-term organizational development. According to the Resource-Based View of the firm, competitive advantage arises from resources that are valuable, rare, and difficult to imitate. Human resources frequently meet these criteria because employees' knowledge, creativity, and experience represent specific organizational resources that competitors find difficult to replicate (Barney, 1991). Consequently, organizations that develop effective human resource management strategies have greater opportunities to develop innovations and achieve sustainable competitive advantage. Numerous empirical studies confirm the relationship between human resource management practices and organizational innovativeness. Chen and Huang (2009) conducted a study on a sample of firms in Taiwan in order to analyze the relationship between strategic HRM practices and organizational innovation performance. Their findings showed that practices such as competency-based employee selection, systematic employee development, and participative decision-making have a positive impact on the innovation capacity of organizations. Similar results were found in the study conducted by Laursen and Foss (2003), who analyzed the influence of different HR practices on the innovation performance of Danish firms. The authors concluded that organizations that apply a combination of HR practices such as teamwork, flexible work organization, decentralized decision-making, and continuous employee education achieve significantly better innovation outcomes compared to organizations that do not apply such practices. They particularly emphasized the importance of the complementarity of HR practices, that is, their integrated implementation within organizations. Employee competency development represents one of the most important elements of human resource management strategy that can stimulate organizational innovativeness. Organizations that continuously invest in employee education and professional development create conditions for the development of new knowledge and skills that are essential for innovation processes. According to research conducted by Shipton et al. (2006), organizations that implement systematic employee development programs are significantly more likely to develop product and process innovations. Motivation and reward systems also play an important role in encouraging innovative employee behavior. Organizations that develop incentive-based reward systems can motivate employees to generate new ideas and actively participate in innovation processes. A study conducted by Jiang et al. (2012) showed that reward systems encouraging employee creativity and initiative can significantly increase the level of innovative behavior within organizations. Recent studies further emphasize the importance of integrating human resource management strategy with the organization's innovation strategy. Song et al. (2023) analyzed the relationship between innovation-oriented HR practices and organizational innovation performance and found that organizations that integrate HR strategy with innovation strategy achieve significantly better innovation outcomes. Their research also indicates that HR practices that promote teamwork, interdisciplinary collaboration, and knowledge sharing have a strong influence on the development of innovation. Similarly, research conducted by Seeck and Diehl (2017) demonstrated that strategic human resource management has a significant impact on organizational innovation capability because it enables the development of employee competencies, encourages organizational learning, and facilitates knowledge sharing within organizations. Another particularly important factor in fostering organizational innovativeness is leadership style. Transformational leadership, which encourages creativity, visionary thinking, and employee participation in decision-making, is often associated with higher levels of innovative employee behavior. Research conducted by Aguirre-Camarena and Chirinos (2025) showed that transformational leadership can significantly strengthen the positive impact of HR practices on employees' innovative behavior.

In contemporary organizations, knowledge management is also gaining increasing importance as an integral part of human resource management strategy. Knowledge management enables organizations to effectively collect, share, and apply employee knowledge, which can significantly contribute to the development of innovation. Nonaka and Takeuchi (1995) emphasize that organizations that encourage knowledge sharing among employees create favorable conditions for generating new ideas and developing innovative solutions. The results of numerous empirical studies indicate that human resource management strategy can have a multifaceted impact on organizational innovativeness. On the one hand, it can stimulate innovative employee behavior through competency development, motivation systems, and participative decision-making. On the other hand, HR strategy can contribute to creating an organizational environment that encourages knowledge sharing, creativity, and employee collaboration.

3. ORGANIZATIONAL INNOVATIVENESS

Organizational innovativeness represents one of the key determinants of successful business performance in the contemporary economy characterized by intensive technological change, globalization, and strong competition. Organizations that are capable of continuously developing new products, services, and processes have greater opportunities to achieve long-term competitive advantage in the market (Tidd & Bessant, 2021). In such conditions, innovativeness becomes an important element of organizational strategy and a key driver of economic growth and development. According to the OECD Oslo Manual, innovation is defined as the implementation of a new or significantly improved product, process, marketing method, or organizational method in business practices, workplace organization, or external relations (OECD, 2018). This definition emphasizes that innovation does not include only technological changes but also organizational and managerial innovations that can significantly improve business processes and organizational efficiency. In the literature, four basic types of innovation are most commonly distinguished: product innovations, process innovations, organizational innovations, and marketing innovations. Product innovations refer to the development of new or significantly improved products and services, while process innovations relate to the introduction of new production or distribution methods. Organizational innovations involve changes in organizational structures, managerial practices, or work processes, whereas marketing innovations refer to new methods of promotion, distribution, or pricing of products and services (OECD, 2018). Organizational innovativeness largely depends on an organization's ability to create, transfer, and apply knowledge. For this reason, many authors emphasize the importance of knowledge management as a key element of innovation processes. Organizations that effectively manage knowledge can more rapidly develop new ideas and transform them into innovative products and services (Nonaka & Takeuchi, 1995). In addition to knowledge management, human resources also play a significant role in the development of organizational innovativeness. Employees represent a source of new ideas, creative solutions, and innovations that can significantly contribute to organizational development. According to Damanpour (2010), organizational innovativeness largely depends on employees' willingness to experiment, share knowledge, and participate in the process of developing new ideas.Organizations that encourage open communication, collaboration, and knowledge sharing among employees create a favorable environment for the development of innovation. Such an environment allows employees to freely express their ideas and participate in innovation processes, which may lead to the development of new products, services, or business models (Tidd & Bessant, 2021). In the contemporary business environment, organizational innovativeness is often associated with the concept of innovation capability. Innovation capability refers to the ability of an organization to generate new ideas, develop innovative solutions, and successfully implement them in business operations.

Organizations that develop strong innovation capabilities can adapt more quickly to changes in the business environment and respond more effectively to market demands (Lawson & Samson, 2001). Empirical studies confirm the importance of innovativeness for organizational success. Research conducted by Chen and Huang (2009) showed that organizations that encourage innovative employee behavior achieve better organizational performance and greater competitive advantage. Similar findings are confirmed by more recent studies indicating that organizations that develop an innovation-oriented culture and encourage employee creativity achieve higher levels of organizational effectiveness (Song et al., 2023). Organizational culture plays a particularly important role in the development of organizational innovativeness. Organizational culture shapes employees' values, norms, and behaviors and can significantly influence the level of creativity and innovativeness within organizations. Organizations that develop a culture of openness, collaboration, and tolerance for mistakes create a supportive environment for innovation development (Damanpour, 2010). In such an environment, employees have greater freedom to experiment and explore new ideas, which can lead to the development of innovative solutions. Furthermore, organizations that encourage teamwork and interdisciplinary collaboration among employees can more effectively combine different knowledge and perspectives, which further contributes to innovation development. Managers also play a crucial role in encouraging organizational innovativeness, as their leadership style can significantly influence employees' innovative behavior. Transformational leadership, which encourages creativity, autonomy, and employee participation in decision-making, is often associated with higher levels of organizational innovativeness (Aguirre-Camarena & Chirinos, 2025). In contemporary organizations, innovativeness is increasingly viewed as a continuous process that involves the generation of ideas, the development of innovative solutions, and their implementation in business practice. This process requires collaboration between different organizational functions, including human resource management, research and development, marketing, and strategic management. For this reason, many authors emphasize the importance of an integrated approach to innovation management, which includes the development of an innovation strategy, encouragement of employee creativity, and the creation of an organizational environment that supports innovation (Tidd & Bessant, 2021). In contemporary scientific literature, organizational innovativeness is increasingly viewed as a complex and continuous process involving the creation, development, and implementation of new ideas within organizations. Innovativeness does not refer only to the development of new products or technologies but also includes changes in organizational structures, managerial practices, and forms of collaboration with the external environment. For this reason, organizational innovativeness represents an important capability that enables organizations to adapt to environmental changes and achieve long-term competitive advantage (Drucker, 2007). One important concept related to organizational innovativeness is the concept of open innovation. This approach is based on the assumption that organizations cannot rely solely on their internal resources and knowledge in the innovation process, but must also develop cooperation with external partners such as universities, research institutions, suppliers, and customers. Collaboration with external partners enables organizations to access a wider range of knowledge and ideas and increases the likelihood of developing innovative solutions (Chesbrough, 2003). Under such conditions, organizations increasingly develop cooperation networks that facilitate knowledge exchange and accelerate innovation processes. Another important factor influencing organizational innovativeness is organizational learning. Organizational learning refers to the process through which organizations create, transfer, and apply knowledge in order to improve business processes and develop new products or services. Organizations that develop systems for effective knowledge management and encourage knowledge sharing among employees have greater opportunities for innovation development.

Such an approach enables employees to combine different knowledge and experiences and develop new solutions to organizational challenges (Argote, 2013). An important factor in organizational innovativeness is also the innovation climate, which refers to employees' perceptions of the extent to which the organization encourages creativity, experimentation, and the development of new ideas. Innovation climate influences employee behavior because it determines the extent to which employees are willing to take initiative, propose new ideas, and participate in innovation processes. Organizations that develop a supportive innovation climate often encourage open communication, interdisciplinary collaboration, and tolerance for mistakes that occur during innovation development (Anderson, Potočnik & Zhou, 2014). Such an organizational environment allows employees to express their creativity more freely and contribute to the development of innovative solutions. In the literature, organizational innovativeness is also frequently analyzed through different types of innovation. The most commonly distinguished are product innovations, process innovations, organizational innovations, and marketing innovations. Product innovations refer to the development of new or significantly improved products and services, while process innovations involve improvements in production or operational procedures within organizations. Organizational innovations include changes in organizational structures, managerial methods, and organizational practices, while marketing innovations refer to the development of new methods of product promotion and market placement (OECD, 2018). The development of different types of innovation enables organizations to adapt to market changes and increase their competitiveness. Leadership also plays a particularly important role in the development of organizational innovativeness. Leadership style can significantly influence employees' innovative behavior and their willingness to participate in innovation processes.

Leaders who encourage creativity, open communication, and the exchange of ideas among employees create an organizational environment that fosters innovation development. Transformational leadership, which is based on motivating employees, encouraging their creativity, and developing a shared organizational vision, is particularly highlighted as a leadership style that positively influences organizational innovativeness (Jung, Chow & Wu, 2003). In recent years, *digital transformation* has also had a significant influence on organizational innovativeness. The development of digital technologies has enabled organizations to collect and analyze information more rapidly, improve communication among employees, and facilitate knowledge sharing. Digital technologies also enable the development of new business models and the creation of innovative products and services. Organizations that successfully integrate digital technologies into their operations have greater opportunities to develop innovations and achieve competitive advantage in the market (Nambisan et al., 2017). It is also important to emphasize that organizational innovativeness can be observed through the concept of innovation capacity. Innovation capacity refers to the ability of an organization to generate and implement innovations using its resources, knowledge, and organizational capabilities. Organizations with high innovation capacity develop systematic processes for innovation management, encourage employee creativity, and actively invest in research and development of new technologies and products. In conclusion, organizational innovativeness represents a complex and multidimensional phenomenon that depends on the interconnection of various organizational factors. Organizational culture, leadership style, knowledge management, digital technologies, and human resource management together create an organizational environment that can stimulate innovation development. Therefore, organizations that seek to develop innovativeness should adopt an integrated approach to managing organizational resources, in which human resources play a particularly important role.

4. THE IMPACT OF HUMAN RESOURCE STRATEGY OF ORGANIZATIONAL INNOVATIVENESS

Human resource management (HRM) strategy can significantly influence organizational innovativeness through various employee management practices. One of the most important practices is the development of employee competencies. Continuous education and professional development enable the acquisition of new knowledge and skills that are essential for innovation development. An empirical study conducted on a sample of firms showed that strategic human resource management practices have a positive impact on the innovation performance of organizations, with knowledge management capacity acting as an important mediating factor between HR strategy and innovation outcomes (Chen & Huang, 2009). Similar findings have been confirmed by more recent studies, which indicate that a high level of employee involvement in organizational processes and a participative management style positively influence employees' innovative capabilities (Jiang et al., 2012). Research conducted on small and medium-sized enterprises also demonstrated that HR practices such as employee participation in decision-making, reward systems, and competency development have a significant impact on product, process, and marketing innovations within organizations (Laursen & Foss, 2003). Furthermore, research by Shipton et al. (2006) indicates that organizations that implement policies promoting employee autonomy and performance-based reward systems demonstrate a greater tendency to invest in research and development and achieve higher levels of innovativeness. Human resource management strategy plays a significant role in fostering organizational innovativeness because it influences the way employee competencies are developed, motivated, and utilized. In contemporary organizations, innovation is increasingly viewed not only as a result of technological investments but also as the outcome of effective mobilization of employees' knowledge and creative potential. For this reason, HR strategy becomes an important instrument through which organizations can stimulate innovation and ensure long-term competitive advantage (Armstrong, 2020). In the literature, human resources are frequently identified as the primary drivers of innovation activities, as employees generate new ideas through their knowledge, experience, and creativity, which may lead to the development of new products, services, and business processes. According to the Resource-Based View of the firm, organizations that effectively develop and utilize human resources can achieve sustainable competitive advantage because employee knowledge and competencies represent resources that are difficult for competitors to imitate (Barney, 1991). Empirical research confirms the existence of a significant relationship between human resource management practices and organizational innovation performance. One of the most frequently cited studies in this field was conducted by Chen and Huang (2009), who examined the relationship between strategic HRM practices and organizational innovation capability. Their findings indicate that practices such as competency-based employee selection, systematic employee development, and participative decision-making positively influence the innovation capacity of organizations. Similarly, research conducted by Laursen and Foss (2003) on a sample of Danish firms demonstrated that the combined application of multiple HR practices, such as teamwork, flexible work organization, and decentralized decision-making, significantly improves organizational innovation performance. The authors emphasize that the strongest effects occur when HR practices are implemented complementarily, as an integrated human resource management system. Employee competency development represents one of the most important elements of HR strategy that can stimulate organizational innovativeness. Organizations that continuously invest in employee education and professional development create favorable conditions for the development of new knowledge and skills that are essential for innovation processes. Research shows that organizations implementing systematic employee training programs achieve a higher number of product and process innovations compared to organizations that invest less in employee development (Tidd & Bessant, 2021).

Another important element of HR strategy influencing organizational innovativeness is the employee motivation and reward system. Reward systems that encourage creativity and employee initiative can significantly contribute to innovation development. Organizations that reward innovative employee ideas encourage active participation in innovation processes and increase the likelihood of developing new products and services (Laursen & Foss, 2003).Organizational culture also plays an important role in stimulating organizational innovativeness. Organizations that develop a culture of open communication, knowledge sharing, and tolerance for mistakes create an environment in which employees have greater freedom to experiment and develop new ideas. Such an organizational culture can significantly increase the innovation potential of the organization (Damanpour, 2010). Recent research further emphasizes the importance of strategic integration between human resource management and organizational innovation strategy. Song et al. (2023) demonstrated that organizations that integrate HR strategy with innovation strategy achieve significantly better innovation outcomes compared to organizations that treat these functions separately. The authors particularly highlight the importance of developing innovation-oriented HR practices that include promoting teamwork, developing employees' creative competencies, and encouraging knowledge sharing within organizations. Research also shows that leadership style can significantly influence the relationship between human resource strategy and organizational innovativeness. Transformational leadership, which encourages employees to think creatively and actively participate in decision-making processes, is often associated with higher levels of innovative employee behavior (Aguirre-Camarena & Chirinos, 2025). Knowledge management also plays an important role in fostering organizational innovativeness. Organizations that develop systems for collecting, sharing, and applying knowledge can more effectively utilize the intellectual capital of their employees to develop innovations. Knowledge management enables organizations to combine employees' diverse knowledge and experiences and thereby generate new ideas and innovative solutions (Nonaka & Takeuchi, 1995). The results of numerous studies indicate that human resource management strategy can have multiple effects on organizational innovativeness. On the one hand, it can stimulate innovative employee behavior through motivation systems, competency development, and participative decision-making. On the other hand, HR strategy can contribute to creating an organizational environment that encourages knowledge sharing, collaboration, and employee creativity.

5. CONCLUSION

Human resource management strategy represents one of the key factors influencing the development of organizational innovativeness. In the contemporary business environment, organizations that successfully integrate human resource strategy with overall business strategy have greater opportunities to develop innovations and achieve competitive advantage.The findings of this study confirm that practices such as employee competency development, participative decision-making, motivation systems, and the encouragement of an innovation-oriented organizational culture have a significant impact on organizational innovativeness. In particular, the development of employees' knowledge and competencies, effective motivation and reward systems, employee participation in decision-making processes, organizational culture that encourages creativity, and effective leadership and teamwork represent important drivers of innovation within organizations. Organizations that adopt a strategic approach to human resource management create a supportive environment for innovation and achieve better organizational performance. In the modern business environment characterized by rapid technological change, globalization, and increasing competition, organizational innovativeness has become one of the key determinants of long-term sustainability and competitive advantage. In such conditions, human resources are increasingly recognized as a strategic organizational resource that can significantly contribute to innovation development.

For this reason, human resource management strategy occupies an important position in contemporary theoretical and empirical research in the fields of management and organizational studies. The analysis of theoretical approaches indicates that strategic human resource management represents an important instrument for the development of organizational competencies, the encouragement of employee creativity, and the promotion of innovative behavior within organizations. In particular, the Resource-Based View of the firm highlights that employee knowledge, experience, and creativity represent unique organizational resources that can ensure sustainable competitive advantage. The results of numerous empirical studies confirm the existence of a significant relationship between human resource management practices and organizational innovativeness. Strategies that include systematic human resource planning, employee competency development, participative decision-making, teamwork, and incentive-based reward systems can significantly contribute to the development of innovations. Furthermore, research emphasizes the importance of an organizational culture that encourages knowledge sharing, open communication, and experimentation, as such an environment enables employees to actively participate in innovation processes. It is particularly important to emphasize that organizational innovativeness does not depend solely on individual human resource management practices, but rather on their alignment and integration with the overall organizational strategy. Organizations that successfully integrate human resource management strategy with innovation strategy have greater opportunities to develop new products, services, and business processes and to achieve long-term competitive advantage in the market. Based on the conducted analysis, it can be concluded that human resource management strategy has a significant impact on organizational innovativeness, as it enables the development of employee competencies, encourages innovative behavior, and contributes to the creation of an organizational environment that supports the development of new ideas and innovative solutions.

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GOVERNANCE FORMALISATION, BOARD DIVERSITY, AND SOCIAL VALUE ORIENTATION IN SLOVAK PUBLIC ENTERPRISES: A COMPARATIVE ANALYSIS OF STATE- AND MUNICIPALLY OWNED CORPORATIONS

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ABSTRACT

The governance of state-owned enterprises is increasingly shaped by tensions between accountability, efficiency, and social value creation. In the Slovak context, similar tensions arise in municipally owned corporations operating under hybrid public–commercial mandates. This paper comparatively examines governance structures and board composition in selected Slovak state-owned and municipally owned corporatised enterprises in infrastructure sectors. Using publicly available documents, including annual reports, corporate governance statements, statutes, and sustainability disclosures, the study applies structured document analysis to assess governance formalisation, board diversity, and the articulation of social value in official reporting. Governance formalisation is operationalised through supervisory board structures, internal control mechanisms, and transparency practices. Board diversity is examined through gender representation and professional background, while social value orientation is analysed through public service mandates, stakeholder engagement mechanisms, and non-financial performance indicators. The comparative design enables an assessment of whether ownership level is associated with differences in governance architecture and the articulation of social value. The findings contribute to debates on corporate governance in public enterprises by illustrating how governance arrangements and board composition relate to the balance between managerial efficiency and broader public value objectives. The paper concludes by outlining implications for future research on governance and leadership in hybrid public enterprises.

Keywords: *Corporate governance, Municipally owned corporations, Public enterprises, Social value, Board composition*

1. INTRODUCTION

Public enterprises play a central role in the provision of essential infrastructure services and operate at the intersection of economic performance, public accountability, and social value creation. In this context, corporate governance structures are increasingly expected to balance efficiency with broader public interest objectives. This paper examines how governance structures and board composition in Slovak state-owned and municipally owned enterprises relate to the articulation of social value in public service infrastructure sectors. To address this question, a comparative qualitative analysis was conducted across four Slovak public enterprises operating in transport and utility sectors. The analysis focuses on governance architecture, board composition, social value orientation, and accountability mechanisms in order to identify patterns associated with different ownership levels and sectoral contexts.

2. CORPORATE GOVERNANCE RESEARCH

Corporate governance research increasingly examines how formal governance arrangements and board characteristics influence the capacity of organisations to balance economic objectives with broader social responsibilities. In the context of publicly oriented enterprises, these issues are particularly relevant, as governance structures must reconcile efficiency, accountability, and the creation of social value.

2.1 Governance formalisation and social value orientation

The relationship between governance formalisation and social value orientation has been addressed in several strands of corporate governance and corporate social responsibility research. Corporate governance is commonly understood as a system of rules, processes, and institutional arrangements through which companies are directed and controlled. Le and Nguyen (2022) define Corporate Governance (CGV) as a set of rules and processes that balance economic, social, and environmental values. Their study identifies a positive association between corporate governance and Corporate Social Responsibility (CSR), which subsequently contributes to firm value. Research has also emphasised the importance of formal governance mechanisms in supporting organisational accountability and transparency. Musová et al. (2023) highlight good corporate governance as an important factor influencing company performance and the economic dimension of CSR, particularly with respect to employees and shareholders. They emphasise information disclosure and transparency as essential elements of governance frameworks. Empirical studies have further examined how specific governance characteristics influence social value orientation. Rania et al. (2021), analysing firms in France, distinguish between "diversity of boards", referring to structural characteristics such as board size and independence, and "diversity in boards", referring to demographic attributes of board members. Their findings suggest that larger boards and the presence of independent directors are positively associated with overall CSR performance, while CEO-chair duality is negatively associated with CSR outcomes. Similarly, Cucari et al. (2018), examining Italian firms, report that the presence of CSR committees and independent directors is positively associated with ESG disclosure, which can be interpreted as an indicator of social value orientation. Other research has focused on governance processes rather than formal structures. Grofcikova and Musa (2020), analysing companies in Slovakia, investigate the relationship between governance process characteristics, such as information flow and mutual respect among board members, and financial performance measured by return on equity (ROE). Their results indicate significant positive correlations between governance processes and financial outcomes, although the study does not explicitly address social value orientation. An alternative governance perspective is provided by Tortia (2025), who examines Italian social cooperatives. In this context, governance structures are characterised by stakeholder self-organisation and adaptive governance arrangements. These mechanisms aim to reconcile economic sustainability with social objectives and generate social value through multi-stakeholder participation.

2.2 Board diversity and social value orientation

A substantial body of international research has examined the relationship between board diversity and social value orientation, frequently operationalised through CSR or ESG performance indicators. Rania et al. (2021) find that female representation on boards is positively and significantly associated with overall CSR performance, particularly in the areas of human rights and corporate governance. Their analysis also identifies positive associations between CSR performance and age diversity, the presence of foreign directors, highly educated directors, and directors holding multiple board positions. Similar findings are reported by Arayakarnkul et al. (2022), who analyse firms in the United States and identify a positive relationship between board gender diversity and corporate commitment to human rights, product responsibility, community engagement, and workforce-related initiatives. Their study suggests that female directors may contribute to sustainability-oriented decision-making due to relationship-oriented perspectives and distinct professional expertise. Qureshi et al. (2020) likewise report a positive association between female representation on corporate boards, firm market value, and the extent of ESG disclosure among European firms.

A comprehensive review by Amorelli and García-Sánchez (2021) concludes that most empirical studies report a positive relationship between gender diversity, CSR performance, and CSR disclosure. The authors attribute these outcomes to the introduction of new perspectives, stronger ethical standards, and greater social sensitivity associated with diverse boards. They also discuss several theoretical explanations, including agency theory, stakeholder theory, and resource dependence theory. In addition, they highlight the relevance of critical mass theory, which suggests that the presence of at least three women on a board may be necessary to exert a measurable influence on decision-making.

2.3 Board diversity and social value orientation in Slovakia

The Slovak context presents a different pattern compared with many international findings. Musová et al. (2023) report that the representation of women on corporate boards in Slovakia remained relatively low between 2016 and 2021, with a median share of approximately 16.7 percent and a significant number of companies without any female representation. Although the Corporate Governance Index improved during the observed period, progress in gender diversity remained limited. Musová et al. (2023) also note that the European Commission emphasises the potential benefits of gender equality for company performance and corporate governance quality. However, the practical implementation of board gender diversity in Slovakia remains limited. Grofcikova and Musa (2020), although acknowledging board diversity in their literature review as a factor potentially influencing firm performance, do not empirically analyse its impact on corporate performance or social value orientation in the Slovak context.

2.4 Contrasting findings and moderating factors

Despite the dominant trend in the literature suggesting a positive relationship between board gender diversity and social value outcomes, several studies report more complex or context-dependent findings. Abdelkader et al. (2024), analysing firms in South Africa, identify a negative relationship between board gender diversity and ESG performance. This relationship is mediated by a short-term orientation among female directors, which the authors interpret through the lens of Role Congruity Theory. According to their interpretation, female directors operating in developing economies may prioritise short-term outcomes in order to gain legitimacy in environments characterised by gender-based biases. However, the negative effect weakens when female directors have longer tenure or operate within family firms, where institutional environments may provide greater support for long-term strategic orientation. Similarly, Cucari et al. (2018) report a negative relationship between the presence of women on boards and ESG disclosure in the Italian context.

The authors suggest that this finding may reflect regulatory pressures that encourage female representation without necessarily ensuring that such appointments introduce new perspectives in corporate social responsibility practices. Amorelli and García-Sánchez (2021) acknowledge that empirical findings in this area remain mixed. Some studies report non-significant or negative relationships between gender diversity and CSR outcomes. They identify several moderating factors that may influence these relationships, including institutional context, regulatory frameworks, investor protection regimes, organisational characteristics such as pollution intensity or consumer market orientation, firm-level variables, and ownership structures. Rania et al. (2021) similarly note that board diversity effects appear more consistent in non-family firms than in family-owned organisations, where boards tend to be less diverse.

2.5 Governance mechanisms, social value, and research gaps

Beyond board diversity and formal governance structures, the literature also highlights the role of specific governance mechanisms. Rania et al. (2021) identify positive associations between board size and independence and CSR outcomes, while confirming the negative influence of CEO-chair duality. Cucari et al. (2018) emphasise the role of CSR committees and independent directors in strengthening ESG disclosure practices. Musová et al. (2023) further highlight the importance of transparency, information disclosure, and clearly defined board responsibilities in strategic management and organisational oversight. In cooperative governance models, social value creation may emerge from participatory governance arrangements. Tortia (2025) demonstrates that multi-stakeholder participation and client-oriented governance structures play a central role in generating social value within social cooperatives, even when service users are not directly represented on governing boards. Despite these insights, several gaps remain. Musová et al. (2023) report that nearly half of Slovak companies still fail to disclose information related to corporate governance practices, executive remuneration, or risk management structures, and many organisations have not established key governance committees. Grofcikova and Musa (2020) note that empirical research on governance processes in Slovakia remains relatively limited. In addition, Le and Nguyen (2022), while discussing corporate governance and CSR relationships, do not explicitly conceptualise governance formalisation as a distinct analytical category or social value orientation as a separate construct.

3. METHODOLOGY

This study employs a qualitative comparative research design based on structured document analysis. The objective is to examine governance structures, board composition, and the articulation of social value in selected corporatised public enterprises in Slovakia. The analysis focuses on publicly available information.

3.1 Research design and case selection

The study adopts a comparative case study approach. Four public enterprises were selected according to three criteria: public ownership, corporatised legal form, and operation in infrastructure sectors characterised by strong public service obligations. The selected organisations are joint-stock companies with formal supervisory governance structures and publicly accessible reporting. The cases form two sectoral comparison pairs. In the transport sector, the analysis includes Železničná spoločnosť Slovensko, a state-owned passenger railway operator, and Dopravný podnik Bratislava, a municipally owned urban public transport provider. In the utilities and public services sector, the study examines Slovenská pošta, the national postal service provider owned by the Slovak state, and Bratislavská vodárenská spoločnosť, a municipally owned water and wastewater utility operating in the Bratislava region. This design enables comparison across two ownership levels, state and municipal, while controlling for sectoral characteristics. All selected enterprises operate under hybrid mandates that combine commercial management requirements with the provision of socially essential services.

3.2 Data sources and analytical procedure

The empirical material consists exclusively of publicly available documents. These include annual reports, corporate governance statements, financial statements, statutes, and information published on the official websites of the selected enterprises. Where available, sustainability or corporate social responsibility disclosures were also examined. A structured coding framework was developed to analyse three main dimensions. First, governance architecture, including the presence of supervisory boards, internal control mechanisms, and governance reporting practices.

Second, board composition and diversity, focusing on gender representation and professional background diversity as observable through publicly available information. Third, social value orientation, assessed through the explicit articulation of public service mandates, stakeholder engagement practices, and non-financial performance indicators in corporate reporting. Table A1 in Appendix A presents the coding framework used in the analysis. The coded information was subsequently compared across cases in order to identify patterns associated with ownership level and sectoral context. The analysis therefore aims to reveal how governance structures and board characteristics relate to the formal articulation of accountability, efficiency, and social value in corporatised public enterprises.

4. RESULTS AND DISCUSSION

The analysed sample consists of four large public service enterprises operating in infrastructure sectors in Slovakia: Železničná spoločnosť Slovensko (ZSSK), Dopravný podnik Bratislava (DPB), Slovenská pošta (SP), and Bratislavská vodárenská spoločnosť (BVS). Two of the organisations are state-owned enterprises (ZSSK and Slovenská pošta), while the remaining two are municipally owned utilities (DPB and BVS). All four organisations operate as joint-stock companies, reflecting the widespread use of corporate legal forms in public infrastructure governance in Central Europe. The enterprises vary substantially in size and sectoral focus. Slovenská pošta represents the largest organisation in the sample with approximately 11,000–12,000 employees and annual revenues of roughly €340 million. ZSSK operates national rail passenger services with approximately 5,800–6,000 employees and turnover of around €450–500 million. The municipally owned transport provider DPB employs approximately 3,200–3,400 staff with turnover around €180–220 million. BVS, a regional water utility, is the smallest organisation in the sample with approximately 900–1,000 employees and annual turnover slightly above €127 million. These differences reflect the sectoral characteristics of national transport networks versus local infrastructure utilities. Despite these differences, all organisations perform essential public service functions and operate within regulatory frameworks that combine commercial management with public service obligations.

4.1 Governance architecture

Across the sample, governance structures exhibit strong institutional similarities. All four enterprises follow the two-tier governance model typical of continental European corporate governance, consisting of a board of directors (predstavenstvo) and a supervisory board (dozorná rada). Internal audit functions are present in all organisations, and corporate governance statements are published as part of annual reporting practices. However, some differences in governance structure emerge. ZSSK is the only enterprise in the sample where a board committee (audit) is explicitly identified. In the remaining organisations, specialised board committees are not publicly reported. This suggests that governance oversight in most cases remains concentrated within the supervisory board rather than delegated to specialised committees. Another differentiating feature concerns the separation of executive and supervisory leadership roles. In the two state-owned enterprises the roles differ: Slovenská pošta separates the positions of CEO and board chair, whereas ZSSK combines them. In contrast, the municipally owned DPB also concentrates these roles, while BVS maintains separation. The pattern therefore does not appear to be strictly linked to ownership level. None of the analysed organisations explicitly references national or international corporate governance codes, which suggests that governance practices are guided primarily by statutory requirements rather than voluntary governance frameworks.

4.2 Board composition and diversity

Board composition across the four enterprises shows moderate diversity but also several structural similarities. Board sizes vary from three members in ZSSK to five or six members in Slovenská pošta. Supervisory boards are significantly larger, particularly in municipally owned companies where political representation tends to be more pronounced. Gender diversity varies across organisations. DPB and Slovenská pošta show higher representation of women (26–50%), whereas ZSSK and BVS have lower representation (1–25%). While the overall representation of women is improving, gender diversity remains uneven across the sample. Professional background diversity is generally high. Three organisations (ZSSK, DPB and Slovenská pošta) show representation from at least five professional domains including economics, engineering, law, public administration and private sector management. BVS displays slightly lower diversity, with representation across three to four professional fields.

Political affiliation among board members appears in three of the four enterprises. Observable political connections are present in DPB, Slovenská pošta and BVS, reflecting the strong role of public ownership in board appointments. ZSSK is the only organisation in the sample where explicit political affiliations were not identified in publicly available information.

4.3 Social value orientation

A key finding across the sample is the strong and explicit articulation of public service mandates. All four organisations clearly define their activities as serving public interest functions within essential infrastructure systems. The annual reports of all enterprises combine financial performance indicators with references to social value, service accessibility and public infrastructure responsibilities. Non-financial performance indicators are disclosed by all organisations, demonstrating increasing attention to broader performance metrics beyond financial results. These indicators typically include service reliability, passenger volumes, environmental performance, or operational efficiency. However, formal ESG governance structures remain limited. None of the analysed enterprises publishes a dedicated ESG or sustainability report, and explicit ESG strategies are only described in general terms. Sustainability considerations are primarily embedded within operational narratives rather than formal governance frameworks. Differences emerge in the area of stakeholder engagement mechanisms. DPB and Slovenská pošta demonstrate more structured stakeholder engagement mechanisms, reflecting their direct interaction with large user communities. In contrast, ZSSK and BVS primarily rely on consultation mechanisms such as customer feedback channels. Another distinction concerns social inclusion measures. These are present in the three transport and postal service providers but less explicit in the case of BVS, where the discourse focuses more strongly on environmental protection and infrastructure reliability rather than social accessibility policies.

4.4 Accountability and transparency

Transparency practices are relatively consistent across the four organisations. Annual reports and financial statements are publicly accessible, and all companies publish audited financial statements accompanied by detailed managerial commentary. Strategic objectives and performance targets are also disclosed in all cases. One notable variation concerns the disclosure of board remuneration. ZSSK is the only enterprise in the sample that publicly discloses remuneration information for board members. In the remaining organisations this information is not reported in publicly available documents. All enterprises provide a corporate governance section in their annual reports; however, these sections are generally basic in scope, focusing on organisational structures rather than detailed governance processes or governance performance indicators.

4.5 Comparative governance patterns

Taken together, the findings reveal a governance model that can be described as administratively oriented public corporate governance. While the enterprises adopt corporate legal forms and reporting practices, their governance logic remains strongly shaped by public ownership and policy mandates. Ownership structure does not appear to produce strong systematic differences in governance design. Both state-owned and municipally owned enterprises display similar governance architectures, board structures and reporting practices. The most visible differences emerge in stakeholder engagement patterns and board composition, where municipal enterprises show stronger integration with local political environments. Across all four cases, social value is articulated primarily through public service obligations rather than through advanced ESG governance frameworks. Sustainability and social responsibility are acknowledged but remain institutionally underdeveloped compared to emerging international corporate governance standards. Overall, the analysis suggests that Slovak public infrastructure enterprises operate within a hybrid governance model that combines elements of corporate management with strong administrative oversight and public policy alignment.

4. CONCLUSION

This study contributes to the literature on corporate governance in public enterprises by providing an exploratory empirical comparison of governance structures and social value articulation in Slovak state-owned and municipally owned infrastructure companies. By combining governance architecture, board composition, social value orientation, and transparency indicators within a structured coding framework, the paper demonstrates how publicly available organisational data can be systematically analysed to examine governance practices in public enterprises. In doing so, the study offers an analytical approach that may be applicable in contexts where access to internal organisational data is limited. The findings also highlight the relevance of examining governance practices beyond purely financial or efficiency-oriented indicators. The coding framework developed in this study allows the identification of patterns in how social value is articulated and embedded in governance structures, thereby providing a basis for more systematic comparisons across different ownership forms, sectors, and national governance environments. Several avenues for future research emerge from this exploratory analysis. First, expanding the dataset to a larger sample of public enterprises across sectors would allow more robust comparisons between state-owned and municipally owned companies. Second, longitudinal analysis could examine how governance structures and ESG-related practices evolve in response to regulatory changes, particularly in light of emerging European sustainability reporting requirements. Third, qualitative research methods such as interviews with board members or public officials could provide deeper insight into how governance processes operate in practice and how social value considerations influence strategic decision-making. Overall, the study illustrates the potential of structured document analysis for examining governance practices in public enterprises and highlights the importance of further research into the evolving relationship between corporate governance, public accountability, and social value creation in infrastructure sectors.

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Appendix following on the next Page

APPENDIX A. CODING FRAMEWORK FOR GOVERNANCE AND SOCIAL VALUE ANALYSIS

A BASIC IDENTIFICATION VARIABLES (Contextual)					
A1 Enterprise name					
A2 Ownership level	1 = State-owned	2 = Municipality-owned			
A3 Legal form	1 = Joint-stock company (a.s.)	2 = Limited liability (s.r.o.)			
A4 Sector	1 = Transport	2 = Energy/Heating			
A5 Size indicators (for contextual control)					
A5.1 Number of employees					
A5.2 Annual turnover (EUR)					
A5.3 Total assets					
B GOVERNANCE ARCHITECTURE					
B1 Supervisory board present	0 = No	1 = Yes			
B2 Number of supervisory board members					
B3 Board committees present (multiply coding possible)	0 = None	1 = Audit	2 = Risk	3 = ESG/Sustainability	4 = Strategy
B4 Separation of CEO and Chair roles	0 = No	1 = Yes			
B5 Corporate governance statement published	0 = No	1 = Yes		1 = Audit	
B6 Reference to governance code (national/international)	0 = No	1 = Yes			
B7 Internal audit function explicitly mentioned	0 = No	1 = Yes			
B8 Responsibility for CSR / ESG defined at board level	0 = Not mentioned	1 = Mentioned but informal	2 = Formalised (committee, dedicated officer, or governance section)		
C BOARD COMPOSITION AND DIVERSITY					
C1 Total number of board members					
C2 Gender diversity - Percentage of women	0 = 0%	1 = 1–25%	2 = 26–50%	3 = >50%	
C3 Professional background diversity (based on publicly available CVs) *Count number of distinct professional domains represented: Law, Economics/Finance, Engineering/Technical, Public administration/politics, Academia, Private sector management*	1 = Low diversity (1–2 domains)	2 = Medium (3–4 domains)	3 = High (5+ domains)		
C4 Political affiliation observable (based on public information)	0 = No explicit indication	1 = At least one member with political office/clear affiliation			

C5 Average tenure (if publicly available)					
C6 Board member biographies publicly available	0 = No	1 = Yes			
C7 Educational diversity	1 = Low (similar academic fields)	2 = Moderate	3 = High (multiple disciplinary backgrounds)		
D SOCIAL VALUE ORIENTATION (Discursive and Structural)					
D1 Explicit reference to public service mandate	0 = Minimal/implicit	1 = Explicitly stated			
D2 Social value framing in annual report	0 = Financial focus dominant	1 = Balanced financial + social			
D3 ESG or sustainability report published	0 = No	1 = Yes			
D4 Non-financial performance indicators disclosed	0 = No	1 = Yes			
D5 Stakeholder engagement mechanisms described	0 = None mentioned	1 = Basic consultation	2 = Structured stakeholder engagement mechanisms		
D6 Social inclusion, affordability, or accessibility measures described	0 = No	1 = Yes			
D7 Explicit sustainability or ESG strategy	0 = No reference	1 = General statements only	2 = Formal strategy with defined priorities		
E ACCOUNTABILITY AND TRANSPARENCY					
E1 Annual report publicly accessible online	0 = No	1 = Yes			
E2 Financial statements detailed and disaggregated	0 = Minimal statutory	1 = Detailed managerial discussion included			
E3 Audit opinion disclosed	0 = No	1 = Yes			
E4 Remuneration of board members disclosed	0 = No	1 = Yes			
E5 Strategic objectives and performance targets disclosed	0 = No	1 = Yes			
E6Dedicated corporate governance section	0 = No	1 = Basic	2 = Detailed governance description		
F QUALITATIVE MEMO FIELD					
A short qualitative memo (max. 200–300 words) summarising: dominant governance logic observed, tone of social value articulation, notable governance innovations or gaps					

Table A1. Coding framework for governance and social value analysis (Source: Author's own compilation)

THE CONNECTION BETWEEN LEADERSHIP STYLE, TEAM COHESION AND WORK SATISFACTION IN A PROJECT TEAM

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ABSTRACT

With project-based work becoming dominant organizational form in contemporary business environments characterized by uncertainty, complexity and rapid change, the role of the project manager extends beyond technical coordination to include leadership behaviors that shape team dynamics and attitudes. Drawing on interdisciplinary literature including organisational psychology and project management in particular, leadership is conceptualized as a context-dependent and relational process that influences both individual perceptions of project work and collective functioning within project teams. With the aim of examining the effects of transformational, transactional, democratic, and autocratic leadership styles on team cohesion and work satisfaction, a quantitative empirical research was conducted among 105 project team members in the Republic of Croatia. The obtained results indicate that transformational leadership is the most prominently perceived leadership style and the only significant predictor of task-oriented cohesion. Other leadership styles did not show a statistically significant relationship with either task-oriented or social cohesion and were not found to predict components of work satisfaction such as project tasks or financial compensation. However, transformational and democratic leadership styles were positively associated with perception of the project manager by the project team. Mediation analysis further revealed a direct positive effect of transformational leadership on satisfaction with work while task-oriented cohesion did not act as a mediating mechanism. In addition, paper highlights the contextual and multidimensional nature of leadership in project environments, emphasizing the importance of transformational and participative leadership behaviors for fostering goal-oriented collaboration and contributing to a more nuanced understanding of their effects in temporary organisational settings to offer relevant implications for leadership development in project-based organisations.

Keywords: *Leadership styles, Project management, Project teams, Team cohesion, Work satisfaction*

1. INTRODUCTION

In modern organizational environments, increasing emphasis is placed on project management and temporary forms of organization that enable focus on unique goals within a limited time frame and with the help of temporary teams that bring together experts with different profiles, knowledge and skills (Sydow and Windeler, 2020). Successful project management today is no longer identified with traditional administrative management, but rather implies a synergy of management and leadership skills, with project manager as a central figure who should ensure not only an adequate plan and organization of activities, but also actively encourage team members to cooperate and focus on common goals within uncertain, complex and rapidly changing project environments (Kurzydłowska, 2016). Therefore, project managers must possess a combination of technical competencies and leadership qualities, considering that the ability to manage a project is not limited to knowledge of methodology or resource allocation,

but also includes the ability to recognize the needs of team members and their alignment, to manage changes and to make decisions even under pressure and with limited information (Luchko and Kohut, 2021). Satisfaction and motivation of project team members have been proven to be crucial for increasing work efficiency, so special attention should be paid to how they are approached and managed, due to the specificity of project work, including includes temporary, interdisciplinary and dynamic goals (Ahmed et al., 2023; Arora et al., 2023; Marnewick and Marnewick, 2019). Starting from the team formation phase, project manager needs to identify the abilities and potentials of the members, integrating them into a coherent whole and establishing common goals. Through the appropriate leadership style and emotional intelligence, project manager builds psychological safety in the team, an atmosphere in which team members feel free to express their opinions, ask questions and take the initiative without fear of negative consequences. Such an environment then creates the foundation for effective cooperation, especially in agile and creative projects (Rehan et al., 2023; Muethel and Hoegl, 2011). Each team member should have a clearly defined role and tasks, with the possibility of dynamic redistribution of work, with a project manager in charge of keeping the motivation, interpersonal dynamics, engagement, goal-orientation and resilience at the satisfactory level. When choosing the leadership style, project manager needs to recognize the specific requirements of the context, as well as the individual characteristics of the team members, in order to contribute to the stabilization of relationships and more effective achievement of project goals (Ghafory and Sahnosh, 2024; Ahmed et al., 2023). Previous research consistently indicate that no leadership style is universally superior, but that their effectiveness depends on the complexity of the project, the organizational culture, the degree of team virtuality and the level of competence and independence of team members (Ahmed et al., 2023). During the early stages of team formation, a more direct and structured approach is needed, while later stages require more participative and delegating forms of leadership (Abbas and Ali, 2021; Grynchenko et al., 2018). Transformational leaders, for example, emphasize vision, critical thinking, emotional connection and personal development of team members, which results in a higher level of creativity and effectiveness, especially in complex projects and uncertain environments (Ahmed et al., 2023; Kurzydłowska, 2016). On the other hand, the transactional approach relies on structured exchange, clearly defined tasks, rewards and sanctions. It is useful in structured environments with clearly defined goals, deadlines and tasks because it allows for the maintenance of discipline and procedures, however, it can limit creativity and autonomy (Ghafory and Sahnosh, 2024; Abbas and Ali, 2021). Research shows that transactional leaders achieve better results when there is a high level of team cooperation and trust, which further indicates that interpersonal dynamics plays a significant role within this style as well (Irianti et al., 2024). Furthermore, autocratic and democratic leadership styles represent two opposing approaches in the level of team members' involvement in decision-making. While autocratic leaders retain control and make decisions independently, which can be useful in crisis situations, democratic leaders encourage team participation, openness and dialogue, thereby increasing satisfaction and engagement (Dhomne and Hall, 2012). In the long term, the democratic style proves to be more suitable for projects that require creativity and teamwork, while the autocratic style is reserved for situations that require quick and decisive reactions. Changes in technology, work culture, and global trends require project managers to continuously learn, reflect, and adapt, so professional development is no longer an option, but a necessity to maintain relevance and effectiveness in leading teams in increasingly complex project systems (Kurzydłowska, 2016). Furthermore, in order to create an environment of trust and cooperation, and to ensure lower rates of burnout, absenteeism or turnover, it is up to the project managers to maintain team cohesion, that is, the level to which team members are connected, focused on common goals and motivated to cooperate (Salas et al., 2015).

Team cohesion is most often divided into two basic dimensions: social - refers to the emotional connection of team members and includes mutual trust, support and friendly relations, and task-oriented - reflects the orientation of team members to the achievement of common goals and tasks, whereby role clarity, mutual coordination and performance efficiency are valued. Although these two dimensions are often analyzed separately, their interdependence is the basis for a comprehensive understanding of team dynamics. Previous research show that task-oriented cohesion has a stronger predictive potential for subjective assessments of productivity, while social has a greater impact on long-term team maintenance (Dimas et al., 2023; Özer and Karabulut, 2019, Picazo et al., 2015; Salas et al., 2015; Chang et al., 2006; Zaccaro, 2000; Mullen and Copper, 1994). Cohesion is not a static concept, but is shaped and changed depending on the stage of team development, project phase, challenges and context. Events such as reorganization or leadership changes can significantly affect the level and type of cohesion, for which longitudinal monitoring using advanced methodological tools, including network analysis and non-invasive observation, is proposed (Brandebo, 2021). Finally, given the fact that human resources represent an inimitable and irreplaceable factor of organizational success, another concept comes into focus – work satisfaction – a psychological construct that encompasses the emotional, cognitive and behavioral reactions of team members to various aspects of their professional experience, including the emotional reaction to work experiences and the assessment of the extent to which work tasks, conditions and interpersonal relationships correspond to their personal values and expectations (Locke et al., 1976). While earlier theories interpreted work satisfaction through the fulfillment of needs, modern approaches emphasize the cognitive processes of evaluating working conditions and attitudes towards work that reflect the emotional assessment of the reality and direct behavior. This assessment is not unambiguous or one-dimensional, instead, it develops as a result of a series of interrelated factors that include the organizational context, nature of tasks, interpersonal relationships, reward systems and career development opportunities (Ariani et al., 2024; Meilani and Dwiyanti, 2022L; Serreqi, 2020; Lăzăroiu, 2015). The perception of superiors represents a separate dimension, aimed at assessing competence, support and fairness in management (Schmidt, 2010). Previous research broaden the understanding of the relationship between leadership, cohesion and satisfaction (Ghafory and Sahnosh, 2024; Mehdi Abadi, 2023). Stashevsky and Koslowsky (2006) found a positive relationship between perceived cohesion of the management team and objective effectiveness, highlighting the importance of emotional climate and clarity of goals. A similar contribution was made by De Clerck et al. (2025), where an autonomously supportive leadership style significantly promotes both social and task-oriented cohesion and by Majeed et al. (2023), who emphasized the role of team mindfulness in enhancing cohesion, provided that quality leadership is present. Mariam et al. (2022) and Michalisin et al. (2007) showed that leadership style focused on people and knowledge has a positive effect on cohesion and indirectly on project effectiveness. Khalilet al. (2025) highlighted the mediating role of cohesion in the relationship between leadership and team performance and a similar mechanism was confirmed by Sabino et al. (2021), who showed that directive and supportive leadership style has a positive effect on cohesion, which in turn contributes to greater client satisfaction. Together, these studies suggest that leadership style operates through cohesion as a mediating mechanism, which points to the complexity of psychological processes in the team. In the context of project teams, research done by Cojoacă (2024) linked the roles of emotional intelligence and knowledge sharing in the development of cohesion, emphasizing that leadership must be adaptable to project phases. On the other hand, Kodithuwakku and Korale-Gedara (2023) indicated that transactional leadership, although less suitable for stimulating creativity, can have positive effects on satisfaction in the final stages of projects, when clarity of structure and tasks are crucial.

The complexity of the relationship between leadership and team outcomes was confirmed by Fung and Ramasamy (2015) who found that frequent demonstration of leadership behaviors increases team effectiveness, which then acts as a mediator towards satisfaction and project success, as well as Imam and Zaheer (2021) who found that a leadership style focued on sharing between team members, in combination with cohesion and knowledge management, leads to project success. These results suggest that cohesion and satisfaction with work are key mediators between leadership and performance. With the aim to further examine previous ideas and explore the connection between the role of project managers and leadership style, team cohesion and work satisfaction in project teams as a prerequisite for achieving project success, the authors conducted an empirical research among project team members in the Republic of Croatia. The rest of the paper is organized as follows - a description of the methodology and sample, which includes a detailed presentation of the research instrument and demographic characteristics of the research participants, followed by research results and discussion, with a concluding remarks, research limitations and recommendations at the end of the paper.

2. METHODOLOGY AND SAMPLE

2.1. Research instrument

The research was conducted to determine the existence and strength of the relationship between specific constructs - leadership styles, team cohesion and work. Accordingly, a descriptive-correlational research design was applied, which implies that data on variables are collected at the same time, and the relationships between them are examined using statistical techniques such as correlation and regression analysis. The descriptive aspect of the research focuses on presenting the characteristics of the respondents, i.e. the sample, their demographic characteristics, organizational work context and personal perceptions of leadership, cohesion and satisfaction. The correlational part of the research provides insight into the direction and strength of the relationship between the variables. Such a design does not involve manipulation of variables, which means that it cannot prove causality, but it can clearly show statistically significant relationships. The questionnaire was constructed based on existing validated measurement scales that were previously used in relevant empirical research, adapted to the Croatian context and translated in a way that preserves their original structure, while respecting cultural and linguistic specificities. It included four thematic units: 1) demographic variables (gender, age, education, employment sector, work experience, project team size and duration of work in project team, 2) project manager's leadership style, 3) perception of team cohesion and 4) work satisfaction (project tasks, financial compensation, perception of the project manager). Each construct was operationalized through multiple items expressed as statements and responses were collected using a five-point Likert scale (1 = completely disagree to 5 = completely agree). Leadership styles is the central construct of the research, and they include four theoretically distinct forms - transformational, transactional, autocratic and democratic. The scales for measuring transformational and transactional leadership styles were taken from the work of Jensen et al. (2016), and autocratic and democratic leadership styles were measured with scales based on the Northouse model (2007). Transformational style was measured using four statements that include clarity of vision, shared goals and encouragement of team collaboration ($\alpha = 0.706$). Transactional style included six statements related to rewards, praise and sanctions ($\alpha = 0.722$), which describe leadership as a dynamic process of decision-making, communication management and employee participation. Autocratic style included six statements that describe hierarchical communication, strict decision-making and minimal involvement of team members ($\alpha = 0.702$). On the other hand, democratic style contained seven statements related to employee participation in decision-making, consultation and delegation of authority ($\alpha = 0.706$). Team cohesion is conceptualized as two-faceted – task-oriented and social.

The task-oriented cohesion scale was taken from the work of Chang et al. (2006) for measuring orientation towards a common goal, responsibility and support between team members through four items (α = 0.727), while social cohesion measures the informal connection of team members, their socialization and emotional closeness, again through four statements (α = 0.812). Work satisfaction was measured using a scale developed by Smith et al. (1969), which is one of the most commonly used measures of organisational satisfaction in work psychology and management. The scale includes six items covering general satisfaction with the nature of the project, project interest, creativity, sense of accomplishment and professional motivation (α = 0.797). In addition, satisfaction with financial compensation is measured as a separate subconstruct through three items on fairness and market-consistent compensation (α = 0.912), as well as the perception of the project manager presented through seven statements that measure the constructiveness of feedback, quality of communication, flexibility, professionalism and the level of trust the team members have in their project manager (α = 0.788). The average completion time was 10 to 15 minutes, which was confirmed by a trial completion by the authors before final distribution. The research was conducted in May-June 2025 among project team members from different sectors and at different positions within organizations. An additional inclusion criterion was that participants had worked in a project team for at least six months, which ensured relevant experience and the ability to evaluate team dynamics and leadership style. Ethical standards of scientific work were taken into account when conducting the research. Respondents were informed in advance about the purpose of the research, anonymity and voluntary participation, and the collected data were analyzed collectively, without the possibility of identifying individuals.

2.1. Demographic characteristics of the sample

A total of 105 respondents participated in the research, which is in line with recommendations for conducting correlation and regression analyses in the social sciences with recommend minimum of 10 respondents per predictor (Green, 1991). This number of respondents provides basic statistical power for a reliable analysis of the relationships between the observed variables. The sample is dominated by male respondents (70.5%). In terms of age structure, the two most represented age groups are 25–34 years (38.1%) and 35–44 years (41.0%), which together make up almost 80% of the respondents. These data indicate that the research participants are members of the most active and professionally productive population, who are often in key career development phases and intensive period of participation and commitment to project tasks. When it comes to education, the majority of participants have a university degree - graduate (60%) and postgraduate or doctoral education (12.4%). This confirms that the members of the project environment are highly qualified and professionally trained, which contributes to the credibility of their assessments regarding leadership styles and team dynamics. Respondents come from various sectors - ICT (26.7%), finance (21.0%), healthcare/pharmacy (16.2%), manufacturing/engineering (15.2%), education/science (11.4%) and public administration (9.5%). Such sectoral diversity ensures a broad view of leadership styles and team dynamics in different organizational and industrial contexts. In terms of work experience, 45.7% of respondents have more than 15 years of total work experience, while an additional 28.6% have between 8 and 15 years of experience. This indicates a high level of professional maturity and competence of the sample. At the same time, experience working in project teams is distributed in such a way that 34.3% of respondents have 1–3 years of experience and 27.6% have more than 7 years of experience, which ensures a good balance between fresh and long-term insight into teamwork. Finally, almost half of the participants (47.6%) worked in teams with less than five members, indicating a predominance of smaller teams, where communication and collaboration are often more intense.

However, participants from larger teams were also present (20% in teams with more than 20 members), indicating a diversity of structures and potential diversity of leadership styles in different team compositions.

3. RESULTS AND DISCUSSION

Initially, descriptive statistical analysis of the variables used in the research was performed with the aim of gaining basic insight into the distribution of data, central tendency and dispersion of results, thus creating a context for interpreting the interrelationships between variables in later analytical steps, followed by inferential statistical analyses. The transformational leadership style achieved the highest average score (M = 4.20), indicating a high level of agreement among respondents with statements describing this style, such as fostering a shared vision, team collaboration and guiding toward organizational goals. High values indicate that respondents perceive their superiors as project team leaders who motivate, communicate strategic direction and actively involve team members in achieving the vision. The democratic style was also highly rated (M = 3.88), indicating that project team members generally recognized inclusion in decision-making, openness to suggestions and sharing of responsibility. On the other hand, the transactional leadership style received a moderate average score (M = 3.63). Respondents were relatively reluctant to express agreement with statements indicating leadership based on rewards and punishments. Although some elements, such as providing positive feedback and warning about negative consequences have slightly higher scores, the overall level of expression of this style remains medium. This may indicate that project managers sometimes practice these elements, but team members do not perceive them as dominant. The lowest rated was the autocratic leadership style (M = 2.24), which shows that respondents generally do not recognize rigid, hierarchically strict or controlling patterns of behavior in their project managers. The sample of respondents perceives transformational and democratic leadership as the most pronounced and desirable styles in a team context, which is in line with the literature that associates these styles with a positive impact on satisfaction, motivation and team effectiveness. Task-oriented cohesion, as a form of team focus on common goals and cooperation in the context of performing work tasks, was rated highly (M = 4.15). Respondents showed a high degree of agreement with statements indicating a strong team orientation towards joint effort and responsibility, however, with a lower availability of team support. On the other hand, socially oriented cohesion, which includes emotional connection, informal interaction and a sense of interpersonal closeness, showed a moderately high average value (M = 3.71) and indicates that some teams cultivate close and friendly relationships, which can positively affect team climate, while indicating that cohesion in some cases depends on current functional cooperation, rather than on more permanent social ties. Respondents on average perceive a high level of task-oriented cohesion, which is expected given the nature of project teams that are focused on clearly defined goals and deadlines. Social cohesion is also present, but with somewhat greater variance among responses, suggesting that emotional and interpersonal bonds within teams vary depending on the context, team culture and nature of the tasks (eg. team members participating in long-term projects with frequent meetings may more often develop deeper social relationships, while in short-term tasks, functional but less personal collaboration is maintained). The results of descriptive statistics for variables related to work satisfaction, including project tasks, perception of the project manager and financial compensation indicate positive average ratings across all domains. Satisfaction with project tasks received an overall average rating of M = 3.98, indicating that respondents largely perceive their projects as interesting, fulfilling and professionally stimulating, however, with the impression that certain parts of the job are not equally creatively challenging for all participants and this may vary depending on the industry or type of task. The variable perception of the project manager showed the highest average value across all domains (M = 4.22).

Participants express high agreement with statements describing constructive, supportive and understanding behavior of their project managers, indicating a perception of leaders as emotionally intelligent and professional individuals. Also, high scores on statements about clarity of instructions, praise and constructive feedback further confirm positive organizational climate and quality of interpersonal relationships in project teams. Financial compensation, although rated the lowest among the three analysed categories, still received a relatively high average value of M = 3.90, which indicates moderate to high satisfaction of respondents with their income with relative acceptance of market conditions but also caution about the perception of the fairness of their own income. This pattern indicates that interpersonal relationships and work tasks are currently stronger sources of motivation than financial factors (eg. a team member who experiences support from project manager and feels that work contributes to something significant is likely to show a high level of engagement even though he/she does not necessarily consider himself/herself optimally paid). Next the regression analysis was used to examine the predictive power of individual leadership styles on the elements of team cohesion and work satisfaction in a project environment (Table 1 and Table 2). A multiple linear regression model was applied, which enables the simultaneous inclusion of several independent variables in order to assess their separate contribution in explaining the variability of the dependent variable. In this way, it is possible to identify which of the leadership styles significantly predict the level of task-oriented and social cohesion of the team, satisfaction with the project and the perception of the project manager. For task-oriented cohesion, transformational leadership style was found to be a statistically significant predictor ($R = 0.404$; $R^2 = 0.163$; $F = 20.034$; $p < 0.001$), meaning that this style explains about 16% of the variance in the perception of task-oriented cohesion. In other words, leaders with strong vision and motivational capacities who encourage shared goals and support collaboration are more likely to develop a cohesive team focused on achieving goals. All other styles - transactional, autocratic and democratic - did not show a significant impact on task-oriented cohesion (all p values > 0.05), meaning that they are not reliable predictors in this context. When it comes to social cohesion, no leadership style reached statistical significance, although the autocratic style approached the borderline value ($p = 0.055$). Its coefficient value ($R = 0.188$; $R^2 = 0.035$) suggests that in some contexts it could have a weak but potentially significant impact, still these results are not sufficient for definitive conclusions without additional testing.

Dependent variable	Independent variable		R	R^2	F	Sig.
Task-oriented cohesion	Leadership styles	Transformational	**.404**	.163	20.034	.000
		Transactional	.030	.001	.092	.762
		Autocratic	.056	.003	.319	.573
		Democratic	.032	.001	.107	.744
Social cohesion	Leadership styles	Transformational	.044	.002	.197	.658
		Transactional	.038	.001	.151	.699
		Autocratic	.188	.035	3.768	.055
		Democratic	.086	.007	.768	.383

Table 1: Regression analysis - prediction of team cohesion in the context of leadership styles (Source: author's work based on data obtained through primary research)

For satisfaction with project tasks, no leadership style was found to be a statistically significant predictor.

All p-values are well above the significance level (the lowest is for the autocratic style, p = 0.355), and the coefficients of determination (R^2) remain very low (from 0.0 to 0.008). These findings suggest that, although leadership style can shape other aspects of the work experience, satisfaction with project content is likely to depend more on characteristics of the tasks, individual roles or autonomy in work, rather than on project managers' behavior. Similarly, for satisfaction with financial compensation, no leadership style showed significant predictive potential. The highest R^2 is 0.011 for the transformational style (p = 0.292), indicating a very weak and statistically insignificant influence. This is to be expected, since financial policies are often structured independently of the leadership style of an individual project manager and are determined at the organisational, collective bargaining or market level. On the other hand, significant results were observed in the prediction of satisfaction with project managers in the context of leadership. Here transformational ($R^2 = 0.158$; $p < 0.001$) and democratic styles ($R^2 = 0.072$; $p = 0.006$) showed statistically significant and relevant effects. This means that respondents who perceive their project manager as visionary, supportive and collaborative express greater satisfaction with the way they are led. Transactional and autocratic styles did not show a significant impact ($p > 0.20$), which further confirms the preference of participative and encouraging styles of superiors in creating a positive work climate. These findings confirm the importance of the interpersonal dimension of leadership in shaping employees' subjective attitudes, while other spheres of satisfaction, such as work tasks or compensation, likely depend on broader organisational or structural factors.

Dependent variable	Independent variable		R	R^2	F	Sig.
Satisfaction (project tasks)	Leadership styles	Transformational	.011	.000	.012	.912
		Transactional	0.71	.005	.515	.475
		Autocratic	.091	.008	.863	.355
		Democratic	.069	.005	.496	.483
Satisfaction (financial compensation	Leadership styles	Transformational	.104	.011	1.122	.292
		Transactional	.038	.001	.146	.704
		Autocratic	.073	.005	.559	.456
		Democratic	.009	.000	.008	.930
Satisfaction (perception of project manager)	Leadership styles	Transformational	**.397**	.158	19.288	.000
		Transactional	.124	.015	1.597	.209
		Autocratic	.070	.005	.502	.480
		Democratic	**.268**	0.72	7.992	.006

Table 2: Regression analysis - prediction of work satisfaction in the context of leadership styles (Source: author's work based on data obtained through primary research)

In order to gain a deeper understanding of the mechanisms through which leadership style influences team members' work satisfaction, a mediation analysis was conducted to examine the mediating role of team cohesion (Table 3). The starting point of this analysis is based on the assumption that leadership styles do not directly affect work satisfaction, but rather partially or completely indirectly through team cohesion. Total direct and indirect effects were calculated, along with confidence intervals (95% CI), which allows for an assessment of the significance of the mediation even in cases where the distribution is not normal.

Model phase	Predictor variable	Coefficient (B)	SE	T	p	Lower 95% CI	Upper 95% CI
Effect X on M	Transformational leadership - Cohesion	.16	.07	2.31	.02	.02	.29
Effect X and M on Y	Transformational leadership - Satisfaction	.16	.07	3.22	.00	.06	.26
	Cohesion - Satisfaction	(-).04	.07	(-).50	0.62	(-).18	.10
Indirect effect	Transformational leadership – Cohesion - Satifaction	(-).01	.01	-	-	(-).04	.02

Table 3: Mediation analysis - team cohesion as a mediator between leadership style and satisfaction (Source: author's work based on data obtained through primary research)

This model examined whether task-oriented cohesion acts as a mediator in the relationship between transformational leadership style (X) and project satisfaction (Y), i.e. whether the impact of transformational leadership on satisfaction is transmitted through increased team cohesion. The results showed that transformational leadership has a significant positive effect on task-oriented cohesion ($B = 0.16$; $p = 0.02$), meaning that team members whose project manager displays transformational characteristics experience higher levels of team cohesion and focus on a common goal. Transformational leadership also directly and significantly predicts satisfaction with work ($B = 0.16$; $p < 0.001$). This confirms earlier theoretical and empirical expectations that this leadership style has a positive effect on employees' emotional and professional motivation. However, when satisfaction with work is included in the model as a dependent variable and task-oriented cohesion as a mediating variable, cohesion by itself is not shown to be a significant predictor of satisfaction ($B = -0.04$; $p = 0.62$). In other words, once the impact of transformational leadership is taken into account, the additional contribution that cohesion might have to satisfaction is not statistically significant. It is possible that the effect of cohesion as a mediating factor is only evident in later stages of team development or in teams with a longer history of collaboration, which would require longitudinal research to examine the temporal aspect of this dynamic.

4. CONCLUDING REMARKS

This paper examined the relationships between leadership styles, team cohesion and work satisfaction in project teams, with a particular focus on the mediating role of team cohesion. Responding to the growing complexity and temporary nature of modern projects, the research contributes to the ongoing discussion on the importance of leadership in environments characterised by uncertainty, interdisciplinary collaboration and time pressure. The findings demonstrate that transformational leadership plays a central role in fostering task-oriented cohesion in project teams and leaders who articulate a clear vision, encourage collaboration and provide customised support are more likely to create teams that are aligned around common goals and coordinated task execution. In contrast, transactional, autocratic and democratic leadership styles did not significantly predict task-oriented cohesion, suggesting that instrumental control, reward-based exchange or participation alone may not be sufficient to generate a strong collective task focus in project settings. Furthermore, no leadership style was found to be a significant predictor of social cohesion, which indicates that emotional bonding and interpersonal relationships may depend more on temporal stability, team tenure and informal interaction patterns than on leadership behavior. With regard to satisfaction with work, the results indicate that leadership styles do not significantly influence satisfaction with project tasks or financial compensation as they appear to be shaped primarily by structural and organszational factors such as task design, autonomy and compensation policies.

However, transformational and democratic leadership styles were found to significantly predict satisfaction of the team members with their project manager, underscoring the importance of relational and interpersonal leadership behaviors in shaping subjective evaluations of leadership quality. From a theoretical perspective, paper contributes to leadership and project management literature by confirming the contextual and multidimensional nature of leadership effects, while from a practical perspective it highlights the importance of developing transformational and participative leadership competencies among project managers. Thus, organisations should invest in leadership development programs for their project managers to adapt their leadership approach to the relational needs of team members, emphasize vision-building, emotional intelligence, communication and empowerment rather than rely solely on formal authority or reward systems. However, certain methodological and substantive limitations need to be taken into account to interpret the results correctly. One of the main challenges relates to the type and size of the sample as the research was conducted on a convenience sample of 105 participants from different sectors, where the sample was not based on random selection. Sectoral diversity contributes to the breadth of views, but the unstructured nature of the selection of participants limits the representativeness of the results to the population of project team members. Given that the largest number of participants were in the middle stage of their careers and most of them were highly educated, it is questionable whether these findings are transferable to wider populations with different work experience, education levels or organisational cultures. The use of a self-report questionnaire as the primary instrument for data collection is a subject to various forms of bias, including socially desirable responses, subjective perceptions and cognitive limitations of the participants. Such influences can undermine the internal validity of measurements, especially for constructs such as leadership perception or satisfaction, which are highly sensitive to the current emotional state of the respondents or their personal expectations. The research is based on a cross-sectional design, which means that all data were collected at a single point in time which limits the ability to draw causal conclusions and to capture changes in cohesion and satisfaction across different project phases. Another limitation relates to contextual variables that were not included in the analysis - organisational culture, company size, project duration and other characteristics of the work environment potentially act as moderators or additional predictors in examining the relationship between leadership and work outcomes. Based on the above limitations, future research should employ longitudinal designs that track leadership behaviors, cohesion and satisfaction over the full life cycle of projects. Comparative studies across countries, industries and types of projects would further enhance understanding of contextual influences on leadership effectiveness. Additionally, future studies could incorporate moderating variables such as project complexity, team virtuality or team tenure, as well as explore alternative mediating mechanisms, including psychological safety, trust or knowledge sharing. Such approaches would deepen insight into the dynamic processes through which leadership contributes to effective and sustainable project team performance.

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FROM STATE OWNERSHIP TO ESG-GOVERNED ENTERPRISES: LEGAL CHALLENGES AND OPPORTUNITIES UNDER THE 2025 CROATIAN STATE-OWNERSHIP ACT

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ABSTRACT

The governance of state-owned enterprises (SOEs) has become a central issue in contemporary public economic law as sustainability, transparency, and accountability reshape expectations toward public ownership. The Croatian State-Ownership Act adopted in 2025., (Zakon o pravnim osobama u vlasništvu Republike Hrvatske, Narodne novine, br. 102/2025., further the Act) represents a legislative framework aimed at consolidating the exercise of shareholder rights of the Republic of Croatia, centralising ownership coordination, and introducing financial and non-financial (including sustainability-related) objectives into governance structures. This article develops an extensive doctrinal and comparative analysis of the reform within the broader framework of European Union law, the OECD Guidelines on Corporate Governance of State-Owned Enterprises, and contemporary debates on environmental, social, and governance (ESG) integration. Attention is devoted to the Social and Governance dimensions of ESG, the hybrid legal nature of state ownership, supervisory board responsibilities, and risks associated with political influence. The article argues that the Croatian reform reflects a broader shift toward an emerging model of ESG-oriented public ownership, yet its effectiveness will depend on institutional capacity, depoliticization, and the development of measurable governance mechanisms capable of translating normative commitments into operational practice.

Keywords*: Corporate governance, ESG, OECD Guidelines on Corporate Governance of State-Owned Enterprises, corporate purpose, public ownership*

1. INTRODUCTION: STATE OWNERSHIP IN AN ESG-ORIENTED GOVERNANCE ENVIRONMENT

State ownership remains a structurally significant feature of European economic governance. In sectors characterized by strategic relevance, natural monopoly characteristics, or the provision of services of general economic interest, public enterprises continue to perform functions that combine market participation with the pursuit of broader public objectives. Croatia is no exception. State-owned enterprises operate in energy, transport, infrastructure, and financial services, occupying positions that are economically material and politically sensitive. The governance of such enterprises, however, cannot be understood solely within a traditional public law framework. Contemporary developments require their analysis at the intersection of company law, European Union internal market law, state aid discipline, and sustainability regulation. The transformation of corporate governance standards — particularly through the integration of environmental, social, and governance (ESG) considerations — has reshaped expectations regarding accountability, transparency, and strategic oversight. State ownership is increasingly assessed not only in terms of economic efficiency but also in relation to sustainability performance, resilience, and long-term value creation.

The Croatian reform of the state ownership framework must therefore be situated within a broader process of regulatory convergence. In the Croatian legal framework, the Act primarily applies to legal entities in which the Republic of Croatia exercises prevailing influence, which requires a more precise distinction than the broader notion of state-owned enterprises (SOEs) At the international level, the OECD Guidelines on Corporate Governance of State-Owned Enterprises (2024) articulate a model of the state as an active and informed owner, emphasizing professional boards, competitive neutrality, and transparency. At the European Union level, state aid rules, competition law, and sustainability reporting obligations — notably under the Corporate Sustainability Reporting Directive (Directive (EU) 2022/2464 of the European Parliament and of the Council (Corporate Sustainability Reporting Directive) https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32022L2464) — impose structural constraints that shape the governance environment of public undertakings. These legal frameworks limit the discretion of Member States while simultaneously encouraging governance modernization. Croatian legal doctrine provides an important analytical lens for examining this transformation. In the field of company law, the concept of corporate interest has long been understood as requiring a balancing of economic objectives and the long-term stability of the enterprise (Barbić, J., 2013, Pravo društava: Opći dio. Zagreb: Organizator). Recent scholarship has increasingly emphasized that directors' and supervisory board members' duties cannot be confined to short-term financial metrics but must incorporate long-term risk management and sustainability considerations (Horak; Tomić - ESG'S INFLUENCE ON BOARD MEMBERS AND THEIR EVOLVING DUTIES; 110th International Scientific Conference on Economics and Social Development; XII.OFEL Book of Proceedings; Varaždin 2024: page 104-110). In parallel, European Union scholarship highlights that national governance arrangements must be interpreted within the constitutional structure of the internal market and the principles of proportionality and competitive neutrality (Ćapeta, T., & Rodin, S. (2011) Osnove prava Europske unije. Zagreb: Narodne novine). Furthermore, governance research underscores that formal legal rules are insufficient without professional capacity and institutional culture, particularly in systems exposed to political influence (Tipurić, D. (2008). Korporativno upravljanje. Zagreb: Sinergija). Against this background, this article advances the following thesis:

The Croatian reform of state ownership reflects an emerging European model of ESG-oriented public ownership in which the state's role as shareholder is reconceptualized as a governance function subject simultaneously to market discipline, sustainability obligations, and transnational soft-law standards. Its effectiveness, however, depends on the professionalization of supervisory structures and the internalization of governance norms beyond formal compliance. The analysis proceeds in eight chapters. It first clarifies the conceptual foundations of corporate purpose, public value, and ESG. It then examines OECD governance standards and EU legal constraints before turning to the Croatian institutional framework, supervisory duties, ESG implementation challenges, and the risk of symbolic compliance. The article concludes with normative reflections on sustainable public ownership within the European legal order.

2. CONCEPTUAL FRAMEWORK: CORPORATE PURPOSE, PUBLIC VALUE, AND ESG IN THE CONTEXT OF STATE OWNERSHIP

2.1 Corporate Purpose Beyond Shareholder Primacy

The debate on corporate purpose has undergone significant transformation in recent decades. While classical shareholder primacy models emphasized profit maximization as the central objective of the company, contemporary European company law scholarship increasingly recognizes the enterprise as a complex organizational structure embedded within broader social

and regulatory systems. The concept of corporate interest is thus understood as encompassing long-term viability, stakeholder relations, and compliance with regulatory obligations. Traditionally, companies followed the idea popularized by Milton Friedman that a corporation's main responsibility is to maximize shareholder returns. ESG challenges this by emphasizing stakeholder capitalism**,** where companies also consider employees, customers, communities, and the environment. A major symbolic shift came in 2019 when the Business Roundtable (an association of chief executive officers from major U.S. corporations that advocates for pro-business public policies) redefined corporate purpose to include commitments to all stakeholders, not just shareholders. In Croatian company law doctrine, corporate interest is not reduced to the immediate interests of shareholders but is interpreted considering the stability and sustainability of the enterprise as a legal entity (Barbić, J. (2013). Pravo društava: Opći dio. Zagreb: Organizator). This doctrinal understanding is particularly relevant in the context of state- owned enterprises, where the shareholder is the state and the objectives of ownership extend beyond financial return. State ownership inherently introduces a duality of purpose: public enterprises must reconcile commercial performance with policy objectives. Unlike purely private undertakings, their mandate may include ensuring universal service provision, regional development, or strategic autonomy.

This duality complicates the interpretation of directors' and supervisory board members' duties. The question arises whether the corporate interest of a state-owned enterprisecan legitimately incorporate public policy considerations that may not maximize short-term profitability. European legal developments suggest an affirmative answer, provided that such objectives are transparent, proportionate, and consistent with EU law. The recognition of services of general economic interest within Article 106 TFEU illustrates that public mandates are compatible with market principles, subject to conditions designed to prevent distortion of competition. The jurisprudence of the Court of Justice, particularly in Altmark (Case C-280/00 Altmark Trans GmbH EU:C:2003:415), clarifies that compensation for public service obligations does not constitute state aid when specific criteria are met, including clearly defined obligations and the avoidance of overcompensation. Corporate purpose in the context of state ownership must therefore be understood as legally structured pluralism: the enterprise pursues economic activity within a framework that may legitimately incorporate public objectives, but these objectives must be articulated and governed in a manner consistent with internal market discipline.

2.2 Public Value and the Role of the State as Shareholder

Public value theory provides a complementary conceptual perspective. It suggests that public institutions — including state-owned enterprises — should be evaluated not solely by profitability but by their contribution to societal outcomes. When applied to SOEs, this framework shifts the focus from ownership as control to ownership to stewardship. The OECD Guidelines (2024) reflect this orientation. They emphasize that governments should develop clear ownership policies defining the rationale for state ownership and the objectives pursued. The state should act as a professional and informed shareholder, avoiding day-to-day interference while ensuring strategic oversight. The separation of ownership and regulatory functions is particularly important in preventing conflicts of interest and safeguarding competitive neutrality. This model aligns with Croatian reform efforts aimed at centralizing ownership coordination and professionalizing supervisory structures. However, the success of such reforms depends on institutional capacity and clarity of purpose. Without clearly articulated ownership objectives, the dual role of the state may generate ambiguity and undermine accountability.

2.3 ESG as Governance Architecture

The integration of ESG considerations further reshapes the conceptual landscape. ESG has evolved from a voluntary reporting framework into a regulatory architecture embedded in EU law. The Corporate Sustainability Reporting Directive (Directive (EU) 2022/2464 of the European Parliament and of the Council (Corporate Sustainability Reporting Directive) https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32022L2464) and the European Sustainability Reporting Standards (European Sustainability Reporting Standards https://eur-lex.europa.eu/legal- content/EN/TXT/PDF/?uri=OJ:L_202302772) require large undertakings, including many public enterprises, to disclose sustainability risks, governance practices, and social impacts. This regulatory framework significantly strengthens the legal relevance of sustainability considerations, embedding them within corporate governance and reporting obligations. Croatian scholarship has highlighted that the integration of sustainability risks affects the interpretation of directors' duties. The standard of due care increasingly requires consideration of long-term environmental and social risks, particularly climate-related risks (Horak; Tomić - ESG'S INFLUENCE ON BOARD MEMBERS AND THEIR EVOLVING DUTIES; 110th International Scientific Conference on Economics and Social Development; XII.OFEL Book of Proceedings; Varaždin 2024: page 104-110). Supervisory boards are expected to oversee risk management systems capable of identifying and managing such risks. Failure to do so may expose the enterprise — and potentially its governing bodies — to legal and reputational consequences. In the context of state-owned enterprises, ESG integration acquires additional significance. Public enterprises are often expected to lead in sustainability transitions, especially in sectors such as energy and infrastructure. However, ESG must not become a rhetorical instrument. Its operationalization requires measurable objectives, internal controls, and professional governance practices. As governance research emphasizes, formal rules alone cannot ensure effective oversight; institutional culture and competence are decisive (Tipurić, D. (2008). Korporativno upravljanje. Zagreb: Sinergija). The conceptual framework thus reveals a convergence of three normative layers:

1. Corporate law doctrine (corporate interest and directors' duties),
2. Public value considerations (state ownership as stewardship), and
3. ESG regulatory architecture (sustainability as governance obligation).

The Croatian reform must be assessed within this multi-layered framework.

3. OECD STANDARDS AND THE TRANSNATIONAL MODEL OF STATE OWNERSHIP GOVERNANCE

3.1 The 2024 OECD Guidelines as a Governance Benchmark

The OECD Guidelines on Corporate Governance of State-Owned Enterprises (2024) constitute the most authoritative transnational benchmark for the governance of public enterprises. Although formally non-binding, they exert considerable normative influence, particularly in states undergoing governance reform or seeking alignment with international standards. Their importance lies not merely in the articulation of best practices, but in the consolidation of a coherent model of state ownership that reconciles public objectives with market discipline. The 2024 revision strengthens three interrelated dimensions: sustainability integration, integrity and anti-corruption safeguards, and the professionalization of ownership functions. The Guidelines emphasize that governments should exercise ownership in a transparent and accountable manner, acting as informed shareholders while avoiding undue political interference in day-to-day management. They further stress that boards of state-owned enterprises must possess the necessary expertise and independence to oversee strategy, risk management, and sustainability

performance. This governance model reflects a shift from ownership as control toward ownership as stewardship. The state is expected to articulate a clear ownership policy defining the rationale for state ownership, the objectives pursued, and the performance expectations imposed on enterprises. In doing so, governments are required to distinguish their role as shareholder from their regulatory authority — a distinction designed to protect competitive neutrality. In the Croatian context, the relevance of the OECD framework is twofold. First, it provides a normative template for the professionalization of supervisory boards and the clarification of ownership coordination. Second, it serves as an external benchmark against which national reforms can be evaluated. The integration of sustainability considerations within the 2024 revision aligns closely with EU regulatory developments, reinforcing the idea that ESG is not an optional add-on but a core governance requirement.

3.2 Ownership Policy and Competitive Neutrality

One of the central principles articulated by the OECD concerns competitive neutrality. State-owned enterprises should operate on a level playing field with private undertakings, without benefiting from implicit state guarantees or preferential treatment. This principle is essential for maintaining market confidence and preventing distortions of competition. Competitive neutrality also resonates with European Union law. The internal market is premised on the neutrality of ownership structures; Article 345 TFEU (Treaty on the Functioning of the European Union, https://eur-lex.europa.eu/legal- content/EN/TXT/?uri=OJ:C:2008:115:TOC). confirms that the Treaties do not prejudice the system of property ownership in Member States. However, this neutrality does not shield public undertakings from compliance with competition rules. Article 106(1) TFEU explicitly requires Member States to ensure that public undertakings respect competition law, while Article 106(2) allows limited derogations for services of general economic interest under strict conditions. The OECD's emphasis on separating ownership and regulatory functions complements this EU framework. Where the state simultaneously acts as regulator and shareholder, conflicts of interest may arise that undermine market fairness. Clear institutional separation mitigates these risks and enhances credibility. Both OECD governance standards and EU law address structurally similar risks, particularly conflicts of interest arising from the dual role of the state as regulator and shareholder. The OECD's separation principle complements the EU ESG framework because it provides the institutional backbone that makes ESG credible:

- ESG defines what companies should achieve (sustainability, accountability, stakeholder value)
- OECD governance principles ensure the system enforcing this is impartial, transparent, and effective

Without that separation, ESG risks being inconsistent, biased, or ineffective, especially where the state is both player and referee. Croatian reforms seeking to centralize ownership coordination and clarify institutional competences must therefore be assessed considering this principle. Without transparent ownership policies and professional oversight structures, the distinction between regulatory intervention and shareholder influence may become blurred.

3.3 Board Professionalization and Sustainability Oversight

The 2024 Guidelines place particular emphasis on the competence and independence of boards. Board members should be appointed through transparent and merit-based procedures, possess relevant expertise, and act in the best interest of the enterprise. Political considerations should not compromise professional judgment.

This dimension directly intersects with Croatian company law doctrine. Under the Croatian Companies Act, members of supervisory boards are required to exercise due care and loyalty in overseeing management activities. Contemporary scholarship argues that this duty encompasses the supervision of risk management systems and long-term strategic planning (Horak, H. (2025). Klimatska odgovornost trgovačkih društava; Okrugli stol -Sporovi o klimatskim promjenama Knjiga 87, HAZU; Zagreb) / (Barbić, J. (2013). Pravo društava: Opći dio. Zagreb: Organizator). The OECD Guidelines reinforce this interpretation by explicitly requiring boards to oversee sustainability risks and ESG disclosures. The integration of sustainability into board oversight expands the traditional understanding of governance. It requires boards to assess climate-related risks, supply chain vulnerabilities, and reputational exposure. Reputational risk encompasses and interconnects with several other risks such as operational risk, compliance risk and strategic risk. Therefore, in overseeing board of directors must adopt a comprehensive perspective (Magan M; Michelon G. (2024) Handbook on Corporate Governance and Corporate Social Responsibility¸ E.Elgar Publising). In state-owned enterprises, where public scrutiny is intensified, the governance implications are particularly significant. Governance research further emphasizes that professionalization is not solely a matter of formal qualifications but also of institutional culture and capacity (Tipurić, D. (2008). Korporativno upravljanje. Zagreb: Sinergija). Transparent appointment procedures are necessary but insufficient; sustained training, performance evaluation, and accountability mechanisms are equally important. The Croatian reform's effectiveness will thus depend not only on legislative design but on the development of a governance culture that internalizes these standards.

4. EUROPEAN UNION LEGAL CONSTRAINTS: COMPETITION, STATE AID, AND SUSTAINABILITY REGULATION

4.1 Ownership Neutrality and Market Discipline

European Union law establishes a framework within which Member States may retain ownership of undertakings while ensuring the integrity of the internal market. Article 345 TFEU affirms ownership neutrality, but this principle does not exempt state-owned enterprises from compliance with competition rules. Public undertakings are subject to Articles 101 and 102 TFEU, as well as to the state aid discipline under Articles 107 and 108 TFEU. Article 106(1) TFEU requires Member States to refrain from enacting or maintaining measures contrary to competition rules in respect of public undertakings. This provision underscores that ownership cannot serve as a shield against market discipline. At the same time, Article 106(2) recognizes that undertakings entrusted with services of general economic interest may be granted specific rights or compensation, provided that such measures are necessary and proportionate. The jurisprudence of the Court of Justice, particularly in Altmark, establishes four cumulative criteria under which public service compensation does not constitute state aid. These criteria — clearly define obligations, objective and transparent parameters for compensation, avoidance of overcompensation, and benchmarking against a well-run undertaking — reflect a structured approach to reconciling public mandates with competitive neutrality. In assessing Croatian state ownership reform, it is therefore essential to consider whether governance mechanisms facilitate compliance with these principles. Clear ownership objectives and transparent performance indicators reduce the risk of unlawful advantages and enhance legal certainty.

4.2 Sustainability Regulation and Corporate Governance

The EU's sustainability agenda further reshapes the governance environment. The integration of sustainability reporting obligations has two principal implications. First, it enhances transparency and comparability, enabling stakeholders — including the state as shareholders,

to evaluate performance against measurable criteria. Second, CSRD and the European Sustainability Reporting Standards (ESRS) establish extensive sustainability disclosure obligations. However, following Directive (EU) 2025/794 ('Stop-the-clock Directive') and its transposition into Croatian law (NN 151/2025), the application timeline for certain categories of undertakings has been postponed. The obligations therefore remain structurally relevant, but their temporal application has been adjusted. Croatian legal scholarship has observed that the expansion of sustainability reporting obligations influences the interpretation of directors' duties. The obligation to identify, assess, and manage sustainability risks becomes part of the standard of due care (Horak; Tomić - ESG'S INFLUENCE ON BOARD MEMBERS AND THEIR EVOLVING DUTIES; 110th International Scientific Conference on Economics and Social Development; XII.OFEL Book of Proceedings; Varaždin 2024: page 104-110). In state-owned enterprises, supervisory boards must therefore ensure that internal control systems can meet regulatory requirements. The interaction between EU sustainability regulation and state ownership is particularly significant in sectors central to the green transition. Public enterprises often play leading roles in energy transformation and infrastructure development. Consequently, governance failures may have systemic implications.

4.3 Constitutional and Institutional Dimensions

The EU legal framework must also be understood within its constitutional context. The principles of proportionality, subsidiarity, and sincere cooperation shape the interaction between national ownership regimes and supranational regulation. Member States retain discretion in structuring ownership frameworks, but such discretion is bounded by the obligations of the internal market. Scholarly analysis emphasizes that national governance reforms cannot be insulated from the constitutional logic of EU law (Ćapeta, T., & Rodin, S. 2011, Osnove prava Europske unije. Zagreb: Narodne novine). The interplay between ownership autonomy and internal market discipline requires careful institutional design. Where governance mechanisms lack transparency or accountability, the risk of legal conflict increases. The Croatian reform can thus be interpreted as part of a broader Europeanisation process in which national ownership structures are adapted to conform with supranational norms. The convergence between OECD governance standards and EU regulatory requirements reinforces this dynamic, embedding sustainability and competitive neutrality within the core of state ownership governance.

5. THE CROATIAN LEGAL AND INSTITUTIONAL FRAMEWORK OF STATE OWNERSHIP

5.1 Constitutional and Systemic Context

Public ownership in Croatia must be situated within a constitutional framework that recognizes the role of the state in managing public assets and promoting economic development. While the Constitution affirms market economy principles and entrepreneurial freedom, it does not exclude state participation in economic activity. The legal challenge is therefore not the legitimacy of state ownership per se, but the way it is exercised. Historically, the governance of state-owned enterprises in Croatia has been characterized by fragmentation of ownership functions across different ministries and administrative bodies. Such fragmentation can lead to inconsistent objectives, overlapping competences, and blurred accountability. Contemporary reform efforts aim to centralize ownership coordination and clarify institutional responsibilities, reflecting a shift toward a more structured ownership model. From a doctrinal perspective, the state, when acting as shareholder, must be distinguished from its role as regulator. This distinction is central to both OECD guidance and EU law.

The failure to separate these functions risks undermining competitive neutrality and exposing the state to allegations of preferential treatment or unlawful state aid.

5.2 Ownership Policy and Strategic Coordination

A coherent ownership policy is essential for aligning state-owned enterprises with public objectives while maintaining operational autonomy. The articulation of such a policy should define:

- the rationale for retaining ownership,
- the financial and non-financial objectives pursued,
- performance expectations, and
- mechanisms for monitoring and evaluation.

The OECD Guidelines (2024) / (https://www.oecd.org/en/publications/oecd-guidelines-on-corporate-governance-of-state-owned- enterprises-2024_18a24f43-en.html) emphasize that ownership objectives should be transparent and publicly disclosed. In the Croatian context, the development of clearer strategic frameworks represents an important step toward professionalization. However, clarity on paper must be accompanied by consistency in implementation. Croatian company law doctrine underscores that supervisory and management bodies must act in the best interest of the company. Where ownership objectives incorporate public policy considerations, these must be translated into concrete corporate strategies in a manner compatible with company law standards (Barbić, J., 2013, Pravo društava: Opći dio. Zagreb: Organizator). The absence of explicit statutory articulation of corporate purpose in state-owned enterprises may create interpretative uncertainty. Nevertheless, corporate interest in such enterprises can legitimately encompass public mandates, if these are defined transparently and aligned with EU law constraints.

5.3 Supervisory Boards: Duties and Professionalization

The reform of state ownership governance places particular emphasis on supervisory boards. In the Croatian two-tier system, supervisory boards are entrusted with oversight of management, approval of strategic decisions, and monitoring of risk management systems. Under the Companies Act, members of supervisory boards are subject to duties of care and loyalty. These duties require them to act diligently, independently, and in the interest of the company. In state-owned enterprises, the interpretation of these duties must reconcile commercial logic with public mandates. Recent scholarship highlights that the standard of due care increasingly includes the oversight of sustainability risks and long-term strategic resilience (Horak; Tomić - ESG'S INFLUENCE ON BOARD MEMBERS AND THEIR EVOLVING DUTIES; 110th International Scientific Conference on Economics and Social Development; XII.OFEL Book of Proceedings; Varaždin 2024: page 104-110) / (Horak, H. (2025). Klimatska odgovornost trgovačkih društava; Okrugli stol -Sporovi o klimatskim promjenama Knjiga 87, HAZU; Zagreb). The integration of ESG into governance thus expands the scope of supervisory responsibility. Boards are expected not only to monitor financial performance but also to ensure that environmental and social risks are identified and managed. Boards don't manage environmental and social risks directly day-to-day management's job. Supervisory boards/ non-executive directors are responsible for overseeing the establishment and effectiveness of systems for identifying, assessing, and managing such risks, while day-to-day risk management remains within the competence of the management board/ executive directors. Governance research emphasizes that professionalization requires more than formal qualifications (Tipurić, D., 2008, Korporativno upravljanje. Zagreb: Sinergija). Transparent appointment procedures, merit-based selection, and continuous training are necessary to ensure effective oversight.

Political considerations, if allowed to dominate board appointments, may undermine independence and strategic consistency. The Croatian reform's emphasis on competency-based appointments aligns with OECD guidance. The OECD has long stressed that competency-based appointments in state-owned enterprises are necessary but not sufficient. Croatia adopting this approach is an important structural step, but its effectiveness hinges on two deeper factors: consistency and institutional culture. Competency-based selection helps ensure that Boards and executives have relevant expertise, decisions are more strategic and long-term and ESG and corporate purpose can be meaningfully implemented. Boards urgently need to reflect on the very reason of their existence and that of the organizations they supervise (Marnet O. (2022) Research Handbook on Corporate Bord Decision -Making; E.Elgar Publishing). The Croatian reform reflects a direction broadly consistent with OECD standards and EU regulatory developments. However, the effectiveness of these mechanisms depends on their consistent application and the development of a culture of professional autonomy.

6. ESG INTEGRATION AND GOVERNANCE CHALLENGES IN PRACTICE

6.1 Operationalizing ESG in State-Owned Enterprises

The incorporation of ESG principles into the governance of state-owned enterprises requires translation from normative commitment to operational practice. This process involves:

- integrating sustainability objectives into corporate strategy,
- developing measurable performance indicators,
- establishing internal control systems,
- ensuring transparent reporting.

The Corporate Sustainability Reporting Directive and ESRS standards impose structured disclosure obligations, requiring enterprises to assess material sustainability impacts and risks. For state-owned enterprises, these obligations may reinforce accountability toward both public authorities and society at large. However, ESG integration presents practical challenges. Measuring social impact or environmental externalities often involves methodological complexity. Balancing financial sustainability with broader public objectives may generate tensions, particularly in sectors subject to competitive pressures. Croatian doctrinal analysis suggests that the interpretation of directors' duties must evolve to reflect these realities (Horak; Tomić - ESG'S INFLUENCE ON BOARD MEMBERS AND THEIR EVOLVING DUTIES; 110th International Scientific Conference on Economics and Social Development; XII.OFEL Book of Proceedings; Varaždin 2024: page 104-110). The failure to consider material sustainability risks may constitute a breach of due care where such risks are foreseeable and legally relevant.

6.2 Political Influence and Institutional Capacity

One of the persistent risks in state ownership governance is political influence. Democratic accountability necessitates some degree of oversight, yet excessive intervention may undermine operational autonomy and strategic planning. The distinction between legitimate ownership oversight and political interference is not always clear-cut. OECD guidance recommends that governments refrain from day-to-day intervention and respect the autonomy of boards and management. Transparent appointment procedures and clear performance criteria can mitigate risks of politicization. Institutional capacity is equally critical. Even well-designed legal frameworks may fail if administrative bodies lack expertise, resources, or coordination mechanisms. Governance scholarship underscores that institutional effectiveness depends on organizational culture and professional norms (Tipurić, D., 2008, Korporativno upravljanje. Zagreb: Sinergija).

Many OECD member countries have addressed the issue of political independence of the securities supervisor through the creation of a formal governing body (a board, council or commission) whose members are given fixed terms of appointment. Some jurisdictions also stagger appointments and make them independent from the political calendar to further enhance independence. Some jurisdictions have sought to reduce potential conflicts of interest by introducing policies to restrict post-employment movement to industry through mandatory time gaps or cooling-off periods. Such restrictions should take into consideration the regulators' ability to attract senior staff with relevant experience. These bodies should be able to pursue their functions without conflicts of interest, and their decisions should be subject to judicial or administrative review. At the same time, supervisory staff should be adequately protected against the costs related to defending their actions and/or omissions made while discharging their duties in good faith. To guard against conflicts of interest (including the potential for political or business interference in supervisory and enforcement processes), operational independence may be reinforced by autonomy over budgetary and human resource management decisions. Such autonomy should be coupled with high ethical standards and accountability mechanisms, including timely, transparent and fully explained decisions that are open to public and judicial scrutiny (G20/OECD, Principles of Corporate Governance.
(OECD Publishing 2023
https://www.oecd.org/content/dam/oecd/en/publications/reports/2023/09/g20-oecd-principles-of-corporate- governance-2023_60836fcb/ed750b30-en.pdf).

In transition economies, historical legacies may exacerbate these challenges. Reform therefore requires sustained commitment, not merely legislative change.

6.3 Balancing Public Mandates and Market Discipline

State-owned enterprises often operate in markets where they compete with private actors. Ensuring competitive neutrality while fulfilling public mandates demands careful governance design. From a legal perspective, public service obligations must be clearly defined and compensated in accordance with EU state aid rules. Transparent cost allocation and objective performance metrics reduce the risk of distortions. Governance mechanisms that clarify strategic objectives contribute to legal certainty and compliance. The integration of ESG may further complicate this balance. Public enterprises may be expected to assume leadership roles in sustainability transitions, potentially bearing costs that private competitors do not. Policymakers must therefore design regulatory frameworks that reconcile sustainability leadership with fair competition.

7. FORMAL COMPLIANCE, INSTITUTIONAL LIMITS, AND THE RISK OF SYMBOLIC GOVERNANCE

7.1 The Problem of Decoupling in Governance Reform

Governance reform frequently encounters a structural risk: the adoption of formal rules without corresponding transformation in organizational practice. Institutional theory describes this phenomenon as "decoupling," where formal compliance is maintained for legitimacy purposes while underlying behavioral patterns remain unchanged. In the context of state-owned enterprises, this risk is particularly salient due to the intersection of political authority, administrative structures, and corporate governance. The Croatian reform introduces procedural safeguards — merit-based appointments, clearer ownership coordination, and enhanced reporting obligations — that are consistent with OECD standards. Yet formal alignment with transnational governance benchmarks does not automatically ensure substantive change. Without internalization of professional norms and sustained oversight, reforms may remain largely symbolic.

From a legal perspective, symbolic compliance is problematic for two reasons. First, it undermines accountability by creating an appearance of reform without measurable performance improvement. Second, it may expose the state to legal and reputational risks, particularly in the context of EU state aid discipline and sustainability reporting obligations.

7.2 ESG as Narrative Versus Operational Framework

The integration of ESG into governance structures introduces additional complexity. ESG may function either as an operational framework embedded in strategic planning and risk management, or as a narrative instrument signaling modernization and responsibility. The distinction is legally significant. Under EU sustainability reporting obligations, undertakings must disclose material risks and governance processes. Superficial or selective reporting may attract regulatory scrutiny. Moreover, where sustainability risks are foreseeable and material, the failure to integrate them into decision-making may implicate directors' and supervisory board members' duties (Horak; Tomić - ESG'S INFLUENCE ON BOARD MEMBERS AND THEIR EVOLVING DUTIES; 110th International Scientific Conference on Economics and Social Development; XII.OFEL Book of Proceedings; Varaždin 2024: page 104-110). State-owned enterprises face heightened expectations in this regard. As publicly owned enterprises, they are often perceived as exemplary of responsible governance. The credibility of public ownership depends not only on formal ESG commitments but on demonstrable implementation. Governance research reinforces this point: effective oversight requires competent boards, robust information systems, and organizational learning processes (Tipurić, D., 2008, Korporativno upravljanje. Zagreb: Sinergija). Without these elements, ESG risks becoming rhetorical rather than transformative.

7.3 Institutional Culture and Depoliticization

Institutional culture plays a decisive role in determining whether reforms achieve substantive outcomes. Transparent appointment procedures and statutory competency requirements are necessary but insufficient conditions for professional governance. The internalization of independence norms, respect for fiduciary duties, and resistance to political pressure are equally important. The separation of ownership and regulatory functions, emphasized by both OECD standards and EU law principles, must be reflected not only in formal structures but also in practice. Where political considerations continue to shape strategic decisions informally, governance credibility may be compromised. Croatian reform efforts thus face a dual challenge: establishing clear legal frameworks and cultivating professional governance culture. This requires sustained training, performance evaluation mechanisms, and transparency in board operations. Institutional learning must accompany legislative change.

8. Conclusion: Toward Sustainable Public Ownership

The analysis undertaken in this article demonstrates that the governance of state-owned enterprises in Croatia is embedded within a multi-layered normative framework. Three dimensions converge:

1. Corporate law doctrine defines the duties of management and supervisory bodies (Horak; Tomić - ESG'S INFLUENCE ON BOARD MEMBERS AND THEIR EVOLVING DUTIES; 110th International Scientific Conference on Economics and Social Development; XII.OFEL Book of Proceedings; Varaždin 2024: page 104-110) / Jakša Barbić, Pravo društava: Opći dio (Organizator 2013). Transnational governance standards articulated by the OECD (2024) – (https://www.oecd.org/en/publications/oecd-guidelines-on-corporate-governance-of-state-owned- enterprises-2024_18a24f43-en.html)

2. European Union legal constraints concerning competition, state aid, and sustainability regulation (Ćapeta, T., & Rodin, S., 2011, Osnove prava Europske unije. Zagreb: Narodne novine.

Within this framework, state ownership is reconceptualized as a governance function rather than a mechanism of direct control. The state acts as shareholder subject to market discipline, transparency obligations, and sustainability standards. The legitimacy of public ownership depends on its compatibility with competitive neutrality and responsible governance. The Croatian reform reflects a process of convergence toward an ESG-oriented model of public ownership, aligned with both OECD governance standards and EU regulatory requirements. However, convergence in form does not guarantee effectiveness in substance. The principal normative implication is that legal reform must be complemented by institutional capacity and governance culture. Supervisory boards must internalize sustainability oversight as part of their fiduciary responsibilities. Ownership policies must articulate clear objectives compatible with EU law. Transparency mechanisms must enable evaluation of both financial and non-financial performance. Ultimately, sustainable public ownership requires a balance between autonomy and accountability, public mandate and market discipline, national discretion and supranational constraint. Croatia's experience illustrates both the opportunities and structural limits of governance reform in transition contexts. The evolution of state ownership governance will depend not only on legislative design but on the continuous alignment of institutional practice with the normative expectations embedded in European and transnational frameworks.

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DOUBLE MATERIALITY ASSESSMENT AND SUSTAINABILITY REPORTING QUALITY UNDER THE ESRS: EVIDENCE FROM FIRST-YEAR ADOPTERS IN CROATIA

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ABSTRACT

To implement the requirements of the European Green Deal, the European Union is developing a set of Standards that enable comprehensive, uniform, and informative reporting on the fulfilment of sustainable business operations requirements. The Standards represent a game-changer for sustainability reporting among the largest companies, i.e., those with the largest emission footprints. Accordingly, the obligation to apply the European Sustainability Reporting Standards in the first year of application, i.e. from the financial year starting on 1 January 2024, is imposed on large companies that are public interest entities and that exceed an average number of 500 employees on the balance sheet dates. When it comes to ESRS, it is a complex set of Standards that encompasses a whole range of requirements. One of the most significant novelties in sustainability reporting is the assessment of double materiality, which encompasses financial materiality on the one hand and the impact materiality on people and the environment on the other. However, since the first application, the Standards have undergone significant changes and simplifications in accordance with the Omnibus package, the draft of which has been available since November 2025. The European Commission summarises the aim of these simplifications as making sustainability reporting more efficient and less burdensome. Regardless, the first year of application is behind us. Therefore, the question is: Have first-year CSRD obligors in Croatia successfully complied with sustainability reporting under the new European Sustainability Reporting Standards, and what characterises the quality of their double materiality assessment and sustainability disclosures?We researched this question by analysing a sample of 42 sustainability statements prepared by entities subject to sustainability reporting in 2024 in the Republic of Croatia. To obtain the necessary results, we used PCA, cluster analysis, and descriptive statistics. Results indicate that Croatian entities are well prepared for ESRS implementation; however, there is still significant room for improvement.

Keywords: *double materiality, ESG, ESRS, impact, risks and opportunities (IRO), sustainability reporting*

1. INTRODUCTION

Directive 2014/95/EU of the European Parliament and of the Council of 22 October 2014 amending Directive 2013/34/EU as regards disclosure of non-financial and diversity information by certain large undertakings and groups first defines the concept of double materiality as an important aspect of non-financial reporting. In accordance with the Directive, large groups employing more than 500 employees on average should include "information to the extent necessary for an understanding of the group's development, performance, position and impact of its activity, relating to, as a minimum, environmental, social and employee matters, respect for human rights, anti-corruption and bribery matters" in their consolidated management reports and consolidated non-financial statements (European Parliament and

Council of the European Union, 2014). Although the Directive does not mention the concepts of double materiality or materiality, it does present two perspectives on the information companies should disclose. On the one hand, information about those who influence the company; on the other hand, information about the company's impact on the external environment. Double materiality as a term and concept first appeared in 2019 in the *Guidelines on non-financial reporting: Supplement on reporting climate-related information* stating that the Non-financial Reporting Directive 2019/95/EU has a double materiality perspective explaining that the development, performance, and position of the company explain financial dimension, i.e. financial materiality, and impact of company's activities represents environmental and social materiality (European Commission, 2019). Before the introduction of the European regulations, non-financial reporting was based solely on the assessment of the materiality of the impacts. Although not being legally mandated, the largest number of non-financial reporting entities based their ESG disclosures on GRI standards. In accordance with GRI standards, companies shall "describe the actual and potential, negative and positive impacts on the economy, environment, and people, including impacts on their human rights" (Global Reporting Initiative, 2021). However, in June 2021, GRI issued white paper emphasizing benefits and challenges of implementing double materiality for sustainability reporting (Adams *et al.*, 2021). The authors conclude that, in practice, companies often prioritise financial materiality, while the processes for identifying and involving stakeholders and assessing the materiality of effects are insufficiently transparent. They believe that an approach that primarily emphasises financial significance can be harmful to sustainable development and to long-term financial success. Therefore, they emphasise that a thorough and credible assessment of an organisation's material impacts is a key starting point for understanding sustainability risks and their potential financial consequences (Adams *et al.*, 2021)

From 2019, with the European Green Plan, which emphasised the importance of informing the public about the non-financial aspects of the company's operations, the regulatory framework began to develop, leading to the introduction of mandatory sustainability reporting standards. In 2021, the European Financial Reporting Advisory Group (EFRAG), at the request of the European Commission, will launch an initiative to develop a unique set of sustainability reporting standards. The initiative resulted in the adoption of the European Sustainability Reporting Standards (ESRS) in July 2023 by Commission Delegated Regulation (EU) 2023/2772 of July 31, 2023, amending Directive 2013/34/EU of the European Parliament and of the Council regarding sustainability reporting standards. The adopted standards have sparked extensive public discussion regarding their scope, complexity, and the large number of disclosure requirements. The Standards shall apply from the business year beginning on 1 January 2024 for large public interest entities with an average number of employees exceeding 500 at the balance sheet date, with a gradual expansion of the number of taxpayers in subsequent cycles. However, already in February 2025 the European Commission has adopted the first Omnibus package containing proposals to "simplify EU rules and boost competitiveness, and unlock additional investment capacity with objective to create a more favourable business environment to help EU companies grow, innovate, and create quality jobs (https://finance.ec.europa.eu/publications/omnibus-i-package-commission-simplifies-rules-sustainability-and-eu-investments-delivering-over-eu6_en). This resulted in several decisions postponing the application of certain requirements and allowing a transitional period for adoption for certain groups of taxpayers. Finally, in December 2025, the European Parliament and EU member states agreed on the Omnibus I simplification package, which represents a significant step toward reducing the administrative burden on public interest entities.

The main aim of the package is to reduce complexity and improve efficiency by excluding reporting requirements for many companies but increasing flexibility for those that remain liable. In addition, in November 2025, EFRAG issued drafts of simplified ESRSs that reduce the number of requirements and introduce simplifications in their application. One of the most significant innovations in sustainability reporting for ESRS entities concerns double materiality (European Commission, 2023). As previously highlighted, entities must assess impact materiality and financial materiality to assess the materiality of individual matters in sustainability reporting. More specifically, entities conduct a materiality assessment as an initial step in sustainability reporting to identify significant impacts, risks, and opportunities (IROs). The double materiality assessment process is governed by general requirements (ESRS 1) and general disclosures (ESRS 2), as well as standards related to topical requirements (E1-G1). General disclosures (ESRS 2) include disclosure requirements that apply to all entities applying ESRS regardless of their activities. In addition to other requirements that address general reporting, disclosures in special circumstances, governance, strategy, interests, and stakeholders' views, a significant portion of the requirements address double materiality and related disclosures (European Commission, 2023). The double materiality assessment process in the ESRS (2023) is very detailed, highly granular and strongly process-oriented, which makes it administratively demanding. As part of IRO-1, *the Description of the process to identify and assess material impacts, risks, and opportunities*, including detailed descriptions of the methodologies and assumptions used, input parameters, connections with overall corporate governance, internal controls, and stakeholder involvement, is required (European Commission, 2023). In the draft ESRS 2025, the disclosure requirements under IRO-1 have been reduced from eight to four (EFRAG, 2025). In the new draft Standards, the standard-proposers emphasise the results of the double materiality assessment rather than the process, and they simplified the requirements (EFRAG, 2025). For example, instead of a detailed description of the methodology, a 'concise description' is required. Instead of a history of changes, 'significant changes' in the assessment methodology must be stated. Also, EFRAG significantly reduced the requirements relating to internal controls, integration with overall corporate governance and the details of input parameters (EFRAG, 2025). An especially important change is the merger of the descriptions of assessment of impact materiality and financial materiality, which in the 2023 version of the Standards had separate sections that required a detailed description of the magnitude and likelihood of impacts, risks, and opportunities (EFRAG, 2025). The current ESRSs (2023) require companies to explain the conclusions of their assessment of non-material topics (IRO-2, 55) (European Commission, 2023). In the draft Standards, the emphasis remains exclusively on climate topics (E1), providing significant administrative relief for companies. Thus, the EFTRAG completely excluded requirements relating to immaterial topics from IRO-2 (EFRAG, 2025). Also, the draft standard further emphasises the connection between double materiality and the due diligence process. Finally, the 2023 version of the Standards did not include any application requirements (AR) for IRO-1, allowing companies to adopt a wide range of interpretations and approaches in practice (European Commission, 2023). In contrast, the 2025 draft introduces six application requirements that should allow for greater standardisation of the double materiality assessment process and for uniform publication of its results (EFRAG, 2025). Ultimately, although the 2023 Standards are extremely comprehensive and demanding to apply, they ensured a high level of transparency. However, the proposed amendments in the 2025 draft will reduce transparency to some extent due to the implemented simplifications. However, the changes should still result in increased proportionality and a reduction in the administrative burden for companies. The European Commission has still not adopted the 2025 ESRS draft, while the first year of application of the 2023 ESRS is now behind us.

Thus, this raises an important question: how did the first implementation shape the double materiality assessment and the disclosure of material matters for companies? Accordingly, the purpose of this paper is to assess the level of implementation of the double materiality assessment requirements in sustainability statements in the Republic of Croatia during the first year of the ESRS's application (2023). In addition, the paper aims to investigate the quality of sustainability reporting by comparing the quality of the conducted double materiality assessment with the quantity of disclosures of material topical requirements.

2. LITERATURE REVIEW

Although sustainability reporting based on the concept of double materiality is still a relatively new approach, which has been mandatory in the European Union for only a limited number of public interest entities and for only one financial year (2023), a significant number of papers have already been published that deal with the application of double materiality in the assessment of material matters in sustainability reporting. In this sense, there is a certain number of papers that study the concept of double materiality before the adoption of the ESRS and link it with other sustainability reporting guidelines and standards, such as the GRI standards (Bogdan *et al.*, 2025; Bux *et al.*, 2025; Correa-Mejía *et al.*, 2024; De Cristofaro and Gulluscio, 2023; Mezzanotte, 2023; Ng *et al.*, 2022; Nielsen, 2023; Shami, 2025). In addition, fewer papers address double materiality in the context of the ESRS (Grigaitytė and Rudžionienė, 2025; Macuda and Kobiela-Pionnier, 2025; Suta *et al.*, 2025; Szalacha, 2024; Tarakcıoğlu Altınay and Sardoğan, 2025). Furthermore, several studies include a content analysis of double materiality adoption. A few of them researched the adoption of the concept in the pre-obligation period and analysed so-called early adopters (Bogdan *et al.*, 2025; Correa-Mejía *et al.*, 2024; De Cristofaro and Gulluscio, 2023; Grigaitytė and Rudžionienė, 2025; Macuda and Kobiela-Pionnier, 2025; Szalacha, 2024). Other, analysed sustainability reports for the first adoption year – 2024 (Grigaitytė and Rudžionienė, 2025; Tarakcıoğlu Altınay and Sardoğan, 2025).

2.1. Regulation and guidelines for reporting double materiality

Some of the first papers aim to review the theoretical concept of double materiality, and others aim to review and compare regulations, guidelines, and reporting standards on sustainability. Baumüller and Sopp (2022) analyse the historical development of the concept and pinpoint that the European Parliament vaguely defined the materiality concept in the NFI Directive. In contrast, the CSRD proposal defines double materiality more clearly but also significantly more demanding for companies. They conclude that double materiality will expand the scope of reporting and increase the costs and complexity of the process. Mezzanotte (2023) confirms these findings and emphasises that the assessment of materiality under the ESRS is complex, subject to uncertainty, and open to multiple interpretations. Fornasari and Traversi (2024) add that CSRD and ESRS introduce stricter, more detailed and comparable requirements. Bux et al. (2025) conclude that double materiality is a dynamic rather than a static process, and that a dual approach provides more complete and higher-quality information to stakeholders. However, the introduction of double materiality results in certain risks. Thus, Mezzanotte (2023) warns of risks associated with stakeholder involvement, data availability and quality, and differences in materiality criteria, while in a later work (Mezzanotte, 2024), he highlights additional challenges related to data collection, publication quality, weaknesses in impact management, and the implementation of rules. Piętka and Ziaja (2025) believe that double materiality assessment methodologies will continue to develop, and Wojnowska-Radzińska (2025) emphasises that the absence of a standardised methodology creates legal uncertainty, increases costs, and makes consistent application difficult. In other words, double materiality is a central concept in the regulatory framework, but its practices remain unoperationalised, which represents one of the biggest challenges for future reporting procedures.

To increase comparability and transparency, Lilo et al. (2025) propose a methodological framework and codebook to distinguish between financial and impact materiality. The authors conclude that the proposed framework can facilitate understanding and comparability in the assessment of double materiality and help companies prepare more transparent and useful sustainability disclosures (Lilo *et al.*, 2025). Similarly, De Cristofaro and Gulluscio (2023) and Correa-Mejía et al. (2024) highlight the need for clearer operational guidelines and conditions to ensure the consistent application of the assessment process. Overall, the literature shows a clear consensus that the application of double materiality will be extremely demanding and complex for companies, and that, despite extensive regulatory requirements, there remains a lack of a clear methodological operationalisation that would enable consistent and comparable application of this concept in practice.

2.2. Early adopters

The majority of empirical studies analyse sustainability reports in the years before the first implementation of ESRS, to determine the readiness of companies to implement the double materiality concept (Bogdan *et al.*, 2025; Correa-Mejía *et al.*, 2024; De Cristofaro and Gulluscio, 2023; Grigaitytė and Rudžionienė, 2025; Macuda and Kobiela-Pionnier, 2025; Ng *et al.*, 2022; Szalacha, 2024). Some authors conduct longitudinal analyses to assess the development and implementation of ESRS and double materiality (De Cristofaro and Gulluscio, 2023; Kapplmüller *et al.*, 2025; Shami, 2025). De Cristofaro and Gulluscio (2023) analyse reports of 58 companies from the period 2019–2021. Authors identify a high diversity, fragmentation and methodological inconsistency in disclosures related to the assessment of double materiality. Shami (2025) analyses 366 European companies from 2020 to 2022 and, using keyword analysis and regression, concludes that the mention of double materiality has an increasing trend but has no significant impact on reducing the divergence in ESG ratings. According to the results, the number of reports mentioning double materiality has increased from four in 2020 to 88 out of 366 in 2022. The authors do not offer a clear operationalisation of the concept of double materiality for their regression analysis, but instead measure it by the frequency of the term's occurrence (Shami, 2025). Ng et al. (2022) advocate the development of global standards based on double materiality and, using the example of a company in Ghana over the period 2016–2020, show that climate disclosures based on the single materiality approach are weak, insufficient and inconsistent, making comparability difficult and ignoring external costs. Kapplmüller et al. (2025) conduct a longitudinal case study of one company (2021–2023) and identify four drivers of the transformative potential of double materiality: attitude, engagement, responsibility and advancement. They conclude that an improved assessment model can enable real rather than symbolic application, and that companies should view materiality as a dynamic, contextual process. With an improved model of the double materiality assessment process, companies can achieve a transformation that enables iterative shared understanding, shared responsibility, and built-in accountability mechanisms rather than a symbolic assessment. Nielsen (2023), also through a case study, shows that linking the business model, value chain and due diligence process with the double materiality assessment enables a more effective selection of relevant ESG metrics. The author shows that the identified impacts, risks and opportunities can be more effectively translated into relevant ESG metrics when companies link the double materiality assessment process to a business model analysis and an in-depth examination of the value chain. The author concludes that the REGS model can help companies identify key KPIs by linking double materiality to the business's fundamental drivers. Szalacha (2024) analyses the sustainability reports of five Polish companies from the WIG20 index and, using the example of early adopters, identifies significant changes in the number and type of material topics, as well as differences in the quality and completeness of disclosures.

They conclude that the transparency of the double materiality assessment is inconsistent and still developing, as reflected in the varying levels of detail across companies (Szalacha, 2024). Similarly, Bogdan et al. (2025) analyse reports from seven companies prepared in accordance with the GRI standards and confirm a wide diversity in the application and interpretation of the double materiality requirements, which limits comparability. The authors conclude that the practice is still in its early stages and that EFRAG needs to develop clearer methodological guidelines to achieve more consistent and informative disclosures (Bogdan *et al.*, 2025). Several studies have quantified companies' readiness to introduce ESRS before mandatory implementation (Correa-Mejía *et al.*, 2024; Macuda and Kobiela-Pionnier, 2025; Nicolo *et al.*, 2025). Typically, the studies aimed to determine the sector's level of preparedness for the introduction of the ESRS. Nicolo et al. (2025) analyse the reports of 144 Italian companies and develop two disclosure indices. The first refers to the total number of disclosures weighted by topic, and the second to the share of material disclosures relative to the total number of disclosures. They conclude that most companies do not yet apply double materiality, but that compliance with GRI disclosures and the ESRS is high (around 66%), especially in governance and social topics (Nicolo *et al.*, 2025). At the same time, it is the lowest in environmental disclosures. They also confirm that the company's size and environmental sensitivity are important predictors of disclosure levels, and that future ESRS subscribers are better prepared than those who will not be (Nicolo *et al.*, 2025). Correa-Mejía et al. (2024) analyse 76 European companies that introduced double materiality before the mandatory implementation and find that 67% of them do not meet the minimum EFRAG requirements, which classifies them as so-called "label adopters". The authors conclude that the application of double materiality is still a "scenario under construction", characterised by numerous challenges and shortcomings in practice (Correa-Mejía *et al.*, 2024). Macuda and Kobiela-Pionnier (2025) arrive at similar findings: among the 30 largest Polish companies, only 23% conducted a double materiality assessment, and only 1 did so in accordance with the ESRS. They conclude that preparedness is low, that there is considerable unevenness among companies, and that numerous challenges will arise in implementing the new standards in the coming years (Macuda and Kobiela-Pionnier, 2025).

2.3. Adopters

The least amount of research directly addresses the assessment of the application of the double materiality concept in ESRS sustainability reports in the first year of implementation (2024) (Grigaitytė and Rudžionienė, 2025; Tarakcıoğlu Altınay and Sardoğan, 2025). Tarakcıoğlu Altınay and Sardoğan (2025) conducted a qualitative content analysis of 100 companies to determine how they interpreted, structured, and applied the double materiality concept. The results show that 78% of companies claim to have conducted a double materiality assessment, but only 46% provide a detailed description of the process (Tarakcıoğlu Altınay and Sardoğan, 2025). The authors conclude that there is considerable variability in interpreting the requirements, leading to inconsistent reporting and limited comparability across reports (Tarakcıoğlu Altınay and Sardoğan, 2025). Grigaitytė and Rudžionienė (2025) conduct a comparative case study of seven multinational companies to examine the application of ESRS 2 IRO 1 requirements in their 2024 reports. By comparing the elements of the disclosures related to the assessment of double materiality, they identify significant differences in methodology and conclude that methodological standardisation still does not exist in the early phase of the EFRS's application (Grigaitytė and Rudžionienė, 2025). Accordingly, they emphasise the need for clearer guidelines to improve the comparability, reliability, and transparency of the assessment of double materiality (Grigaitytė and Rudžionienė, 2025).

After reviewing all the research, a consensus emerges among the authors who analyse the regulation, those who research the readiness to apply ESRS before mandatory implementation and those who study the first year of double materiality implementation. All emphasise that it is a complex process with numerous requirements, the methodological operationalisation of which remains unclear. The consequence is inconsistency, differing interpretations of the requirements, and insufficient transparency in the disclosures about the assessment process. Therefore, there is still a lot of work ahead for both regulators, who need to provide clearer guidelines and standardisation, and companies, who need to develop internal processes and competencies so that implementation is factual rather than merely declaratory. Since the simplification of the ESRS is underway and double materiality is still undergoing institutionalisation, it remains an open question whether the proposed changes will deliver the necessary improvements without impairing the transparency and informativeness of future sustainability reports. Therefore, the research question is: Have first-year CSRD obligors in Croatia successfully complied with sustainability reporting under the new European Sustainability Reporting Standards, and what characterizes the quality of their double materiality assessment and sustainability disclosures? To answer these questions, we developed the following research questions:

- Develop and apply a composite double materiality assessment quality index (DM_index) and a sustainability reporting quality index (SRQ_index) for first-year CSRD obligors in the Republic of Croatia.
- Assess the level of quality of the double materiality methodology and reporting according to ESRS standards in the first year of mandatory application.
- Identify types of public interest entities according to the quality pattern of double materiality assessment and ESRS reporting using cluster analysis.

Based on the research question and objectives, the following research hypothesis was formulated:

H1. First-year CSRD obligors in Croatia can be classified into statistically distinct groups based on the quality of their double materiality assessment and sustainability disclosures.

H2. The quality of sustainability disclosures among first-year CSRD obligors in Croatia, as measured by the sustainability reporting quality index, exceeds the theoretical midpoint of the measurement scale, indicating a satisfactory level of compliance.

H3. The quality of double materiality assessment among first-year CSRD obligors in Croatia, as measured by double materiality index, exceeds the theoretical midpoint of the measurement scale, indicating a satisfactory level of implementation.

3. SAMPLE AND METHODOLOGY

To address the research objectives and hypothesis, we gathered data from first adopters who were required to report sustainability under ESRS in 2024. Thus, the Croatian Ministry of Finance have disclosed a list of entities required to prepare statements in accordance with ESRS in the first year of application of the Standard. The list consists of 50 public interest entities (available at: https://mfin.gov.hr/istaknute-teme/bankarstvo-racunovodstvo-i-revizija-111/izvjestavanje-o-odrzivosti/obveznici-izvjestavanja-o-odrzivosti/3796). However, the Ministry of Finance did not include 11 public interest entities in Croatia that employ more than 500 people in the list. Nevertheless, two entities that prepared sustainability statements in accordance with ESRS are early adopters, whereas another entity has not yet disclosed its sustainability report. Interestingly, there is no explanation for why those 11, among the biggest Croatian employers, were not included on the Ministry of Finance's list. Furthermore, regarding the sample determination, it is important to emphasise that eight (8) entities from the list utilised the exemption possibility under the provisions of the Accounting Act (Official Gazette 85/2024,

145/2024, 151/2025). All entities that used the exemption have published translations of their sustainability statements on their websites. Given that sustainability statements were prepared by parent companies outside Croatia rather than by Croatian subsidiaries, we did not include them in our research. Thus, the research covers 42 of the 50 public interest entities required to prepare statements in accordance with ESRS in the first year of the Standard's application. For the 42 public interest entities, we obtained sustainability statements for the financial year 2024 from the official websites of the respective companies and from the Zagreb Stock Exchange disclosure platform. To obtain the needed data, we used manual content analysis and systematically reviewed each statement, extracting relevant data in accordance with a predefined coding scheme. The extraction process involved reading the full sustainability report and identifying the presence, absence, and quality of specific disclosures related to the double materiality assessment and ESRS reporting requirements. Based on the coded data, we constructed two composite indices. The double materiality index (*DM_index*) captures the quality of the double materiality assessment process. In contrast, the ESRS index measures the quality and coverage of sustainability requirements disclosure relative to the applicable ESRS reporting requirements. We derived indices from binary and ordinal variables extracted during the content analysis phase and aggregated into continuous scores ranging from 0 to 1. Certain indicators used to calculate the double materiality index and sustainability reporting quality index are the result of the application of mandatory requirements (e.g. the description of the double materiality assessment methodology, or the publication of the IRO-2 table), and others, although not mandatory, increase the informative value and thus the quality of sustainability reporting (e.g. the materiality matrix or the consistent use of ESRS codes with the associated disclosures of requirements throughout the entire sustainability statement). To capture the quality and coverage of sustainability disclosures, we measured several aspects of sustainability statement content: the quantity of disclosures, non-materiality exceptions, the presence of an IRO-2 cross-reference table, and the use of the ESRS coding system in the statement. The sustainability reporting quality index (*SRQ_index*) is a composite variable constructed by aggregating scores across these four dimensions, yielding a continuous measure ranging from 0 to 1, with weights empirically derived from a principal component analysis. The quantity of disclosure captures the number of disclosed requirements relative to the overall number of requirements. Thus, we quantify the disclosure indicator (D_{ij}) as:

$$D_{ij} = \frac{d_{ij}}{maxR_j}$$

where
i = public interest entity included in the research
j = observed ESRS topics (E1, …, G1)
d_{ij} = number of disclosed requirements per topic
$maxR_j$ = number of total requirements per topic
The overall disclosure indicator for entity i is then obtained by aggregating D_{ij} across all applicable topics j and is between 0 and 1.
Although more than 50% of entities from the sample did not include descriptions and related them to the ESRS coding system in the text of the statements, 40 of them marked a certain number of topics as non-material. To consider that fact, we prepared the materiality indicator (M_{ij}) as:

$$M_{ij} = \begin{cases} 1 \; if \; topic \; is \; indicated \; as \; material \; in \; the \; IRO-2 \; cross-reference \; table \\ 0 \; if \; topic \; is \; indicated \; as \; non-material \; in \; IRO-2 \; cross-reference \; table \end{cases}$$

By combining disclosure indicator (D_{ij}) and materiality indicator (M_{ij}), we constructed the material and disclosed indicator ($MATDISC_i$), which ranges between 0 and 1 for every entity as:

$$MATDISC_i = \frac{\sum_{j=1}^{J}(D_{ij} * M_{ij})}{\sum_{j=1}^{J} M_{ij}}$$

By reviewing the statements, we identified several cases in which we marked one or more topics as non-material in the IRO-2 cross-reference table. Still, we included them in the statement as special topics (not to imply they are non-material). We believe that these entities declaratively meet the requirements without understanding them. To respect this fact, we constructed an indicator 'tick-the-box' (TTB_i) with values between 0 and 1, which will recognise those entities:

$$TTB_i = \frac{\sum_{j=1}^{J}(D_{ij} * (1 - M_{ij}))}{\sum_{j=1}^{J}(1 - M_{ij})}$$

Furthermore, in accordance with IRO-2 Disclosure Requirements in ESRS covered by the undertaking's sustainability statement, entities must include in the statement "a list of the Disclosure Requirements complied with in preparing the sustainability statement, following the outcome of the materiality assessment, including the page numbers and/or paragraphs where the related disclosures are located in the sustainability statement" (ESRS, 56.). To acknowledge this requirement, we created the IRO-2 cross-reference table indicator (TAB_i) as:

$$TAB_i = \begin{cases} 1\ IRO-2\ cross-reference\ table\ exists \\ 0.5\ IRO-2\ cross-reference\ table\ exists\ but\ it\ is\ incoplete \\ 0\ no\ IRO-2\ cross-reference\ table \end{cases}$$

In our opinion, one of the greatest structural aspects of EFRS is its coding system, which significantly improves the standardisation, consistency, and uniformity of sustainability statements. Thus, to measure the quality and coverage of statements, we analysed whether entities applied those codes in their statements (TAG_i) as:

$$TAG_i = \begin{cases} 1\ ESRS\ codes\ are\ used \\ 0.5\ ESRS\ codes\ are\ inconsistantly\ used \\ 0\ no\ ESRS\ codes \end{cases}$$

Finally, entities must identify material impacts, risks, and opportunities (IRO) in accordance with the concept of double materiality. We recognised significant differences in the reported number of material IRO between entities, and included in the *SRQ_index* standardised indicator of material IRO number (IRO_i) as:

$$IRO_i = \frac{iro_i - \min\ \_iro_i}{\max\ \_iro_i - \min\ \_iro_i}$$

where
iro_i = number of reported material IRO per entity.

Our sustainability reporting quality index (*SRQ_index*) is composite variable determined as:

$$SRQ\_index_i = w_1 * MATDISC_i - w_2 * TTB_i + w_3 * TAB_i + w_4 * TAG_i + w_5 * IRO_i$$

where weights w_k were derived from the first principal component loadings, normalised to sum to unity, ensuring that the *SRQ_index* ranges from 0 to 1.

To assess the quality of the double materiality assessment process, we developed the double materiality index (*DM_index*), which encompasses several aspects of the double materiality concept. These aspects are expressed through composite indices, by which we evaluated the structure of double materiality reporting, the disclosure of the scales used, the reporting of non-material topics, and consultations with affected stakeholders. We list all the indicators used to assess the double materiality process in the *Table 1*.

The double materiality index (*DM_index*) is created as:

$$DM\_index_i = w_1 * \left(\frac{MTH_i + MX_i}{maxK_1}\right) + w_2 * \left(\frac{TH_i + SC_i}{maxK_2}\right) + w_3 * \left(\frac{DES_i + COD_i}{maxK_3}\right) + w_4 * \frac{SH_i}{maxK_4}$$

where
max_K = maximum total index value (sum of maximum values of all components), where $maxK_1$, $maxK_2$, $maxK_3$, $maxK_4$ are specific for each dimension.

	Variable	Code	Type	Coding	Question
Methodology	Double materiality methodology	MTH	ordinal	0 = no description; 1 = generic description; 2 = partial description; 3 =detailed description	How detailed is the methodology explained?
	Double materiality matrix	MX	binary	1 = yes; 0 = no	Did entity disclose materiality matrix?
Quantification	Double materiality thresholds	TH	binary	1 = yes; 0 = no	Did entity disclose information on used thresholds for material IRO?
	Double materiality scale	SC	binary	1 = yes; 0 = no	Did entity disclose information on used scales?
Transparency	Description of non-material topics	DES	binary	1 = yes; 0 = no	Did entity describe non-material topics?
	ESRS coding of non-material topics	COD	binary	1 = yes; 0 = no	Did entity used ESRS coding in describing non-material topics?
Stakeholde	Stakeholders' inclusion	SH	ordinal	0 = no; 1 = declarative; 2 = partially (1-2 groups); 3 = systematically	Did entity explained involved stakeholders and used methodology for consultation with them?

Table 1: Variables used to calculate DM_index

4. RESEARCH RESULTS & DISCUSSION

In the first step, we calculated the indices for each company. To do this, we determined the indicator weights for the indices by applying principal component analysis (PCA), setting the number of factors to 1 and not using rotations. Based on the component matrices for each index, we calculated the weights by normalising the factor loadings of the first principal component so that their sum equals 1 (*Table 2*).

Given the negative loading of *TAG* (-0.088), we used its absolute value in the weight calculation, recognising that its contribution to the index is minimal.

SRQ_index			DM_index		
Indicators	*Component*	*weights*	*Indicators*	*weights*	*Component*
MATDISC	0.736	0.288	DM_structure	0.849	0.3470
TTB	0.47	0.184	DM_scaling	0.745	0.3045
TAG	-0.088	0.034	NM_quality	0.209	0.0854
TAB	0.749	0.293	VC_gov	0.644	0.2632
IRO	0.516	0.202			

Extraction Method: Principal Component Analysis.

Table 2: PCA component matrixes – determining weights for calculating SRQ and DM indecis

We included the obtained weights in the equations designed to calculate *DM_index* and *SRQ_index*, and calculated them for each analysed company. Results of descriptive statistics show that average value of SRQ_index is 0.583, and of DM_index is 0.679 (*Table 3*).

	Mean	SD	Median	Mode	Minimum	Maximum
SRQ_index	0.583	0.136	0.630	0.650*	0.070	0.730
DM_index	0.679	0.213	0.738	0.828	0.260	1.000

**Multiple modes exist. The smallest value is shown*

Table 3: Descriptive statistics for SRQ and DM indecis

To determine the number of relevant clusters, we used hierarchical clustering with *SRQ_index* and *DM_index*, applying the Ward Linkage method and the Squared Euclidean distance measure. From the dendrogram, it is possible to distinguish three distinct clusters separated by long distances (12-25 on the rescaled scale). The branch on the lower part of the dendrogram is a more homogeneous cluster, and the upper branch is a more heterogeneous cluster that joins relatively late (Figure 1).

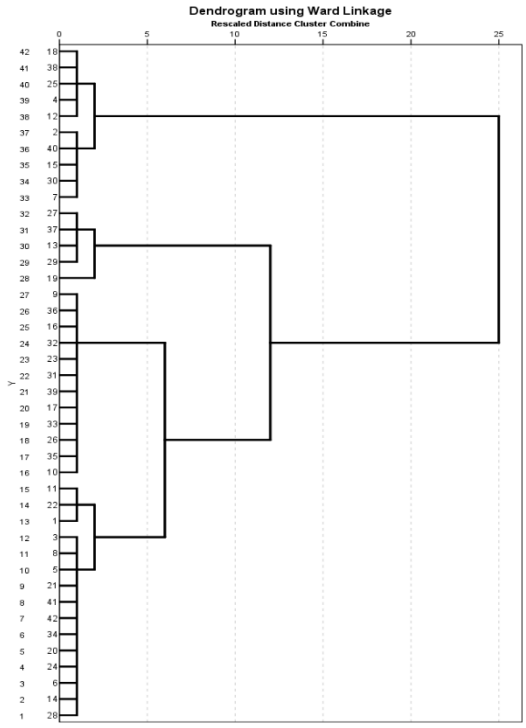

Figure 4: Dendrogram

We tested classification into three clusters using K-means clustering with limitations on the number of clusters. The results confirm the statistical significance of *SRQ_index* and *DM_index*, as the F values are significant at the 5% level, with empirical p-values of 0.000 for both variables (*Table 4*). The largest number of entities, almost 60%, was classified in cluster 1; almost 30% in cluster 2; and the smallest number, less than 12%, in cluster 3. Given that the entities in cluster 1 have relatively high average *SRQ_index* values and extremely high average *DM_index* values, we characterised them as leaders in sustainability reporting in the Republic of Croatia (Integrated Reporters). In contrast, the results show that the fewest companies are classified in the third cluster, characterised by a low average *SRQ_index* but a high average *DM_index*.

We concluded that these entities have implemented the double materiality assessment methodology well; however, in terms of the quality of their disclosure of topical requirements, they have significantly weaker results than clusters 1 and 2. Given that their assessment of double materiality is significantly higher than the disclosure of topical requirements in sustainability statements, we characterised entities in cluster 3 as process-focused reporters. There are shortcomings in transferring these assessment results into the quality of disclosures under the topical requirements in sustainability statements. In this sense, the perspective of uneven reporting is supported and compliance with the ESRS is in the early stages and is not yet fully systematic.

	Cluster 1 *Integrated Reporters*	Cluster 2 *Decoupled Reporters*	Cluster 3 *Process-focused Reporters*
SRQ_index	0.620	0.630	0.290
DM_index	0.820	0.400	0.650
n	25	12	5
%n	59.52%	28.57%	11.90%
F (SRQ_index)	37.968***		
F (DM_index)	57.260***		

*Note: *** $p<0.001$. F-statistics are reported for descriptive purposes only.*

Table 4: Results of K-means cluster analysis

From a theoretical perspective, the most interesting results are those of cluster 2, which incorporates almost 30% of entities. These entities have a relatively low *DM_index* (0.40) but a high average *SRQ_index* (0.63). They provide high-quality disclosure of topical requirements in their sustainability statements; however, their double materiality assessment methodology has shortcomings.

Regardless of the possible quality of the actual double materiality assessment, entities in cluster 2 have not sufficiently documented and disclosed the assessment methodology, resulting in a mismatch between the quality of disclosure of topical requirements and the quality of the disclosed double materiality assessment methodology. Given the mismatch between these two concepts, we characterised entities from cluster 2 as decoupled reporters.

Cluster Number	SRQ_index				DM_index			
	Mean	SD	Median	Mode	Mean	SD	Median	Mode
Cluster 1	0.618	0.070	0.640	0.610*	0.817	0.110	0.828	0.828
Cluster 2	0.633	0.080	0.645	0.710	0.404	0.111	0.424	0.261*
Cluster 3	0.286	0.131	0.320	0.070*	0.649	0.104	0.653	0.523*

** Multiple modes exist. The smallest value is shown*

Table 5: Descriptive statistics for clusters

The more detailed descriptive statistics confirm the previously interpreted average values; i.e., the median values are within the mean for most indicators (*Table 5*). The modal value confirms that the largest number of subjects in cluster 1 has a high *SRQ_index* of 0.610 and a high *DM_index* of 0.828. The analogy holds for other clusters. The multimodality of the distributions is an expected consequence of the small sample and the continuous nature of the variables. Based on the results, we conclude that it is possible to classify first-year CSRD obligors in Croatia into different groups based on the quality of their double materiality assessment and sustainability disclosures, thereby accepting the first research hypothesis (H1) as shown in *Figure 5*.

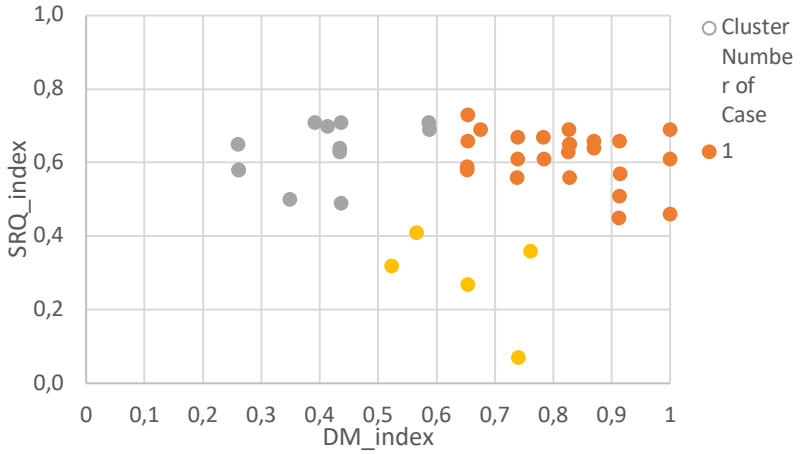

Figure 5: Scatter plot for clusters

We carried on cluster profiling of the obtained results by testing cluster differences in relation to company characteristics such as the total assets (*LnTA*), the number of employees (*LnEMP*), existence of a sustainability officer/team/board in the entity (*CSO*), and the auditor's conclusion on limited assurance, i.e. the existence of a modified conclusion (*AUD*) (*Table 6*).

Variable	Code	Quantification
Total assets	LnTA	Log10 of total assets value
Employees number	LnEMP	Log10 of employees' number
Sustainability officer/team/board	CSO	if exist 1, otherwise 0
Independent auditor's conclusion	AUD	1 = unmodified / clean conclusion 0 = modified conclusion

Table 6: Control variables

The results of the Kruskal-Wallis test indicate that there are no statistically significant differences in the number of employees, the presence of a sustainability officer/team/department, or the modified auditor's conclusion across entities classified into the three clusters at the 5% significance level (*Table 7*).

Although not statistically significant, the difference in total assets (*LnTA*) is marginally significant, with a p-value of 0.066, which is close to the 5% significance level. The absence of statistically significant differences is consistent with the study's main findings, and we can explain it by two complementary perspectives. First, the group of entities that were obliged in the first year of application is relatively homogeneous: these are the largest public-interest entities in the Republic of Croatia. Second, the possible reason is that the application of the ESRS for 2024 was the first adoption year, from which everyone starts on the same terms, without prior experience, and therefore has the same learning curve regardless of their size or available resources.

Variable	Test	H / χ^2	p-value	Conclusion
LnTA	Kruskal-Wallis test	5.451	0.066	Approaching significance
LnEMP	Kruskal-Wallis test	0.847	0.655	Not significant
CSO	Kruskal-Wallis test	0.190	0.910	Not significant
AUD	Kruskal-Wallis test	0.419	0.811	Not significant

Table 7: Results of Kruskal-Wallis tests

Therefore, we can conclude that the quality of reporting in the first year of implementation is not a function of company characteristics — the process of preparing for ESRS implementation does not depend on available resources, which is consistent with the theory of institutional isomorphism according to which companies under the same regulatory pressure converge towards similar practices regardless of their characteristics (Dimaggio and Powell, 1983).
The testing of H2 and H3 assumes that Croatian entities are well-prepared for the initial implementation of the European Sustainability Reporting Standards (ESRS). We assumed that the assessment of double materiality and the quality of topical requirements published in sustainability statements are adequate. We conducted this testing using the One-Sample Wilcoxon Signed Rank Test, with the break-even median set at 0.5 (*Table 8*).

Test	test statistic (W)	p-value	Conclusion
Median of SRQ index > 0.50	711.50	0.000	Confirmed
Median of DM index > 0.50	795.00	0.000	Confirmed

Table 8: Results of One-Sample Wilcoxon Signed Rank Test

The results obtained by testing confirm that for both variables the median value is statistically significantly above the theoretical midpoint of the measurement scale of 0.50 (p=0.000), based on which we concluded that the obliges of the first year of application of the ESRS achieved a satisfactory level of implementation in the context of the quality of the assessment of double materiality (*DM_index*) and the quality of topical requirements disclosures (*SRQ_index*) in sustainability statements. Based on the above results, H2 and H3 can be accepted.

5. CONCLUSION

The first adoption year of the ESRS is behind us, and ahead of us are the results in the form of published sustainability statements. The new sustainability statements can serve as exemplars of the first application and as lessons learned regarding possible shortcomings in the Standards. This paper aimed to determine the quality of the first mandatory application of the new concept of double materiality assessment and the quality of disclosure of topical requirements in sustainability statements prepared in accordance with the ESRS from 2023, using the example of 42 public interest entities in the Republic of Croatia. The research formed two indices. The first index (*DM_index*) measures the quality of the application of the double materiality assessment.

The index acknowledges the methodology used, the scales and thresholds employed, stakeholder involvement, and the publication of information on non-material topics. The results confirm that the entities are well prepared to implement the new materiality assessment concept, with an average index score of 0.679 (median 0.738) on a scale of 0 to 1. On the other hand, in the paper, we created a sustainability reporting quality index (*SRQ_index*) based on the number and materiality of published topical requirements, the number of published IROs, the appropriate disclosure of the IRO-2 table and the use of ESRS codes throughout the statement. In this part as well, the results indicate good entity preparation, with an average score of 0.583 (median 0.630) on a scale of 0 to 1. Based on the quality index results for assessing double materiality and sustainability reporting quality, we classified the analysed entities into three clusters: Integrated Reporters, Decoupled Reporters, and Process-focused Reporters. Most companies, almost 60% of them, are classified as Integrated Reporters, i.e. as leaders in sustainability reporting. Taken as a whole, the results confirm the appropriate level of preparedness of the largest public-interest entities in the Republic of Croatia for the application of ESRS.

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THE IMPACT OF CERTAIN ELEMENTS OF MANIFESTED ORGANISATIONAL CULTURE ON THE PERCEIVED QUALITY OF SERVICES AT ZAGREB ZOO

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ABSTRACT

Research Question (RQ): *What is the significance of the elements of manifested organizational culture on the perceived quality of services?*

Purpose: *The purpose of this paper is to examine whether and how organizational culture influences the perceived quality of services in the Zagreb Zoo.*

Method: *The research was conducted with a sample of visitors to the Zagreb Zoo using a survey. A questionnaire was used to collect data relevant to the research domain. The dependent variable was defined as perceived service quality (PSQ). In contrast, the independent variable, manifested organizational culture (MOC), was measured using a specially designed scale to evaluate visitors' attitudes and opinions regarding the visible and invisible features of organizational culture. To test the hypothesis, univariate, bivariate (t-test, correlation and regression analyses), and multivariate analyses (confirmatory factor analysis) were applied. All collected data were processed and analyzed using IBM SPSS Statistics 22.0 and Microsoft Excel.*

Results: *The application of organizational culture and perceived service quality required measurement procedures. The research results confirmed the multidimensionality of perceived service quality and its psychometric properties as a measurement instrument. Regression analysis demonstrated the predictive capability of manifested organizational culture on perceived service quality ($p < 0.001$).*

Organization: *The paper defines a business management model grounded in organizational culture and its impact on service quality.*

Society: *Implementing a culture-based management model has a positive impact not only on the organization's business performance but also on consumers as members of the broader community.*

Originality: *The paper presents a model of how organizational culture influences service quality, applicable to everyday business practice.*

Limitations / Further Research: *This study has limitations, as only certain dimensions of the dependent and independent variables were analyzed. Therefore, future research should include a greater number of variables and indicators to explore additional attributes of both organizational culture and perceived service quality.*

Keywords: *organizational culture, service, service quality, Zagreb Zoo*

1. INTRODUCTION

The service market today represents a significant segment of the overall business market. In most developed economies, this sector is among the fastest-growing and constitutes a substantial share of GDP.

Developed economies are primarily service-oriented, as the service sector generates the majority of employment and income. Therefore, service marketing represents a key area of economic activity, and understanding the concept of service as part of an expanded product concept is of exceptional importance. Similarly, understanding consumer behaviour in this context requires a different approach, primarily through the managerial component of marketing. According to the consumer-centric marketing concept, profit is regarded as a reward for creating satisfied consumers. Hence, an enterprise that applies the marketing concept or approach is consumer-oriented—directing all its plans, programs, and policies toward fulfilling customer needs (Prebensen & Xie, 2017; Milichovský & Simberova, 2015). Such policies often form an integral part of organizational cultures (Sandrk Nukić et al., 2016), indicating a close relationship between marketing and culture, particularly in the context of service management (Zeb et al., 2021; Tan, 2019). Organizational culture and service quality form a symbiosis—one of the fundamental mechanisms that enhance business operations and positively affect corporate profitability, especially in establishing long-term, high-quality relationships with consumers (McClure, 2010). High-quality service results from a planned, systematically implemented corporate culture. In the consumer evaluation process, service quality is the consumer's perception, as reflected in satisfaction, retention, and loyalty (Yu Sum & Leung Hui, 2009; Bond et al., 2003). These elements of consumer participation can easily translate into more tangible business outcomes, culminating in financial performance or other non-economic benefits such as brand development or increased market share. Organizational culture represents a pattern of coping with challenges of external adaptation and internal integration. Clearly, in analyzing and adapting to marketing environments, it is not sufficient to rely solely on market research, segmentation, and tactical adaptation through marketing mix management. This strategic marketing planning process must rest on a solid foundation of organizational culture. All actions and processes implemented within marketing operations are grounded in and derived from organizational culture. Organizational culture not only defines internal factors but also forms part of the broader corporate identity, bringing numerous advantages to the enterprise. As the focus is always on the consumer, organizational culture can be viewed as outward-oriented toward the enterprise's external environment (Byrne et al., 2019). It serves as a mode of communication and identification in a saturated market that continually generates new competitors, products, and quality dimensions. Corporate culture is shaped by an organization's tendency toward flexibility and dynamism—that is, its continuous adaptability.
The link between organizational culture and service marketing is undeniable. In this context, this paper aims to explore whether and how organizational culture influences the perceived quality of services in the Zagreb Zoo. The purpose of the paper is to demonstrate how the development and application of organizational culture in the examined organization manifests through the perceived quality of service. This example highlights the importance of organizational culture as a determinant of business success and a key driver of competitive advantage.

2. LITERATURE REVIEW

Interaction and the manner of dealing with consumers at the moment of service delivery can be defined as service quality. Service quality also represents a form of experience delivery through the interaction between the consumer, the organization and its employees, and the environment created by the company (Jazza Al Shemmari, 2020). The service encounter is a central issue in service marketing and significantly affects service quality, service delivery systems, and consumer satisfaction. This concept also implies face-to-face interaction between the service provider and the consumer during service delivery. A service encounter is generally defined as the direct contact between the consumer and the service provider, but it also includes the unavoidable presence of the physical environment.

Moreover, the impact of the physical environment on service creation and consumer value delivery is crucial to the service sector. During the service encounter, both previous and current experiences are recorded, enabling overall service quality to be measured. Service quality can also be described as a negotiation process between consumers and service providers, in which resource allocation and management are balanced to satisfy the interests of both parties, as consumers' perceptions of service quality and employee satisfaction are interrelated (Svensson, 2004). The concept of overall perceived service quality was introduced by Grönroos (1982). This model highlights what consumers expect before purchase and what they actually perceive in reality (Grönroos, 1984). Consumer perception comprises two dimensions: the technical and the functional. The first relates to the technical dimension, which concerns the outcome, while the second refers to how the service is experienced throughout the overall delivery process (Grönroos, 1984). Therefore, service quality can be defined as the degree to which consumer expectations are met. High-quality service guarantees consumer satisfaction (Su Kim & Oh, 2008). It is generally achieved through a standardized system of organizational management, with a permanent emphasis on a continuous, innovative approach to product and service quality (Baković et al., 2013). One of the most important predictors of successful quality management implementation is organizational culture (Hsu, 2018; Givens, 2012). For any quality management system to be effective, organizational culture must be suitable and progressive. It develops through strong leadership, employee commitment and involvement, open communication, continuous improvement, and a focus on consumers (Gounaris, 2005). Based on the conducted theoretical analysis and the understanding that organizational culture and service quality are two highly interdependent and complementary determinants of service sector marketing—and that their interconnection can define the level of business success of an individual enterprise—the following hypothesis was established:
Certain elements of manifested organizational culture have a positive effect on perceived service quality.

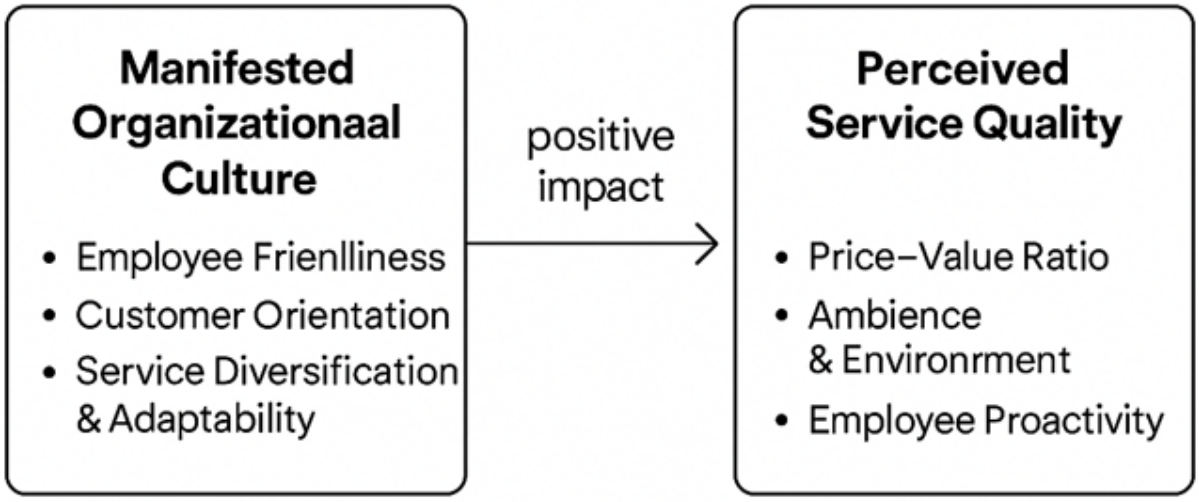
3. METHODOLOGY

The research was conducted on a sample of visitors to the Zagreb Zoo to gain insight into their opinions and perceptions regarding the perceived quality of services provided by the Zoo, as well as its manifested organizational culture, expressed through the values and behavioural principles demonstrated by employees' friendliness toward visitors, the diversification of the service offering, and customer (visitor) orientation. The main criteria for selecting respondents included residential status, age, and the assumption of homogeneity among participants. To this end, a survey-based study was conducted. As the research primarily adopted a quantitative approach, it relied on statistical measures and the survey method as its main data-collection tool. The questionnaire served as the research instrument for obtaining information relevant to the studied domain. Variables in the questionnaire (excluding socio-demographic questions) were designed using a five-point Likert scale. The target group comprised 2,500 visitors, but due to incomplete responses, 98 questionnaires were excluded from the analysis, leaving 2,402 valid respondents. The questionnaire contained 24 mostly closed-ended questions, which respondents answered by circling one of the provided options or assigning ratings from 1 to 5, expressing average values and descriptive evaluations. Among all respondents who completed the questionnaire, 1,375 were women (57.2%), and 1,027 were men (42.8%).

Most visitors came from Zagreb (N=1376), followed by Split (N=117), Pula (N=53), Rijeka (N=49), Samobor (N=41), Sisak (N=41), Varaždin (N=33), Velika Gorica (N=33), Osijek (N=26), Požega (N=25), Zadar (N=23), and Dubrovnik (N=22). There were 184 international visitors, the majority from Bosnia and Herzegovina (N=44), Slovenia (N=20), Spain (N=15), Sweden (N=15), and Germany (N=11).

The dependent variable was defined as Perceived Service Quality (PSQ). In this sense, respondents were asked to evaluate the perception of the optimal benefit delivered through the Zoo's services (Marković et al., 2018; Noone et al., 2009), particularly in terms of the price–value ratio, the ambience and environment in which the service is delivered (Komppula & Reijonen, 2006), and employee proactivity in providing added value during service delivery (Karakasnaki et al., 2019). Items for the dependent variable were measured using a five-point Likert scale. To measure Manifested Organizational Culture (MOC) as the independent variable, a scale was developed to assess visitors' attitudes and opinions regarding both visible and invisible features of organizational culture (Yau et al., 2007). Respondents rated the level of staff friendliness as an element of organizational values and behavioural principles (Lemmink & Mattsson, 2002), customer-oriented service (Kao et al., 2020; Hatch & Schultz, 1997), and the diversification and adaptability of the Zoo's service offerings. This conceptual approach to assessing the influence of manifested organizational culture on perceived service quality enabled the development of the research model (Figure 1).

Figure 1. Proposed Research Model



Source: Authors

As the research was primarily quantitative, it relied on statistical methods and the survey method for data collection. The questionnaire variables were constructed using a five-point Likert scale. When formulating and presenting the research results, scientific and statistical methods were applied to ensure reliable, concrete insights into the domain under study. These included analysis and synthesis, inductive and deductive reasoning, abstraction and concretization, compilation, comparative method, and generalization and specialization. The analyses performed in the empirical part of the study were based on data collected during field research using a structured questionnaire. To test the proposed hypothesis, univariate, bivariate (t-test, correlation, and regression analyses), and multivariate methods (confirmatory factor analysis) were applied. All data were processed and analyzed using IBM SPSS Statistics 22.0 and Microsoft Excel. The reliability of all model variables was assessed using Cronbach's α coefficient. To eliminate potential ambiguities or difficulties in understanding the questionnaire items, a pre-test of the measurement instrument was also conducted prior to the main survey.
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4. RESEARCH RESULTS

Research results are divided into two major categories and are presented below.

4.1. Demographic Structure of Respondents

The majority of visitors, 35.4%**,** belong to the 36–45 age group, while 28.06% fall within the 26–35 age group, and 22.06% belong to the 18–25 age group (Table 1).

Table 1. Age Structure of Visitors

Age Group	**18-25 Numberof Visitors**	**26-35 Numberof Visitors**	**36-45 Numberof Visitors**	**46-55 Numberof Visitors**	**56< Numberof Visitors**
Gende F	302	389	496	62	116
r M	228	285	353	86	75

Source: Authors

The data on age groups are consistent with the finding that the majority of visitors (70.8%) come with their families, with the largest group being parents in this age group (Table 2).

Table 2. With whom do you visit or you visited the Zoo?

	Number Visitors	**Percentage**
Visited Alone	104	4,3%
With Partner	1.701	70,8%
With Friend	291	12,1%
With Friend	284	1,8%
With Organized	19	0,8%
Group	5	
Other		0,2%
Total	2.404	100,0%

Source: Authors

Table 3 shows that individuals with university education visit the Zoo most frequently, with the largest number of these respondents reporting visits several times a year.

Table following on the next Page

Table 3: How often you visit the Zoo?

		How often do you visit the Zoo?			
		First time visiting	Visited several times, not in the past 12 months	Visited several times, at least once in the past 12 months	Visit several times a year, multiple times in the past 12 months
		Number	Numbe	Number	Number
Level Education	Primary School	34	6	27	37
	Secondary School	133	287	173	130
	Higher Education Institution	32	61	67	158
	College	117	378	380	363

Source: Authors

Visitors with secondary education visit the Zoo less frequently than those with higher or university education, as most of them reported having visited the Zoo several times but not in the past 12 months. Given the relatively small number of participants with primary education, no definitive conclusions can be drawn regarding their visitation frequency. However, based on the available data, this group appears to visit the Zoo least often among educational groups. Overall, 4.3% of visitors had completed primary education, 30.2% had secondary education, 13.2% had college education, while the majority, 51.5%, held a university degree.

4.2. Results of the Research on Perceived Service Quality

The construct of the dependent variable, Perceived Service Quality (PSQ), was validated by assessing item reliability and the construct's multidimensionality. As a prerequisite for performing the factor analysis of the 18 items of this construct, the Kaiser-Meyer-Olkin (KMO) measure (0.832) and Bartlett's Test of Sphericity ($\chi^2 = 2768.666$, $df = 2403$, $p < 0.001$) were applied. Factor analysis was conducted using the Varimax rotation method, based on the Kaiser criterion, yielding three factors: Service Benefit Delivery, Environment, and Employee Proactivity. Each of the three factors demonstrated an acceptable level of reliability. The psychometric analysis of the entire measurement instrument indicated strong internal consistency, with a standardized Cronbach's Alpha coefficient of $\alpha = 0.760$, and a total explained variance of 53.44%.

The conducted analysis confirmed the reliability of the measured construct. Furthermore, the individual elements of the measurement construct also demonstrated adequate reliability coefficients:

Table 4. Model Summary for the Dependent Variable PSQ

Pearson's Correlation Coefficient (R)	Adjusted Coefficient of Determination (Adjusted R²)	Adjusted Coefficient of Determination	procj. stand. greška	Change Statistics				
				R Square Change	F Change	df1	df2	Sig. F Change
0,649	0,324	0,306	0,63508	0,324	18,202	3	2399	0,000

Source: Authors

Table 6. Regression model coefficients for the dependent variable S_SFSC

model	Unstandardized Regression Coefficients		Standardized Regression Coefficients	t	Sig.
	B	Standard Errorß ponder			
Constant	1,360	0,426		0,337,000	
PKU	0,418	0,194	0,344	0,337,000	

Source: Authors

Table 5. Presentation of the Main Findings of the Relationship Analysis between Organizational Culture and Perceived Service Quality

Factor	**Author(s)**	**Key Findings**
Employee Friendliness	Hsu (2018); Gounaris (2005); Singh (2013); Zeithaml et al. (1990); Author	An empathetic, friendly attitude among employees towards visitors increases trust and service satisfaction. Employee friendliness in interactions with visitors is recognized as a key element of service quality in high-contact organizations such as the Zoo.
Customer Orientation	Byrne et al. (2019); Yu Sum & Leung Hui (2009); Brady & Cronin (2001); Zeithaml et al. (1996); Author	Customer orientation encourages continuous service improvement and adaptation to customer needs. A culture that promotes customer focus results in higher levels of perceived quality, satisfaction, and visitor loyalty.
Service Diversification	García-Fernández et al. (2018); Polychroniou & Trivellas (2018); Lovelock & Wirtz (2011); Grönroos (2007); Author	Variety and innovation in service offerings increase perceived value and visitor satisfaction. A broader range of services attracts different market segments and strengthens the organization's competitive position.
Management and Internal Communication	Cameron & Quinn (2006); Denison (1990); Hartnell, Ou & Kinicki (2011); Author	Effective internal communication and clearly defined values strengthen organizational identity, encourage collaboration, and positively influence the perception of service quality.
Overall Manifested Organizational Culture	Author	A strong positive correlation was found between manifested organizational culture and perceived service quality ($r = 0.749$; $p < 0.001$). Organizational culture explains 32% of the variance in service quality, confirming the hypothesis of their interrelation.

Source: Authors

When measuring the independent variable, *Manifested Organizational Culture (MOC)*, a Likert scale was used. To examine reliability and finalize this construct, **standardization (z-scores)** was performed.

The reliability coefficient (Cronbach's Alpha) for the total construct, as well as for individual items, was satisfactory:

- *Employee Friendliness*: α = 0.625
- *Customer Orientation*: α = 0.814
- *Service Diversification*: α = 0.709

The three items mentioned reacted well during the measurement process, and the correlation analysis confirmed strong intercorrelation among them (r > 0.5). Therefore, these items were used as independent variables to form an averaged composite variable (MOC). To test the research hypothesis, one dependent variable (*PSQ*) and one predictor variable (*MOC*) were defined, and correlation and regression analyses were performed (Table 6).

Table 6. Correlation Matrix Between Dependent Variable PSQ and Independent Variable MOC

		PKU	**MKU**
PKU	**Pearson Correlation**	1	0,749
	Sig. (2-tailed)		0,000
	N	2402	2402
MKU	**Pearson Correlation**	0,749	1
	Sig. (2-tailed)	0,000	
	N	2402	2402

Source: Authors

According to Pearson's correlation coefficient, a positive, statistically significant relationship exists between the observed variables (p < 0.001).
Based on this correlation, a regression analysis was conducted to predict the dependent variable (Table 7).

Table 7. Model Summary for the Dependent Variable PSQ

Pearson's Correlation Coefficient (R)	Adjusted Coefficient of Determination (Adjusted R^2)	Adjusted Coefficient of Determination	procj. stand. greška	Change Statistics				
				R Square Change	F Change	df1	df2	Sig. F Change
0,649	0,324	0,306	0,63508	0,324	18,202	3	2399	0,000

Source: Authors

Tablica 8. Regression model coefficients for the dependent variable S_SFSC

model	Unstandardized Regression Coefficients		Standardized Regression Coefficients	t	Sig.
	B	Standard Errorß ponder			
Constant	1,360	0,426		0,337,000	
PKU	0,418	0,194	0,344	0,337,000	

Source: Authors

The independent variable's impact on the dependent variable was statistically significant ($p < 0.001$), with a standardized coefficient of $\beta = 0.344$. For the two observed variables, the coefficient of determination (R^2) equals 0.324, indicating that variations in the perception of the manifested organizational culture explain 32% of the variation in perceived service quality. Therefore, the results of both the correlation and regression analyses demonstrate a statistically significant relationship, confirming that within the context of visitor perceptions, elements of manifested organizational culture influence the perceived quality of services at the Zagreb Zoo. The relatively high coefficient of determination further supports this. Based on the conducted research and in accordance with the results of the correlation and regression analyses, it can be concluded that the research hypothesis is confirmed — that certain elements of manifested organizational culture have a positive effect on the perceived quality of services.

5. CONCLUSION

Organizational culture is an agent that influences service quality, which in turn affects customer satisfaction on the one hand, and serves as an instrument for enhancing organizational performance on the other (Uzkurt et al., 2013; Sweeney et al., 2011). A company with a well-developed organizational culture and a high level of service quality is more likely to meet customer needs effectively and become more economically competitive within its industry (Polychroniou & Trivellas, 2018; Yıldız, 2014). This study examined the fundamental premises for understanding organizational culture within the service sector, particularly in the context of service marketing (Pham & Hoang, 2019). Service quality is the primary objective of every competitive enterprise, which can primarily be achieved through the continuous development and nurturing of specific forms of corporate culture (García-Fernández et al., 2018). In this regard, the relationship between these two concepts is essential for understanding successful business models — that is, how service-sector companies can strengthen their competitive advantage. This paper specifically analyzed the relationship between organizational culture and perceived service quality using the case of the Zagreb Zoo. To examine this relationship, measurements were conducted for both organizational culture and perceived service quality. The research results confirmed the multidimensionality of the perceived service quality construct and its psychometric properties as a measurement instrument. The regression analysis also confirmed the predictive power of manifested organizational culture regarding perceived service quality ($p < 0.001$). A large body of research has examined the relationship between corporate culture and service quality (Gómez-Miranda et al., 2015; Hogan & Coote, 2014), and most studies find a positive association. The limitations of this research arise from the fact that only certain dimensions of the dependent and independent variables were analyzed. Therefore, future studies should include a larger number of variables and indicators that capture additional attributes of both organizational culture and perceived service quality. Further research on the impact of organizational culture on service quality should also be conducted longitudinally (Kim & Chang, 2019), particularly during crises or pandemics, when perceptions of value and quality are significantly altered. Moreover, although a positive relationship between organizational culture and perceived service quality has been established, this research relied on Zoo visitors' perceptions. Future studies should therefore include samples from service-sector companies and, through adapted measurement instruments, introduce variables that clearly quantify and demonstrate economic benefits in terms of quantitative and qualitative indicators of business performance.

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MOROCRACY AND ENTREPRENEURIAL ENVIRONMENT: HOW SYSTEMIC INCOMPETENCE STIFLES INNOVATION AND ECONOMIC DYNAMISM

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ABSTRACT

This paper investigates the corrosive impact of morocracy on entrepreneurial ecosystems, with particular attention to transition and developing economies. Morocracy, understood as the systematic elevation of incompetent and intellectually limited individuals to positions of authority, creates institutional environments profoundly hostile to productive entrepreneurship. Drawing on institutional economics and entrepreneurship theory, we analyze how morocratic governance distorts regulatory frameworks, corrupts capital allocation mechanisms, and fundamentally reorients entrepreneurial activity from value creation toward rent extraction. Our analysis reveals that morocracy does not eliminate entrepreneurship but rather perverts it, channeling entrepreneurial talent and energy into navigating dysfunctional systems rather than building innovative enterprises. We conclude by exploring potential pathways toward institutional renewal, while remaining cognizant of the formidable political and cultural obstacles that such transformation inevitably confronts.

Keywords: *morocracy, entrepreneurship, institutional quality, rent-seeking, innovation, economic development*

1. INTRODUCTION

We began this research with what seemed like a straightforward question: why do some economies consistently generate vibrant entrepreneurial activity while others languish despite abundant talent and resources? The conventional answers emphasize capital availability, regulatory burden, or cultural attitudes toward risk. Yet as we dug deeper into the realities of entrepreneurial environments across different institutional contexts, a more troubling pattern emerged. The problem, we came to realize, was not simply that institutions functioned poorly, but that they were systematically populated by individuals fundamentally incapable of performing their roles competently (North, 1990; Acemoglu and Robinson, 2012). This phenomenon, which we term ‘morocracy’ following Tipurić's (2025) conceptualization, goes beyond ordinary corruption or bureaucratic inefficiency. Where corruption involves competent actors pursuing illicit gains, morocracy describes systems where incompetent, intellectually limited, and ethically indifferent individuals occupy decision-making positions precisely because their limitations make them controllable and unthreatening to those who appoint them. The distinction matters enormously. A corrupt official at least understands what they are corrupting; a morocratic official may genuinely lack the cognitive capacity to comprehend the damage they inflict.

What particularly struck us during our research was how morocracy transforms entrepreneurship itself. Baumol (1990) famously distinguished between productive entrepreneurship that creates value and unproductive entrepreneurship that merely redistributes it. In morocratic environments, this distinction collapses in disturbing ways. Entrepreneurial talent does not disappear but gets channeled into navigating dysfunction, cultivating political relationships, and extracting rents from artificially created market distortions. The most successful entrepreneurs become not those who innovate but those who excel at gaming broken systems. One entrepreneur we interviewed put it bluntly: innovation is fine as a hobby, but in this country, survival requires knowing which bureaucrat to pay and which rules everyone pretends to follow but nobody actually enforces. This paper examines how morocracy systematically undermines entrepreneurial ecosystems through multiple reinforcing mechanisms. We begin by establishing theoretical foundations that connect institutional quality to entrepreneurial outcomes. We then analyze how morocracy manifests in practice through regulatory dysfunction, corrupted capital allocation, and the gradual erosion of entrepreneurial culture itself. Throughout, we draw on both theoretical frameworks and empirical observations from transition economies where morocratic patterns are particularly visible. Our goal is not simply to document dysfunction but to understand its logic and explore whether and how it might be overcome.

2. INSTITUTIONS, ENTREPRENEURSHIP, AND THE MOROCRATIC TRAP

The relationship between institutional quality and entrepreneurial activity has become something of a truism in development economics, yet its implications deserve closer attention than they typically receive. When North (1990) argued that institutions constitute the rules of the game that shape economic behavior, he was describing not just formal regulations but the entire ecosystem of norms, expectations, and enforcement mechanisms that determine how economic actors operate. Good institutions reduce transaction costs and create predictable environments where long-term investments make sense. Poor institutions do the opposite, creating uncertainty and encouraging short-term opportunism (Acemoglu, Johnson and Robinson, 2005). But there's a critical dimension that institutional theory sometimes elides: who staffs these institutions matters as much as their formal design. Beautifully crafted regulatory frameworks mean nothing when administered by officials who cannot understand them. Theoretically sound incentive structures fail when those implementing them lack basic competence. This is where morocracy reveals its distinctive pathology. Unlike systems that suffer from bad rules well-executed or good rules poorly executed, morocratic systems feature dysfunctional rules administered by incompetent officials, creating compound failures that prove remarkably resistant to reform. What makes morocracy so insidious is its self-reinforcing character. Incompetent officials cannot recognize competence in others and often view it as threatening. They therefore hire and promote individuals similar to themselves, creating cascading decline across institutional hierarchies (Michels, 1962). Each cycle of appointments yields slightly less capable administrators, until organizations reach equilibrium at remarkably low competence levels. One former minister we spoke with described the phenomenon with dark humor: every time I appointed someone smarter than me, they made me look bad and questioned my decisions, so eventually I learned to appoint only people who made me look smart by comparison. The problem is that I wasn't very smart to begin with. For entrepreneurship specifically, this creates what we might call a selection problem on both sides of the institutional interface. On one side, morocratic systems select for incompetent regulators, financiers, and support staff who cannot effectively facilitate productive entrepreneurship even if they wanted to. On the other side, these dysfunctional institutions create environmental pressures that select for entrepreneurs whose skills lie not in innovation but in exploitation.

The result is a perverse matching: incompetent officials overseeing opportunistic entrepreneurs, with genuine innovators either driven out or forced to adapt in ways that compromise their productive potential (Baumol, 1990).

3. REGULATORY DYSFUNCTION AND THE INNOVATION PENALTY

Perhaps nowhere does morocracy's impact on entrepreneurship manifest more clearly than in regulatory frameworks and their enforcement. Every entrepreneur we interviewed could recount stories of regulatory absurdity that would strain credulity if they weren't so depressingly common. One tech startup founder described spending six months trying to register his company because the official processing applications insisted his business category did not exist, despite the category being explicitly listed in the relevant law. The official simply could not comprehend a software-as-a-service business model and kept demanding to know where the physical product was manufactured. Another entrepreneur recalled being told her innovative recycling process could not be licensed because it did not fit any existing waste management category, with the licensing officer suggesting she just handle waste the traditional way like everyone else (Djankov et al., 2002). These anecdotes reveal a systematic pattern: morocratic regulatory environments penalize innovation precisely because incompetent officials cannot process novelty. Faced with business models they do not understand, morocratic bureaucrats have three options. They can admit ignorance and seek to learn, which would expose their incompetence. They can approve the unfamiliar activity, risking blame if problems arise. Or they can simply reject the innovation as inappropriate or potentially problematic, which carries no career risk and requires no intellectual effort. Guess which option morocratic officials typically choose? The result is a powerful selection pressure toward conformity and against genuine innovation. Meanwhile, regulatory complexity in morocratic systems grows not through careful design but through accumulated incompetence. Each new regulation, often drafted by officials who lack basic understanding of the activities they regulate, adds layers of confusion and contradiction. The complexity serves dual purposes: it creates formidable barriers for legitimate entrepreneurs who lack resources to hire regulatory navigation specialists, while simultaneously creating abundant opportunities for rent extraction by officials and connected insiders who have learned to exploit the system. When rules are so convoluted that compliance is effectively impossible, every business operates in technical violation, giving officials enormous discretionary power to selectively enforce regulations based on political connections rather than actual risk or harm (Djankov, La Porta, Lopez-de-Silanes and Shleifer, 2002). What emerges is what one entrepreneur aptly termed strategic uncertainty. Unlike normal business risk that entrepreneurs can analyze and potentially manage, strategic uncertainty stems from unpredictable actions of incompetent authorities whose decisions follow no discernible logic. Approvals granted one month get revoked the next for unexplained reasons. Identical activities get interpreted differently by different officials with no mechanism for resolution. Enforcement priorities shift arbitrarily, catching businesses off guard. This uncertainty proves particularly destructive because it undermines the long-term planning and investment that entrepreneurship requires. Why invest heavily in building a business when incompetent officials might destroy it tomorrow on a whim or through sheer stupidity?

4. CAPITAL ALLOCATION IN MOROCRATIC FINANCIAL SYSTEMS

If regulatory dysfunction creates obstacles for entrepreneurs, corrupted capital allocation mechanisms often deliver the final blow to innovative ventures. Even brilliant business ideas cannot succeed without funding, yet morocratic financial systems systematically direct capital away from productive entrepreneurship toward politically connected insiders and safe but unproductive investments. The mechanisms through which this occurs would be almost fascinating if the consequences were not so damaging to economic development.

Banks in morocratic environments exhibit a peculiar combination of incompetence and extreme risk aversion. Loan officers systematically lack expertise to evaluate innovative business proposals, cannot distinguish genuine risks from their own ignorance, and therefore default to rejection whenever they encounter business models requiring even minimal understanding of technology or markets. Unable to assess business potential intelligently, they demand overwhelming collateral as substitute for due diligence. This systematically excludes precisely those entrepreneurs most needing capital: young innovators without existing wealth, individuals from less privileged backgrounds without family assets to pledge, and anyone pursuing genuinely novel ventures whose value lies in intangible assets rather than physical property (de Soto, 2000; Beck, Demirgüç-Kunt and Levine, 2005). Meanwhile, those with political connections enjoy dramatically different treatment. We documented numerous cases where well-connected applicants received loans with minimal collateral for dubious projects, while innovative entrepreneurs with solid business plans faced rejection despite offering substantial collateral. One particularly egregious example involved a technology startup with patents, customer commitments, and experienced team being denied a modest loan because the banker did not understand the business, while the same bank simultaneously approved a much larger loan to a politically connected individual for a restaurant in an oversaturated market. The restaurant failed within a year; the startup eventually secured foreign investment and now exports successfully to multiple countries. Government programs ostensibly supporting entrepreneurship often exacerbate rather than ameliorate these problems. In theory, public funds could compensate for private sector failures and help promising entrepreneurs overcome capital constraints. In morocratic practice, these programs become vehicles for political patronage (Lerner, 2009). Selection committees consist of incompetent officials incapable of assessing business potential and political appointees whose primary qualification is loyalty rather than expertise. One former evaluation committee member confided that decisions reflected not business plan quality but political calculations about which constituencies needed attention and which supporters deserved rewards. The entrepreneurs who succeed in securing government support typically possess skills in political navigation rather than business development, excelling at hitting buzzwords in applications and cultivating decision-maker relationships rather than building viable enterprises.

5. THE CORRUPTION OF ENTREPRENEURIAL CULTURE

Beyond immediate regulatory and financial obstacles, morocracy corrodes entrepreneurial culture itself in ways that prove even more damaging over longer time horizons. The most talented potential entrepreneurs increasingly recognize that their abilities will find little reward in environments systematically favoring incompetence over merit. Many choose emigration, creating brain drain that devastates domestic entrepreneurial ecosystems while enriching jurisdictions welcoming them (Docquier and Rapoport, 2012). Every software engineer who leaves for Silicon Valley, every skilled manager who seeks opportunities abroad, every ambitious entrepreneur who takes her ideas to more functional jurisdictions represents not just individual loss but systemic weakening of the remaining entrepreneurial community. Those who remain and thrive tend not to be the most innovative or capable but rather those whose skills lie in navigating dysfunctional systems. Over time, the entrepreneurial community becomes increasingly dominated by opportunists and rent-seekers while genuine innovators either leave or give up in frustration. This creates powerful demonstration effects for younger generations observing what entrepreneurial success actually requires in morocratic contexts. The celebrated entrepreneurs are not innovators who created value but individuals who built fortunes through political connections, regulatory arbitrage, or rent extraction. Their success stories emphasize not breakthrough innovation but clever exploitation of regulatory loopholes, strategic cultivation of official relationships, and skillful navigation of bureaucratic mazes.

Educational systems in morocratic societies typically mirror the incompetence pervading other sectors. Universities emphasize rote memorization over critical thinking, compliance over creativity, credential accumulation over genuine skill development. Faculty positions are filled through political connections rather than academic merit, resulting in instructors who lack the competence to develop entrepreneurial capabilities in students (Audretsch, Keilbach and Lehmann, 2006). Business programs teach students how to navigate existing systems rather than how to create value or drive innovation. Engineering programs produce graduates who can pass exams but cannot design innovative products. The disconnect between educational outputs and entrepreneurial needs grows ever wider. Perhaps most insidiously, educational systems in morocratic environments often actively discourage the risk-taking and independent thinking that entrepreneurship requires. Students learn that success demands conformity, that questioning authority brings punishment rather than praise, that the safest path involves memorizing what teachers want rather than developing independent judgment. By graduation, many have been thoroughly socialized into patterns of thought and behavior fundamentally incompatible with genuine entrepreneurship. When these graduates enter the workforce, they bring with them attitudes and expectations shaped by morocratic educational environments, perpetuating dysfunction into the next generation.

6. THE CAPTURE OF ENTREPRENEURIAL SUPPORT INSTITUTIONS

The global success of institutions like business incubators, accelerators, and technology transfer offices has inspired morocratic systems to create their own versions. Unfortunately, these typically bear only superficial resemblance to their functional counterparts, becoming instead vehicles for political patronage rather than genuine entrepreneurial support. In functional ecosystems, incubators are run by experienced entrepreneurs or investors who can recognize promising ventures and provide valuable guidance. In morocratic versions, they fall under control of politically appointed administrators whose primary qualifications are loyalty and connections rather than entrepreneurial expertise (Mian, Lamine and Fayolle, 2016). We visited several such incubators during our research, and the pattern was depressingly consistent. Impressive facilities with modern furniture and high-speed internet, yet remarkably little genuine business activity. Selection processes that emphasize political connections over business potential. Administrators who could not evaluate startups intelligently if their lives depended on it. Admitted ventures receiving subsidized office space and the appearance of legitimacy but minimal actual mentoring or strategic guidance. One incubator director candidly admitted she had never started a business herself and learned about entrepreneurship from a weekend workshop. When asked how she evaluated applicants, she mentioned looking for good PowerPoint presentations and proper dress at interviews. Trade associations and professional bodies that should represent business interests and advocate for sensible policies become in morocratic contexts yet another layer of dysfunction. Leadership positions are filled by individuals with political connections who view association leadership as stepping stones to official positions or opportunities for rent extraction rather than as responsibilities for genuine advocacy (Doner and Schneider, 2016). Rather than challenging regulatory dysfunction, these associations often collaborate with incompetent officials to maintain the status quo because association insiders benefit from the same rent-extraction opportunities that harm their nominal constituents. Universities and research institutions face similar capture. Technology transfer offices meant to commercialize academic research are staffed by bureaucrats who understand neither the research nor the commercialization process. Research funding flows to well-connected researchers pursuing politically favored topics rather than to the most promising projects judged on scientific merit. The result is substantial investment generating impressive statistics and publications in obscure journals but remarkably little knowledge actually contributing to entrepreneurial activity or economic development.

One technology transfer officer told us his office had facilitated three patent applications and one licensing agreement in five years, while the university received substantial public funding specifically to support commercialization. When pressed on why results were so meager, he blamed entrepreneurs for not being interested in the university's research, apparently oblivious to the possibility that the research might not be commercially relevant or that his office might be failing to identify and support promising opportunities.

7. PATHWAYS TOWARD RENEWAL: POSSIBILITIES AND OBSTACLES

Having documented the multifaceted ways morocracy corrupts entrepreneurial environments, we would like to conclude on an optimistic note about pathways toward renewal. The honest truth, however, is that we find ourselves somewhat pessimistic about near-term prospects. Morocratic systems create powerful constituencies with vested interests in maintaining dysfunction. Officials benefit from arbitrary power and rent-extraction opportunities. Connected entrepreneurs profit from insider advantages. Political elites use entrepreneurship programs as patronage vehicles. Each reform threatens someone's privileges, creating resistance that easily overwhelms reform momentum, particularly when reformers themselves often lack competence or commitment to see changes through. That said, transformation is not impossible, merely difficult. History provides examples of societies that overcame dysfunctional institutions to build more productive ones, though the process typically required crisis, leadership, and sustained commitment over generations rather than quick fixes. For entrepreneurial ecosystems specifically, renewal requires simultaneous action across multiple dimensions. Regulatory frameworks need not just simplification but administration by competent individuals making evidence-based decisions. Financial systems need genuine competition eliminating insider advantages dominating capital allocation. Educational institutions need to develop real capabilities rather than issue credentials. Support institutions need control by experienced entrepreneurs rather than political appointees. Perhaps most fundamentally, renewal requires cultural transformation in how societies think about entrepreneurship, merit, and success. As long as cultures celebrate rent-seeking over innovation, connections over competence, and exploitation over creation, institutional reforms will remain superficial or be quickly subverted. Education systems must cultivate critical thinking and ethical orientation rather than mere compliance. Media must distinguish between entrepreneurs who create genuine value and those who merely extract rents. Civil society must demand and defend meritocratic principles even when threatening powerful interests. We began this research expecting to document straightforward institutional failures and propose technical solutions. What we discovered instead was something more troubling: morocracy represents not just poor institutional design but a kind of civilizational failure where societies systematically reward incompetence and punish merit. The entrepreneurial implications are severe. When the most talented individuals emigrate, when the most innovative ideas die in regulatory labyrinths, when entrepreneurial energy gets channeled into exploitation rather than creation, societies waste precious resources they cannot afford to squander. Whether enough societies can muster the political will, moral courage, and sustained commitment required for genuine transformation remains an open question. But the consequences of failure grow increasingly difficult to ignore as morocratic systems demonstrate year after year their capacity to transform entrepreneurial potential into extractive dysfunction.

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