
Policy Implementation and Inter-Institutional Coordination in Indonesia's Industrial Downstreaming Governance: A Public Administration Perspective

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Abstract. Indonesia's industrial downstreaming agenda depends on the government's capacity to coordinate policies across ministerial, sectoral, territorial, and public-private boundaries. This study examines how policy implementation and inter-institutional coordination can be understood in Indonesia's industrial downstreaming governance from a public administration perspective. The study uses qualitative document analysis combined with a purposive, theory-led integrative literature synthesis. The documentary corpus comprises Indonesian industrial laws and planning instruments, selected policy documents, and peer-reviewed scholarship on policy coordination, policy integration, collaborative governance, policy capacity, and implementation. The synthesis identifies six interrelated analytical findings: strategic-instrument misalignment, mandate multiplicity, coordination treated as episodic rather than infrastructural, capacity asymmetry, fragmented accountability, and insufficient adaptive learning. These six findings are subsequently consolidated into five dimensions of the Integrated Strategic Industry Coordination (ISIC) Framework: strategic alignment, institutional role clarity, coordination infrastructure, implementation capacity, and adaptive accountability. Fragmented accountability and adaptive learning are combined because monitoring becomes consequential only when performance information generates institutional learning and policy adjustment. ISIC is presented as an integrative diagnostic framework rather than a new causal theory or an empirically validated model. Its contribution lies in translating several established public-administration perspectives into a sector-specific diagnostic architecture for identifying where cross-institutional implementation may break down. The study offers implications for executive coordination, policy implementation, and legislative oversight while explicitly limiting its empirical claims to industrial downstreaming governance and the documentary evidence analyzed.

Keywords: Governance; Indonesia; Industrial Downstreaming; Inter-institutional Coordination; Policy Implementation; Policy Integration; Public Administration.

1. Introduction

Industrial transformation is frequently discussed in terms of investment, technology, infrastructure, productivity, and competitiveness. Yet the ability of a state to transform an industrial structure also depends on a less visible variable: administrative coordination. Strategic industrial policy is rarely implemented by a single ministry or agency. It normally intersects with investment licensing, trade, energy, mineral resources, state-owned enterprises, research and innovation, labor, education and skills, environmental regulation, spatial planning, fiscal policy, regional government, and infrastructure provision. Consequently, the central governance problem is not merely whether Indonesia has industrial objectives, but whether the public institutions responsible for translating those objectives into programs, regulations, incentives, permits, infrastructure, and monitoring systems can act coherently.

This issue is particularly important in Indonesia because industrial downstreaming is embedded in a layered regulatory and planning architecture. Law No. 3 of 2014 on Industry establishes the legal foundation for industrial development, while Government Regulation No. 14 of 2015 establishes the National Industrial Development Master Plan (RIPIN) 2015–2035 (Government of Indonesia, 2014, 2015). Presidential Regulation No. 74 of 2022 further

operationalizes national industrial policy for 2020–2024 and provides an explicit policy reference for priority industrial development (Government of Indonesia, 2022). The RPJMN 2025–2029 subsequently places industrial transformation within a broader cross-ministerial national development framework (Government of Indonesia, 2025). Taken together, these instruments establish a formal basis for coordination, but they do not by themselves demonstrate how coordination performs in practice. Accordingly, this article uses them to define the policy architecture and interprets implementation problems cautiously through the more limited empirical literature on downstreaming.

Public-administration scholarship provides a useful lens for this problem. Peters (2022) argues that coordination remains one of the most persistent problems of government because specialization creates organizational boundaries while complex public problems require integrated responses. Candel & Biesbroek (2016) similarly conceptualize policy integration as a process in which policy frames, subsystem involvement, goals, and instruments may move at different speeds. This is important because governments may publicly embrace integrated objectives while retaining fragmented instruments and organizational routines. Coordination should therefore be assessed not by the existence of meetings or committees, but by the degree to which participating organizations align objectives, instruments, resources, and implementation behavior.

Recent research also shows that institutional capacity is inseparable from integration. Domorenok et al. (2021) emphasize that integrated policy designs require institutional capacities that support coherence across sectors. Their empirical analysis further shows that administrations can build different capacity arrangements to support integrated strategies, depending on governance settings and political salience (Domorenok et al., 2021b). Saguin et al. (2018), studying policy work in a developing-country context, demonstrate that policy capacity is distributed unevenly and is shaped by organizational and systemic conditions. These insights are directly relevant to strategic industry governance, where policy ambition can exceed the operational capacity of the institutions expected to implement it.

Coordination is also relational. Amsler (2016) notes that collaborative governance brings together management, politics, and law, meaning that collaboration cannot be understood simply as informal cooperation among officials. Rules, authority, accountability, and institutional design matter. Siddiki et al. (2017) show that trust and participant diversity influence social learning in collaborative governance, while Molenveld et al. (2020) demonstrate that implementing organizations may perceive the same coordination arrangements differently. Waardenburg et al. (2020) further identify paradoxes in multi-agency collaboration: collaboration can generate shared problem-solving capacity while simultaneously producing new tensions related to autonomy, accountability, and organizational interests. Thus, the challenge is not to eliminate institutional differences, but to govern interdependence productively.

In Indonesia, the strongest empirical evidence available in the present corpus concerns industrial downstreaming rather than the entirety of strategic-industry governance. Lahadalia et al. (2025) identify ineffective coordination among ministries and stakeholders as a significant obstacle to downstreaming governance, while Sarjito (2025), focusing on the nickel sector, highlights regulatory unpredictability, licensing problems, and fragmented coordination across levels of government. These studies do not justify generalizing to every strategic industry. They do, however, provide a defensible empirical anchor for examining how coordination, capacity, accountability, and policy integration interact in downstreaming governance. For that reason, the title, research questions, findings, and conclusions of the revised article are deliberately bounded to industrial downstreaming.

This article addresses that bounded problem through three research questions. RQ1: What coordination and implementation challenges are identified when Indonesia's industrial downstreaming policy architecture is interpreted together with the available implementation literature? RQ2: Which administrative capacities and institutional arrangements are most relevant to reducing fragmentation in downstreaming implementation? RQ3: How can these insights be organized into an integrative diagnostic framework for examining cross-institutional implementation? The study does not estimate the economic effects of downstreaming and does not claim to represent all strategic industries in Indonesia.

The article makes three contributions. First, it connects policy-coordination, policy-integration, collaborative-governance, and policy-capacity scholarship to explain recurrent implementation risks in a bounded downstreaming context. Second, it separates documentary evidence about Indonesia from analytical deductions derived from international scholarship, thereby avoiding the treatment of general governance theory as direct evidence of Indonesian institutional performance. Third, it develops the Integrated Strategic Industry Coordination

(ISIC) framework as an integrative diagnostic framework. ISIC does not claim a new causal theory; rather, it organizes established concepts into five nonredundant diagnostic dimensions that can guide future empirical testing of industrial downstreaming governance.

2. Literature Review and Theoretical Framework

Policy Implementation as an Administrative Coordination Problem

Policy implementation is often described as the stage in which authoritative decisions are translated into action, but contemporary governance makes the boundary between formulation and implementation increasingly porous. Strategic industrial policies are repeatedly interpreted, specified, negotiated, and adjusted as they move across ministries, agencies, regional governments, public enterprises, and private actors. The implementation problem is therefore not only compliance with a central directive. It is the alignment of multiple organizations that possess different mandates, resources, incentives, professional knowledge, and accountability relationships.

Peters (2018) explains that coordination problems arise because governments are intentionally differentiated into specialized organizations. Specialization can improve expertise and accountability, but it also creates vertical and horizontal boundaries. In strategic industry governance, the ministry responsible for industry may prioritize industrial depth and domestic value addition, while investment authorities focus on investment realization, trade institutions consider export performance and international obligations, environmental agencies emphasize ecological standards, and regional governments attend to local development and administrative authority. These are legitimate objectives, yet without mechanisms for reconciling them, legitimate specialization can generate inconsistent implementation.

Candel & Biesbroek (2016) provide a processual perspective that is particularly useful for this study. Policy integration can develop unevenly across policy frames, subsystem involvement, goals, and instruments. Applied to industrial governance, government actors may agree that downstreaming, technological upgrading, or domestic value creation is strategically important, but the policy instruments used by different institutions may remain misaligned. An integrated policy frame is therefore insufficient if licensing rules, fiscal incentives, infrastructure priorities, environmental requirements, skills programs, and monitoring indicators are not mutually reinforcing.

Trein et al. (2021) call for policy coordination and integration research to pay greater attention to causal mechanisms and real-world impacts. This is important because coordination is often measured through institutional structures—committees, task forces, memoranda, or inter-ministerial meetings—rather than through the behavioral and implementation changes they produce. The analytical emphasis in this article is consequently placed on coordination outputs: reduced contradictions, clearer responsibilities, shared information, synchronized instruments, joint problem solving, and measurable follow-through.

Inter-Institutional Coordination and Collaborative Governance

Coordination can be hierarchical, negotiated, network-based, or hybrid. Strategic industry governance is likely to require all four. Hierarchy remains necessary where legal authority, standards, budget allocation, and regulatory enforcement are involved. Negotiation is required when mandates overlap or when policy trade-offs must be reconciled. Networks are useful where knowledge and resources are distributed across public and private organizations. Hybrid arrangements combine these modes.

Amsler (2016) argues that collaborative governance must be understood through the interaction of management, politics, and law. This perspective prevents a common mistake: assuming that collaboration becomes effective merely when actors are willing to cooperate. In public administration, cooperation operates within legal mandates, political authorization, formal accountability, and administrative procedure. Strategic industry coordination therefore requires institutional design that specifies who convenes, who decides, who implements, who monitors, and how disagreements are resolved.

Siddiki et al. (2017) add that trust and diversity influence social learning within collaborative governance. Diversity is especially relevant to strategic industry governance because participants possess different technical and institutional perspectives. Productive diversity can improve problem diagnosis and policy design, but only when trust and interaction enable learning. Otherwise, diversity may harden organizational positions. Krogh (2022) similarly shows that publicly mandated governance networks require active facilitation. Mandating collaboration can create a network, but it does not automatically create effective collaborative behavior.

Waardenburg et al. (2020) demonstrate that multi-agency collaboration contains inherent paradoxes. Organizations are expected to share information and jointly solve problems while remaining accountable to their own mandates and constituencies. This tension is central to industrial governance. Effective coordination cannot require agencies to abandon their statutory responsibilities; instead, it must create procedures through which competing responsibilities can be reconciled transparently.

Molenveld et al. (2020) show that implementing organizations may interpret coordination arrangements differently. This implies that institutional design must be assessed from the perspective of implementers, not only central coordinators. A coordination mechanism that appears clear at the strategic level may be experienced as duplication, reporting burden, or ambiguous authority by operational units. This distinction between designed coordination and experienced coordination is incorporated into the present framework.

Torring et al. (2024) emphasize metagovernance: the governance of collaborative governance. Their findings show that multi-level collaboration can become disconnected between strategic, tactical, and operational levels. This is highly relevant to strategic industry policy. A presidential or ministerial commitment may create strong strategic direction, but implementation can still stall if tactical coordination does not translate priorities into operational responsibilities, deadlines, data exchanges, and resource commitments.

Policy Capacity and Institutional Capacity

Coordination requires capacity. Saguin et al. (2018) show that policy work in developing-country settings is shaped by the distribution of analytical, managerial, and political resources. Howlett et al. (2018) further argue that robust policy design requires agility and improvisation, not simply efficient routines. Strategic industry governance operates under technological uncertainty, changing global markets, geopolitical risks, environmental constraints, and evolving investment patterns. Institutions therefore require not only routine administrative capacity but also adaptive capacity.

Bali et al. (2019) argue that policy effectiveness depends on the appropriateness of instruments and the capacity of implementing organizations across analytical, political, and operational dimensions. This insight helps distinguish policy ambition from implementability. A policy can be economically attractive in principle but administratively weak if implementing organizations lack data, expertise, resources, coordination authority, or political support.

Domorenok et al. (2021a) explicitly connect policy integration and institutional capacity. They argue that integrated policymaking requires more than a formal commitment to coherence; it requires capacities that sustain cross-sectoral interaction and implementation. Their companion empirical study demonstrates that capacity-building arrangements differ across institutional contexts (Domorenok et al., 2021b). Thus, there is no universal coordination structure. The relevant question is whether the chosen structure matches the complexity and interdependence of the policy problem.

This capacity perspective also explains why coordination failures can persist even after organizational reform. Creating a coordinating unit may clarify authority but cannot substitute for analytical capacity in line ministries, interoperable data systems, skilled personnel, or credible monitoring. Conversely, strong sectoral capacity can remain underutilized if organizations lack incentives or institutional mechanisms to share information and synchronize decisions.

Industrial Downstreaming Governance in Indonesia

Indonesia's industrial policy architecture provides a strong formal basis for long-term industrial transformation. Law No. 3 of 2014 covers industrial planning, resources, infrastructure, empowerment, investment, public participation, and supervision. RIPIN 2015–2035 subsequently establishes a long-term national industrial vision and serves as a reference for industrial policy across levels of government (Government of Indonesia, 2014, 2015). The 2025–2029 RPJMN adds a contemporary planning framework that explicitly incorporates cross-ministerial and cross-regional programs (Government of Indonesia, 2025). These documents indicate that industrial development is institutionally understood as a whole-of-government concern.

However, formal comprehensiveness does not eliminate implementation fragmentation. Lahadalia et al. (2025) find that Indonesia's downstreaming strategy faces institutional and governance challenges, particularly coordination across ministries and stakeholders. Sarjito (2025) (Sarjito, 2025) similarly identifies administrative bottlenecks and fragmented coordination in nickel downstreaming. These findings support a public-administration interpretation: industrial transformation depends on the institutional capacity to connect multiple policy domains over time.

The literature therefore suggests an analytical proposition: strategic industry governance becomes more implementable when policy goals and instruments are aligned across institutions, coordination is supported by authoritative and facilitative mechanisms, implementing organizations possess adequate capacity, and accountability systems measure joint outcomes rather than isolated organizational outputs. The remainder of the article uses this proposition to analyze Indonesia's governance architecture.

3. Methodology

Research Design

This study adopts qualitative document analysis combined with a purposive, theory-led integrative literature synthesis. The design is interpretive rather than systematic-review or meta-analytic. Its purpose is to connect formal Indonesian downstreaming policy architecture with established public-administration concepts and with the limited empirical literature that directly examines downstreaming implementation. The study therefore does not claim exhaustive coverage of every article on industrial policy or every strategic sector.

Documentary Corpus and Source Roles

The corpus has two analytically distinct components. The Indonesian policy-document component comprises Law No. 3 of 2014 on Industry, Government Regulation No. 14 of 2015 on RIPIN 2015–2035, Presidential Regulation No. 74 of 2022 on National Industrial Policy 2020–2024, and Presidential Regulation No. 12 of 2025 on RPJMN 2025–2029. These sources are used to identify formal policy objectives, institutional responsibilities, and cross-sectoral implementation dependencies. Peer-reviewed scholarship is used for two different purposes: international public-administration studies provide theory and comparative mechanisms, whereas Sarjito (2025) provide the principal empirical implementation evidence specific to Indonesian downstreaming. These source roles are kept separate throughout the analysis.

Literature Identification and Eligibility

The literature component was assembled purposively around five concept families: policy coordination, policy integration, collaborative governance, policy/administrative capacity, and industrial downstreaming implementation. The working search logic used combinations of the terms “policy coordination”, “policy integration”, “inter-institutional coordination”, “collaborative governance”, “policy capacity”, “administrative capacity”, “industrial downstreaming”, “hilirisasi”, and “Indonesia”. Eligibility was limited to peer-reviewed journal articles in English or Indonesian that contributed directly to at least one analytical category and, for the contemporary core, were published within the most recent decade. Seminal or framing works were retained only when necessary to define a concept. Items were excluded when they addressed industrial economics without an implementation or governance mechanism, duplicated another source's role without adding analytical value, or lacked sufficient bibliographic provenance. Because the corpus was constructed through theory-led purposive selection rather than a prospectively logged systematic search, raw database hit counts and a PRISMA-style selection flow are not reported. This limitation is stated explicitly rather than reconstructing unverifiable search counts retrospectively. Supplementary Table S1 lists the peer-reviewed journal corpus actually used and its analytical role.

Coding Framework and Analytical Procedure

Coding proceeded through a structured five-category codebook derived from the research questions: (1) strategic and instrument alignment; (2) role, mandate, and authority configuration; (3) coordination mechanisms and information interfaces; (4) analytical, operational, and political implementation capacity; and (5) accountability, feedback, and learning. Indonesian policy documents were first coded for formal objectives, mandates, instruments, and interdependencies. The peer-reviewed corpus was then coded for mechanisms, observed coordination problems, boundary conditions, and implications for implementation. Evidence patterns were compared across source types before being interpreted. The six analytical findings reported in Section 4 are therefore not six independent constructs; they are evidence patterns generated from the five-category codebook.

Coding Consistency and Claim Discipline

To improve consistency, each source was assigned a stable analytical role and each interpretive claim was checked against the source type supporting it. Statements about Indonesian formal policy architecture are grounded in laws and planning instruments; claims about observed downstreaming implementation are limited to the Indonesian empirical studies in the corpus; and broader statements about coordination mechanisms are explicitly presented as theoretical or comparative synthesis. A second-pass review checked whether

each coded excerpt could be placed consistently within the five categories and whether normative recommendations had been kept out of the results section. This procedure reduces category drift, although it does not substitute for independent inter-coder reliability.

Derivation of the ISIC Framework

The ISIC framework was derived by consolidating the six analytical findings into five diagnostic dimensions. Strategic–instrument alignment maps to strategic alignment; mandate multiplicity maps to institutional role clarity; coordination-as-infrastructure maps to coordination infrastructure; capacity asymmetry maps to implementation capacity; and fragmented accountability together with adaptive learning maps to adaptive accountability. The final pair is combined because performance information has limited governance value unless it produces learning, correction, or policy adjustment. The five dimensions are therefore diagnostic and mutually reinforcing, not a validated causal sequence or a mandatory temporal order. Supplementary Table S2 provides the derivation matrix.

Methodological Limitations

The design has three important limitations. First, the literature synthesis is purposive and theory-led rather than exhaustive, so the corpus should not be interpreted as a systematic map of all scholarship. Second, empirical evidence specific to Indonesia is concentrated in downstreaming studies and formal policy documents; the analysis therefore avoids claims about all strategic industries. Third, documentary evidence cannot establish how coordination is experienced by officials or stakeholders in practice. Future research should test the ISIC dimensions through interviews, process tracing, network analysis, and comparative sectoral cases.

4. Results of the Documentary and Integrative Synthesis

Strategic–Instrument Alignment

Evidence pattern. Indonesian policy documents establish broadly compatible industrial objectives, including stronger industrial structure, domestic value addition, competitiveness, and long-term transformation (Government of Indonesia, 2014, 2015, 2022, 2025). The empirical downstreaming studies, however, report coordination and regulatory inconsistencies during implementation (Lahadalia et al., 2025; Sarjito, 2025). **Interpretation.** This pattern is consistent with Candel & Biesbroek (2016) argument that integration can advance unevenly across policy goals and instruments. The result is therefore interpreted as a strategic–instrument alignment risk rather than as evidence that every Indonesian strategic industry is fragmented.

From a public-administration perspective, however, shared national ambition is only the first layer of integration. Candel & Biesbroek (2016) warn that policy integration can evolve unevenly across goals and instruments. This implies that strategic consensus can coexist with operational inconsistency. For example, an industrial project may depend simultaneously on investment approval, energy supply, transport infrastructure, environmental compliance, fiscal treatment, land arrangements, labor skills, and local permits. If each instrument is designed according to a separate organizational logic, the combined policy mix may become internally inconsistent even though every institution is formally pursuing a legitimate objective.

Peters (2018) identifies this as a classic coordination challenge: organizational specialization creates differentiated policy preferences and routines. The problem is therefore not that agencies have different mandates, but that government lacks sufficient mechanisms to reconcile interdependencies among them. Trein et al. (2021) reinforce this point by arguing that research should focus on the mechanisms and impacts of coordination. Applied here, the relevant test is whether coordination changes policy instruments and implementation behavior.

The Indonesian downstreaming literature provides supporting evidence. Lahadalia et al. (2025) identify governance and institutional discrepancies that constrain effective downstreaming implementation. Sarjito (2025) similarly reports regulatory unpredictability and fragmentation across administrative levels in the nickel sector. These studies indicate that strategic alignment must be operationalized through coherent instruments and predictable implementation pathways.

Mandate Multiplicity

The second finding concerns institutional roles. Strategic industrial development necessarily involves multiple institutions because no single ministry possesses all relevant legal authority, expertise, or resources. This creates a governance system characterized by distributed authority. Distributed authority is not inherently dysfunctional; indeed, it protects

specialization, legality, and sector-specific accountability. The challenge arises when interdependencies are not accompanied by clear decision rights and escalation procedures.

Amsler (2016) is useful here because collaborative governance integrates management, politics, and law. Industrial coordination cannot rely exclusively on voluntary interpersonal cooperation. Officials may agree substantively but remain constrained by formal mandates, budget rules, legal procedures, or political accountability. Therefore, coordination architecture must distinguish at least four functions: strategic direction, technical harmonization, operational execution, and oversight.

Krogh (2022) shows that publicly mandated networks require facilitation. This suggests that creating an inter-agency task force or committee is not sufficient. Someone must maintain the process, prepare joint evidence, identify unresolved dependencies, track commitments, and escalate disputes. Torfing et al. (2024) similarly demonstrate the risk of becoming “stuck in the middle,” where strategic leadership and operational implementation are disconnected by a weak tactical layer. In industrial governance, this tactical layer includes the administrative work of translating strategic targets into synchronized regulatory actions, infrastructure schedules, budget decisions, and measurable responsibilities.

Role clarity should therefore not be confused with organizational exclusivity. In cross-cutting policy, multiple organizations may legitimately contribute to the same outcome. What must be clarified is which institution has authority over which decision, which actor convenes coordination, which data are authoritative, which deadlines are binding, and how unresolved conflicts move to a higher decision level.

Coordination as Implementation Infrastructure

The third finding is that coordination must be institutionalized as infrastructure rather than treated as an event. Meetings are necessary, but they are not themselves coordination outcomes. Effective coordination requires recurring routines, common information, agreed problem definitions, documented commitments, deadlines, and follow-up.

Molenveld et al. (2020) show that implementing organizations may hold different “images” of coordination. A central coordinator may perceive a reporting system as necessary integration, while implementing agencies may perceive it as duplication if the information is not used for joint decisions. This means coordination quality depends on usability and reciprocity. Information should flow not only upward for reporting but horizontally for problem solving.

Siddiki et al. (2017) demonstrate that trust and diversity interact in collaborative learning. Strategic industry governance benefits from diverse expertise—industrial engineering, investment, trade, environment, finance, regional planning, technology, and infrastructure—but the value of this diversity depends on repeated interaction and credible information sharing. Where actors distrust the motives or data of other organizations, coordination becomes defensive and procedural.

Waardenburg et al. (2020) identify paradoxes in collaboration that further explain why infrastructure matters. Organizations must collaborate while preserving autonomy and accountability. A durable coordination infrastructure reduces this tension by specifying what must be shared and jointly decided while preserving clear organizational responsibility for execution. It converts collaboration from a personality-dependent process into an institutional routine.

Accordingly, a strategic industry coordination infrastructure should include a shared policy dashboard, a common issue register, interoperable datasets, joint milestones, cross-agency working groups for technical bottlenecks, and an escalation mechanism for unresolved conflicts. The objective is not administrative centralization for its own sake. It is the reduction of transaction costs and uncertainty at institutional boundaries.

Capacity Asymmetry

The fourth finding is that coordination arrangements are only as strong as the capacities of participating organizations. Saguin et al. (2018) show that policy capacity in a developing-country setting is shaped by the availability and distribution of policy skills and organizational resources. Bali et al. (2019) similarly connect policy effectiveness to analytical, operational, and political appropriateness. These perspectives suggest that inter-agency coordination may be formally well designed but practically weak when one or more institutions lack the capacity to fulfill agreed responsibilities.

Analytical capacity includes the ability to interpret industrial data, assess policy alternatives, forecast consequences, evaluate technological and market developments, and identify regulatory interactions. Operational capacity includes staffing, budget, procedures, project management, digital systems, and the ability to deliver decisions on time. Political

capacity includes legitimacy, stakeholder management, negotiation, and the ability to sustain support for policy choices that distribute costs and benefits unevenly.

Howlett et al. (2018) add a robustness perspective. Strategic industry policy faces uncertainty, and overly rigid administrative systems may perform poorly when circumstances change. Capacity should therefore include the ability to adapt instruments without losing strategic direction. For Indonesia, this is relevant to commodity cycles, technology shifts, global trade disputes, investment conditions, and environmental standards. Coordination must enable adaptation rather than merely enforce an outdated plan.

Domorenok et al. (2021b) show empirically that administrations build different capacity arrangements for integrated policies. The implication is that Indonesia should not seek a single uniform model across all strategic industries. Sectors differ in technology, investment structure, regulatory risk, territorial concentration, and environmental impact. The coordination architecture should have common principles but allow sector-specific implementation arrangements.

Fragmented Accountability

The fifth finding concerns performance and accountability. Cross-institutional policies create a mismatch between shared outcomes and separate organizational accountability. Each ministry or agency may report successful completion of its own outputs while the overall policy remains delayed or incoherent. This is a structural problem rather than necessarily a performance failure by individual organizations.

Domorenok et al. (2021a) argue that policy integration requires institutional capacity for coherence. This capacity includes the ability to connect organizational actions to integrated policy objectives. Trein et al. (2021) similarly call for greater attention to the real-world effects of coordination. In strategic industry governance, this means performance systems should measure both organizational outputs and joint outcomes.

Joint accountability does not eliminate individual accountability. Instead, it adds a second layer. An agency remains responsible for its statutory tasks, but cross-agency governance should also track shared milestones such as completion of integrated licensing sequences, synchronized infrastructure readiness, resolution of regulatory conflicts, availability of critical skills, or progress toward agreed industrial ecosystem targets.

Legislative oversight can be important in this context because it can examine whether coordination problems are producing implementation gaps that are invisible in individual agency reports. Oversight is most useful when it asks not only whether an institution has executed its budget or program, but also whether inter-institutional dependencies have been managed. This public-administration perspective shifts accountability from isolated compliance toward system performance.

Adaptive Learning

Evidence pattern. The reviewed literature consistently treats policy integration as dynamic rather than fixed, while the Indonesian policy architecture extends across long planning horizons in which instruments and institutional responsibilities may change (Government of Indonesia, 2015, 2022, 2025). Interpretation. Adaptive learning is therefore retained as a distinct analytical finding, but it is not claimed as an observed failure across all Indonesian institutions. Within ISIC it is paired with fragmented accountability because monitoring becomes administratively meaningful only when performance information can trigger correction and policy adjustment.

Candel & Biesbroek (2016) processual approach implies that integration is dynamic. Different elements of a policy system can advance or regress. Periodic evaluation is therefore needed to detect whether shared goals remain connected to instruments and implementation. Howlett et al. (2018) similarly emphasize robustness and adaptation. Together, these perspectives suggest that monitoring should not merely document performance; it should trigger policy adjustment.

Siddiki et al. (2017) show that social learning is shaped by collaborative conditions. For strategic industry governance, learning requires credible data, openness about implementation problems, and institutional permission to revise instruments. If coordination forums punish disclosure of problems, agencies will report compliance rather than share operational difficulties. Adaptive governance therefore depends on psychological and institutional conditions that support problem identification. This leads to a broader conclusion: coordination is not a static organizational chart. It is a recurring governance cycle connecting strategy, implementation, monitoring, learning, and adjustment.

5. Discussion

From Policy Fragmentation to Coordinated Implementation

The findings suggest that the central administrative challenge of strategic industry governance is the conversion of broad national priorities into coordinated implementation across differentiated institutions. Indonesia possesses a substantial formal policy architecture for industrial development. The governance problem is therefore less about the absence of policy direction and more about the institutional mechanisms that connect policy direction to implementation.

This distinction matters theoretically. Conventional debates may treat coordination as an organizational-design issue: if fragmentation exists, create a coordinating body. The literature reviewed here indicates that this solution is incomplete. Peters (2018) shows that coordination is a persistent challenge precisely because specialization is an enduring feature of government. Candel & Biesbroek (2016) show that integration is multidimensional and processual. Amsler (2016) demonstrates that collaborative governance is embedded in management, politics, and law. Taken together, these arguments imply that no single organizational reform can permanently “solve” coordination. Coordination must be continuously produced through institutions, routines, capacities, and accountability.

This interpretation also helps explain why high-level political commitment can coexist with operational bottlenecks. Political commitment can align strategic goals and accelerate selected decisions, but sustainable implementation requires a tactical administrative layer capable of translating direction into coordinated work. Torfing et al. (2024) show that collaborative systems can become disconnected between strategic and operational levels. For industrial governance, the tactical layer should therefore be treated as a critical administrative capability rather than an intermediate bureaucratic tier.

ISIC as an Integrative Diagnostic Framework

The six analytical findings are consolidated into five mutually reinforcing ISIC dimensions. Fragmented accountability and adaptive learning are combined within the adaptive-accountability dimension because monitoring becomes meaningful only when performance information generates institutional learning and policy adjustment. The resulting five dimensions are: strategic alignment, institutional role clarity, coordination infrastructure, implementation capacity, and adaptive accountability. This consolidation resolves the apparent six-findings/five-dimensions difference and makes the derivation pathway explicit.

ISIC should be understood as an integrative diagnostic framework, not as a new causal theory, a validated effectiveness model, or a universal sequence of stages. Its novelty lies in the sector-specific translation and configuration of established public-administration perspectives for diagnosing cross-institutional implementation in industrial downstreaming. Policy integration primarily explains coherence among goals and instruments; collaborative governance emphasizes interaction among interdependent actors; policy-capacity scholarship identifies analytical, operational, and political capabilities; metagovernance focuses on how collaborative arrangements are steered; and whole-of-government approaches emphasize horizontal and vertical alignment. ISIC adds value by placing these perspectives in one diagnostic architecture that connects a downstreaming implementation problem to a corresponding administrative locus of diagnosis.

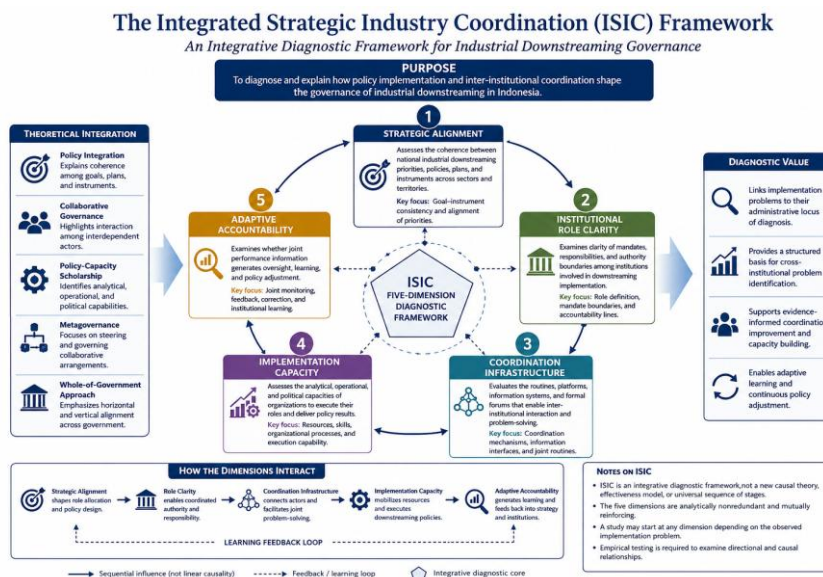
The choice of five dimensions is based on analytical nonredundancy rather than numerical preference. Strategic alignment captures goal-instrument coherence; role clarity captures authority and mandate boundaries; coordination infrastructure captures the routines and information interfaces through which interdependence is managed; implementation capacity captures whether participating organizations can execute their responsibilities; and adaptive accountability captures whether joint performance information produces correction and learning. Separating accountability from learning would create two closely dependent dimensions, while merging role clarity with coordination infrastructure would obscure the distinction between formal authority and the routines used to coordinate it.

The dimensions are mutually reinforcing and diagnostically ordered, but they are not asserted to form a deterministic causal or temporal chain. A study may enter the framework at any dimension depending on the observed implementation problem. For example, a coordination failure may originate in instrument inconsistency even when roles are clear, or in weak operational capacity despite a well-designed coordination forum. Future empirical work is required before directional causal propositions can be made.

Fifth, adaptive accountability combines joint performance measurement, oversight, feedback, and policy adjustment. Trein et al. (2021) emphasize the need to examine coordination impacts, while Howlett et al. (2018) highlight robustness and adaptation.

Adaptive accountability asks whether coordination produces observable improvements in implementation and whether monitoring results are used to modify policy.

These five dimensions form a sequence but also a feedback loop. Strategic alignment shape's role allocation; role clarity enables coordination infrastructure; infrastructure mobilizes implementation capacity; implementation generates performance information; adaptive accountability feeds learning back into strategy and institutional arrangements. A weakness in any dimension can reduce the effectiveness of the others.



Why More Coordination is Not Always Better Coordination

A critical implication of the framework is that the quantity of coordination should not be confused with its quality. More meetings, more reporting requirements, and more inter-agency committees can increase administrative burden without improving implementation. Candel (2021) cautions against treating policy integration as an unquestioned ideal; the appropriate degree of integration depends on the problem. This insight is essential for industrial governance.

Coordination should be intensified where policy interdependence is high. If a decision by one institution substantially affects the ability of another institution to achieve a shared outcome, stronger coordination is justified. Where interdependence is low, excessive integration can slow decisions and blur accountability. The purpose of ISIC is therefore selective integration: coordination intensity should correspond to the degree of substantive interdependence.

This also addresses a practical risk in whole-of-government initiatives. When every actor is included in every decision, collective responsibility may become diffuse. Clear decision rights are necessary to prevent coordination from becoming consensus-seeking without execution. Effective governance combines horizontal collaboration with vertical authority.

Public Value and Democratic Accountability

Strategic industry policy often involves significant public resources, regulatory privileges, environmental consequences, and distributional effects. Coordination must therefore be accountable not only for speed and investment outcomes but also for public value. Public administration contributes an important normative perspective by asking whether industrial transformation is lawful, transparent, equitable, sustainable, and aligned with long-term societal objectives.

Siddiki et al. (2017) show that diverse participation can support learning, while Amsler (2016) emphasizes the legal and political dimensions of collaboration. These arguments suggest that coordination should not become a closed technocratic process. Strategic industry governance should create structured channels for relevant stakeholders, expert evidence, regional interests, and public oversight while maintaining clear governmental responsibility.

Legislative institutions can contribute by examining system-level implementation. Oversight questions can focus on cross-agency bottlenecks, regulatory inconsistency, performance of coordinating mechanisms, and the distribution of responsibilities. Such oversight is especially valuable where executive organizations report performance through

separate administrative channels. The aim is not legislative micromanagement, but democratic scrutiny of whether the governance system is capable of delivering integrated policy.

Indonesia in Comparative Public-Administration Perspective

The Indonesian case also contributes to broader scholarship. Much coordination and collaborative-governance theory has been developed in advanced administrative systems. Saguin et al. (2018) demonstrate the importance of studying policy capacity in developing-country contexts, where resource distribution, organizational professionalization, and political-administrative relationships may differ. Indonesia provides a valuable setting because it combines a large unitary state, extensive decentralization, strong sectoral ministries, state-owned enterprises, regional diversity, and ambitious industrial transformation.

The downstreaming studies by Lahadalia et al. (2025) and Sarjito (2025) illustrate how these institutional features affect implementation. The contribution of the present study is to generalize beyond a single commodity: the same coordination logic applies whenever industrial transformation depends on synchronized decisions across policy domains. This includes advanced manufacturing, mineral processing, energy transition industries, strategic technologies, and other sectors where public authority and private investment are deeply interdependent.

The framework therefore treats Indonesia not as an exception but as a theoretically informative case of complex-state coordination. It shows how policy capacity, integration, collaboration, and accountability can be combined into a single implementation perspective.

Practical Implications

The findings have several practical implications for public administrators and oversight institutions. First, strategic industrial programs should begin with an explicit interdependency map. This map should identify which decisions depend on which organizations, the expected sequence of actions, the information required, and the consequences of delay. Such mapping can reveal coordination needs before implementation problems become crises.

Second, coordinating institutions should distinguish strategic, tactical, and operational forums. Strategic forums should resolve major priorities and political trade-offs. Tactical forums should harmonize instruments, schedules, data, and cross-agency dependencies. Operational teams should solve concrete implementation problems. This differentiation responds to the multi-level coordination challenge identified by Torfing et al. (2024).

Third, shared performance indicators should complement agency-specific indicators. A strategic industry dashboard should not merely aggregate institutional outputs. It should include joint milestones that cannot be achieved by one organization alone. This creates incentives for mutual problem solving and allows oversight actors to identify where implementation is blocked at institutional boundaries.

Fourth, data governance should be treated as coordination infrastructure. Interoperability, common definitions, data ownership, update frequency, and access rights should be agreed in advance. Without a shared evidence base, coordination discussions can become disputes over facts rather than decisions about solutions.

Fifth, coordination mechanisms require professional facilitation and secretariat capacity. Krogh (2022) shows that mandated networks need facilitation. In practice, this means that secretariats should possess analytical capability, not merely administrative meeting-support functions. They should track issues, prepare options, monitor commitments, and identify matters requiring escalation.

Sixth, capacity-building should target the weakest link in an implementation chain. Strengthening only the central coordinator may create a sophisticated center surrounded by uneven implementing capacity. Training, digital systems, staffing, technical expertise, and organizational routines should therefore be assessed across the full network of responsible institutions.

Seventh, oversight should examine implementation interdependencies. Legislative and executive oversight can ask whether conflicting regulations have been reconciled, whether infrastructure and licensing schedules are synchronized, whether responsibilities are clear, and whether coordination decisions are followed through. These questions can reveal governance problems that conventional budget absorption or output reporting may miss.

6. Conclusion

This article has examined Indonesia's industrial downstreaming governance through a public-administration lens focused on policy implementation and inter-institutional coordination. The analysis is intentionally bounded: formal Indonesian policy documents establish the architecture of industrial development, while direct empirical implementation

evidence in the corpus is concentrated in downstreaming studies. The article therefore does not generalize its findings to every strategic industry.

The literature demonstrates that coordination is not synonymous with organizational centralization or frequent meetings. Peters (2018) shows the persistent nature of coordination challenges; Candel & Biesbroek (2016) demonstrate the multidimensional character of policy integration; Amsler (2016), Siddiki et al. (2017), Molenveld et al. (2020), Waardenburg et al. (2020), Krogh (2022) and Torfing et al. (2024) explain the relational and institutional conditions of collaboration; Saguin et al. (2018), Bali et al. (2019), Howlett et al. (2018), and Domorenok et al. (2021a, 2021b) establish the importance of policy and administrative capacity; and Lahadalia et al. (2025) and Sarjito (2025) demonstrate the practical relevance of these issues in Indonesian industrial downstreaming. Candel (2021) additionally reminds policymakers that integration should be purposeful rather than maximal.

The proposed Integrated Strategic Industry Coordination (ISIC) framework synthesizes these insights into five dimensions: strategic alignment, institutional role clarity, coordination infrastructure, implementation capacity, and adaptive accountability. Its central proposition is that coordination quality should be judged by its ability to reduce policy inconsistency and implementation gaps, not by the formal existence of coordinating structures.

For Indonesia, strengthening strategic industry governance therefore requires an institutional shift from episodic coordination toward an implementation system that makes interdependence visible and manageable. Shared objectives must be translated into synchronized instruments; coordination forums must be linked to decision authority; data and performance systems must support joint problem solving; and oversight must assess system-level implementation rather than isolated organizational compliance.

The study is limited by its reliance on documentary and secondary evidence. Future research should test ISIC empirically across specific strategic industries using interviews, process tracing, network analysis, and longitudinal performance data. Comparative studies across sectors and regions could identify which coordination mechanisms work under different institutional conditions. Such research would strengthen both the theory of policy coordination and the practical governance of Indonesia's industrial transformation.

Table 1. Selected Literature Used in the Synthesis

Study	Core concept	Main relevance	Application to this study
Amsler (2016)	Collaborative governance	Management, politics, and law jointly shape collaboration	Role clarity and lawful coordination
Candel & Biesbroek (2016)	Policy integration	Integration develops across frames, actors, goals, and instruments	Strategic and instrument alignment
Siddiki et al. (2017)	Trust and social learning	Trust conditions learning in diverse collaborations	Knowledge sharing across institutions
Peters (2018)	Policy coordination	Specialization creates persistent coordination problems	Cross-ministerial alignment
Saguin et al. (2018)	Policy capacity	Policy capacity is distributed across organizations and systems	Implementation capacity
Howlett et al. (2018)	Policy robustness	Agility and improvisation matter under uncertainty	Adaptive industrial governance
Bali et al. (2019)	Policy effectiveness	Instrument choice must match analytical, operational, and political capacity	Implementability of policy instruments
Molenveld et al. (2020)	Coordination perceptions	Implementers perceive coordination arrangements differently	Designed vs. experienced coordination
Waardenburg et al. (2020)	Collaborative paradoxes	Collaboration creates autonomy/accountability tensions	Hybrid coordination design
Domorenok et al. (2021a)	Institutional capacity	Policy integration requires institutional capacity	Capacity-coherence linkage
Domorenok et al. (2021b)	Administrative capacity	Capacity arrangements vary by governance context	Sector-sensitive coordination
Trein et al. (2021)	Coordination and integration	Research should examine mechanisms and impacts	Outcome-oriented coordination
Krogh (2022)	Network facilitation	Mandated networks require facilitation	Professional coordination secretariat
Torfinng et al. (2024)	Metagovernance	Strategic, tactical, and operational levels can disconnect	Multi-level coordination
Lahadalia et al. (2025)	Indonesia downstreaming	Institutional and coordination weaknesses constrain implementation	Indonesian strategic-industry evidence
Sarjito (2025)	Nickel governance	Regulatory and intergovernmental fragmentation affects downstreaming	Indonesian implementation evidence

(Source: Authors' synthesis of the cited literatur)

Table 2. Integrated Strategic Industry Coordination (ISIC) Framework

Dimension	Diagnostic question	Indicative mechanisms	Expected governance effect
Strategic alignment	Do institutions share operationally specific outcomes?	Common problem definition; shared targets; policy-instrument mapping	Reduced goal and instrument inconsistency
Institutional role clarity	Are decision rights and escalation paths explicit?	Lead/support roles; RACI-type mapping; escalation protocol	Reduced ambiguity and duplication
Coordination infrastructure	Are interdependencies managed continuously?	Shared dashboard; issue register; technical forums; interoperable data	Faster cross-agency problem resolution
Implementation capacity	Can each institution fulfill its responsibilities?	Analytical expertise; staffing; digital systems; project management; stakeholder capability	More reliable execution
Adaptive accountability	Are joint outcomes monitored and used for learning?	Joint KPIs; oversight; periodic review; corrective action	Sustained coherence and adaptation

(Source: Developed by the author based on the literature synthesis)

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