

Applying Open Systems Theory to Post-Contract Public Project Governance in Malaysia

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ABSTRACT

Public project governance is essential for ensuring accountability, transparency, and performance in the public sector. In Malaysia, persistent cost overruns, implementation delays, audit noncompliance, and recurring weaknesses documented in Auditor General reports reveal structural deficiencies in current governance arrangements. Despite regulatory reforms and procedural controls, governance failures continue, indicating fragmentation rather than systemic coherence. This study reconceptualizes post-contract public project governance as an open and adaptive system. Utilizing Open Systems Theory (OST), it develops a conceptual framework in which institutional inputs such as human resource capacity, accountability structures, and contractual completeness are transformed through performance monitoring and change and risk management processes to yield project performance outcomes. Governance effectiveness is thus understood as the result of systemic alignment among institutional capacities, enforcement mechanisms, environmental pressures, and feedback loops. By extending OST to post-contract public project governance, this study advances an integrative theoretical perspective that transcends isolated variable analysis and provides strategic implications for strengthening governance reform in Malaysia and comparable institutional contexts.

Keywords: Public project governance; Open Systems Theory; Post-contract management; Governance effectiveness; Project performance; Financial accountability; Malaysia

INTRODUCTION

Public project governance is a central concern in public administration and project management scholarship, particularly in developing institutional contexts where large-scale public investments align with national development objectives (Klijn & Koppenjan, 2016; Torfing et al., 2020). In Malaysia, public projects serve as key instruments for infrastructure expansion, service delivery improvement, and socio-economic transformation. However, despite established regulatory frameworks and formalized procurement procedures, recurring governance-related deficiencies continue to undermine project effectiveness (Flyvbjerg, 2021).

This study examines ongoing weaknesses in Malaysia's public project governance, such as repeated cost overruns, delays, audit issues, fragmented accountability, and poor monitoring. Similar problems occur in other public-sector projects where governance systems fail to match institutional capabilities with project demands (Ahola et al., 2014; OECD, 2020). These issues suggest that governance systems do not work effectively within the overall public project framework. Instead of isolated administrative mistakes, these weaknesses reveal structural and systemic misalignments among institutional skills, governance processes, and environmental pressures. Understanding public project governance is crucial because poor governance causes not only financial losses but also a decline in public trust, worse service delivery, and weakened institutional legitimacy (Bovens, 2007; Christensen & Lægreid, 2017). Public projects involve the use of large public funds and multiple stakeholders, including government agencies, contractors, regulators, and citizens. Failures in governance go beyond project costs and schedule issues, affecting the overall credibility of governance. Additionally, as governments increasingly depend on complex contracts and multi-agency collaborations, effective governance

is key to ensuring accountability and promoting sustainable development (Klijn & Koppenjan, 2016). Therefore, a more systemic understanding of governance factors is necessary to move beyond reactive reforms and aim for structural improvements.

Previous studies have explored various factors influencing public project governance and performance. Research based on transaction cost economics highlights contractual completeness, monitoring efforts, and control mechanisms as safeguards against opportunistic conduct (Williamson, 1985; Ketokivi & Mahoney, 2020). Agency theory focuses on principal agent issues and emphasizes the importance of accountability structures and oversight mechanisms in reducing information asymmetry (Jensen & Meckling, 1976; Eisenhardt, 1989). Governance literature also examines relational governance, network management, and collaborative arrangements within the public sector (Ansell & Gash, 2008; Torfing et al., 2020). Additionally, organizational capacity research emphasizes the significance of human resource capabilities, financial management systems, and institutional competence in influencing project outcomes (Melton & Meier, 2017).

Although these studies offer valuable insights, they often examine governance variables in isolation. For instance, contractual governance might be studied separately from human resource capacity, or monitoring mechanisms may be analyzed without adequately considering environmental factors like political dynamics or regulatory enforcement strength. As a result, the interactive and systemic nature of governance processes remains under-theorized. There is limited integration of internal organizational capabilities with external environmental pressures within a comprehensive explanatory framework.

In practice, public project governance in Malaysia functions through formal regulatory tools, procurement guidelines, contract management procedures, monitoring systems, and accountability mechanisms within institutions. Governance occurs through structured processes, including project planning, contract development, performance tracking, risk management, and compliance reporting. These processes are supported by organizational resources such as skilled personnel, financial oversight systems, and clear regulations. At the same time, governance mechanisms operate within an external environment influenced by political and administrative factors, legal enforcement structures, institutional norms, and public scrutiny.

Governance does not function as a closed or static system. Organizations constantly interact with their environment, adjusting to feedback and external pressures (Katz & Kahn, 1978). Feedback mechanisms such as audit reports, performance evaluations, and compliance reviews provide information that guides adaptive changes within the governance system. When internal inputs are lacking or environmental pressures are mismatched, governance performance can decline even when formal rules and procedures are in place.

To address these systemic complexities, this study uses Open Systems Theory (OST) to characterize public project governance as an adaptive system made up of interconnected inputs, transformation processes, outputs, environmental influences, and feedback loops (Scott & Davis, 2016). Using OST, this paper seeks to offer a comprehensive, integrative explanation of how internal capabilities and environmental factors together influence governance effectiveness in Malaysian public projects.

This systemic perspective enhances governance theory by integrating fragmented areas of scholarship and developing a conceptual framework that better explains persistent governance issues in public project environments. Earlier theoretical approaches, such as agency theory and transaction cost economics, offer valuable insights into governance control and contractual protections but mainly focus on dyadic relationships and incentive alignment mechanisms (Eisenhardt, 1989; Williamson, 1985). These theories effectively address opportunism, information asymmetry, and contractual enforcement challenges; however, they tend to view governance in a linear way, emphasizing control mechanisms rather than systemic interactions and institutional coordination across multiple governance components.

Public project governance, especially in complex institutional environments like Malaysia, goes beyond principal agent relationships or contractual completeness. Public projects involve multiple actors, layered administrative structures, political oversight, regulatory enforcement bodies, and public scrutiny. As a result, governance outcomes are shaped not only by contractual safeguards but also by interactions among institutional capacity, monitoring systems, environmental pressures, and adaptive feedback processes.

Open Systems Theory (OST) offers a broader analytical perspective for understanding this complexity. Based in organizational theory, OST views organizations as systems that constantly interact with their environment through input-transformation-output processes, controlled by feedback mechanisms (Katz & Kahn, 1978; Scott & Davis, 2016). Organizational effectiveness occurs when internal processes match environmental demands and feedback loops support adaptive adjustments.

Applying Open Systems Theory (OST) redefines public project governance as a system where effectiveness relies on alignment rather than simply having regulations. Governance performance results from interactions among institutional capacity, governance processes, environmental pressures, and feedback mechanisms. This systemic view offers a strong explanation for the ongoing weaknesses in post-contract implementation and recurring governance issues in public project settings.

Background of the Study

Public project governance has become increasingly important in emerging economies where large-scale public investments closely align with national development strategies (OECD, 2020; World Bank, 2020). Malaysia provides a particularly relevant context for studying public project governance because of its institutional structure, regulatory framework, and ongoing focus on infrastructure-led development. As a middle-income country with a centralized but multi-layered administrative system, Malaysia has carried out numerous public projects across sectors such as transportation, education, healthcare, housing, and utilities. These projects act as key tools for implementing national development plans and driving socio-economic transformation.

Malaysia is chosen as the focus of this study for several interconnected reasons. First, the country has established comprehensive procurement regulations, financial management guidelines, and contract governance procedures designed to protect public resources (OECD, 2020). Formal governance structures are institutionalized through centralized oversight agencies, audit mechanisms, and regulatory enforcement frameworks. This makes Malaysia an important case for analysis because governance challenges remain despite structured regulatory systems. The ongoing governance issues within a relatively mature administrative framework pose significant theoretical questions about systemic alignment rather than just a lack of regulation (Christensen & Læg Reid, 2017).

Second, recurring findings from national audit assessments highlight ongoing concerns related to cost overruns, implementation delays, noncompliance with contractual provisions, and weaknesses in monitoring and enforcement practices. Recent Auditor General's Reports continue to document financial irregularities, project completion delays, and deficiencies in contract administration within federal government projects (National Audit Department Malaysia, 2023). Similar patterns have been observed in other public sector contexts where governance mechanisms exist formally but implementation capacity remains uneven (Flyvbjerg, 2021; OECD, 2020). These recurring issues suggest that governance deficiencies stem from deeper institutional and systemic dynamics rather than isolated administrative shortcomings.

Third, Malaysia functions within a complex governance environment characterized by federal state administrative arrangements, political-administrative influences, and growing public scrutiny. Public projects often involve multiple stakeholders, including ministries, implementing agencies, contractors, regulatory authorities, and oversight bodies. Governance complexity in such multi-actor settings is well recognized in network and collaborative governance literature (Klijn & Koppenjan, 2016; Torfing et al., 2020). This complexity increases coordination challenges and creates conditions where governance effectiveness depends on inter-organizational alignment and adaptability. From an Open Systems Theory perspective, organizations operate within dynamic environments where internal processes are constantly influenced by external factors (Scott & Davis, 2016). Malaysia's institutional framework, therefore, provides an ideal context for studying governance as an open and adaptable system.

Furthermore, Malaysia's development path reflects ongoing institutional reforms aimed at strengthening public financial management, procurement transparency, and accountability structures. Public sector reform efforts in Malaysia have historically focused on performance management, regulatory modernization, and administrative restructuring (Siddiquee, 2010). However, reform literature indicates that procedural improvements do not

automatically lead to systemic governance coherence (Christensen & Læg Reid, 2017). Although reform initiatives show policy commitment, persistent weaknesses in project governance suggest that interventions may be fragmented or insufficiently integrated.

The Malaysian case is important because it allows for the study of governance challenges in a setting where formal structures exist, but systemic issues still remain. Instead of concentrating on the lack of governance, this research explores how organizational skills, contractual tools, monitoring methods, environmental influences, and feedback loops all work together to influence public project outcomes.

By situating the study within Malaysia, the research enhances both contextual and theoretical understanding. Contextually, it offers insights into governance challenges faced by a developing yet institutionally structured public sector. Theoretically, it broadens Open Systems Theory into public project governance by showing that governance effectiveness relies on systemic coherence rather than just isolated procedural controls (Scott & Davis, 2016).

Problem Statement

Public project governance in Malaysia continues to face recurring performance issues despite the existence of formal procurement regulations, financial management guidelines, and contract administration frameworks (OECD, 2020). National audit reports regularly highlight project delays, cost overruns, weak contract enforcement, scope changes, and non-compliance with procedural requirements (National Audit Department Malaysia, 2023). Similar governance failures have been reported in public infrastructure projects where institutional capacity and monitoring mechanisms are not sufficiently aligned with implementation demands (Flyvbjerg, 2021). The ongoing presence of these problems indicates that governance weaknesses are not just isolated administrative errors but stem from deeper structural misalignments within public project implementation systems.

At the organizational level, governance effectiveness is closely tied to organizational capacity and managerial skill (Melton & Meier, 2017). Insufficient human resource expertise in contract management, monitoring, and risk assessment weakens enforcement discipline and limits adaptive ability. Although monitoring systems are officially put in place, governance literature stresses that monitoring intensity and enforcement integration are vital to avoiding implementation failure (Williamson, 1985; Ketokivi & Mahoney, 2020). Repeated audit results also show that feedback mechanisms are not consistently built into governance structures, which restricts institutional learning and ongoing improvement (National Audit Department Malaysia, 2023).

Contractual and regulatory governance mechanisms also have structural vulnerabilities. Transaction cost economics emphasizes the importance of contractual completeness and enforcement safeguards in reducing opportunistic behavior (Williamson, 1985), while agency theory highlights the risks of principal-agent misalignment in public sector arrangements (Eisenhardt, 1989). However, incomplete contractual provisions, weak enforcement practices, and compliance-focused implementation can create gaps between regulatory design and operational execution. As a result, governance processes risk becoming mere procedural exercises instead of dynamic tools for ensuring accountability and performance outcomes.

Although existing research has studied contractual safeguards, monitoring practices, accountability structures, and organizational capacity, these factors are often examined separately (Klijn & Koppenjan, 2016; Torfing et al., 2020). Little attention has been given to how internal capacities, governance processes, and environmental pressures interact within a unified systemic framework. As a result, current explanations may miss how weaknesses in one area can interact with deficiencies in another, ultimately limiting overall governance effectiveness.

The main issue addressed is the lack of an integrated, systems-based understanding of post-contract public project governance in Malaysia. From an Open Systems perspective, organizations operate within dynamic environments influenced by regulatory pressures and institutional factors (Scott & Davis, 2016). When internal capacities, governance processes, and environmental factors are mismatched, project performance declines despite formal rules. Using Open Systems Theory (OST), this study redefines public project governance as an

adaptive system where interconnected inputs, transformation processes, outputs, and feedback mechanisms collectively influence governance effectiveness.

Research Gap

Existing studies on public project governance have explored governance factors from various theoretical viewpoints. Research based on transaction cost economics highlights contract completeness, incentive alignment, and monitoring systems as protections against opportunistic actions (Williamson, 1985; Ketokivi & Mahoney, 2020). Studies rooted in agency theory focus on principal–agent misalignment, monitoring efforts, and accountability frameworks to lessen information asymmetry and moral hazard (Eisenhardt, 1989; Jensen & Meckling, 1976). Broader governance research examines relational governance, collaborative networks, and institutional setups in environments with multiple actors in the public sector (Klijn & Koppenjan, 2016; Torfing et al., 2020). These theoretical perspectives have greatly enhanced understanding of governance structures and control mechanisms.

Additionally, much of the research on project governance focuses on the pre-contract phase, especially procurement systems, tender evaluation processes, contract design, and regulatory compliance during project initiation (Ahola et al., 2014; Biesenthal & Wilden, 2014). Studies on public procurement reform similarly highlight transparency mechanisms, bidding procedures, and regulatory frameworks at the award stage (OECD, 2020). These contributions offer valuable insights into how governance structures are formally established before project execution.

However, relatively less attention has been given to governance dynamics during the post-contract phase, where activities like implementation, contract administration, performance monitoring, risk management, and enforcement determine project outcomes. Governance effectiveness is ultimately tested during execution rather than at the award stage. Empirical evidence indicates that many project failures result not from flawed procurement design but from weaknesses in supervision, enforcement, discipline, adaptive decision-making, and integration of audit feedback after contracts are signed (Flyvbjerg, 2021; Joslin & Müller, 2015). Despite this, post-contract governance remains relatively under-explored within the broader project governance literature.

Additionally, earlier studies often analyze governance mechanisms separately. Monitoring practices can be examined without considering organizational capacity, contractual safeguards may be evaluated independently of institutional context, and accountability structures might be studied without feedback integration. Such isolated approaches restrict understanding of how governance mechanisms interact dynamically during project execution. As the multi-level project governance literature recognizes, governance effectiveness relies on alignment among structures, actors, and processes (Biesenthal & Wilden, 2014; Müller & Lecoivre, 2014). However, little research combines internal capacities, governance processes, environmental pressures, and adaptive feedback loops within a single explanatory framework.

Another significant limitation is the lack of a systems-based theoretical perspective in analyzing post-contract public project governance. Although governance complexity is widely acknowledged, few studies view governance during implementation as an open and adaptive system shaped by both internal and external factors. Open Systems Theory suggests that organizational effectiveness depends on alignment among inputs, transformation processes, environmental influences, and feedback mechanisms (Scott & Davis, 2016). However, its use in post-contract public project governance has been limited. As a result, governance reforms are often seen as procedural changes rather than comprehensive system realignments.

This study addresses these limitations in two primary ways. First, it explicitly shifts analytical attention to the post-contract phase of public project governance, focusing on how governance mechanisms operate during project execution, including contract administration, monitoring and evaluation, financial oversight, enforcement practices, and audit feedback integration. By concentrating on implementation dynamics, the study examines the stage at which governance weaknesses most frequently emerge.

Second, the study adopts an Open Systems Theory (OST) perspective to understand post-contract governance as an interconnected, adaptable system. Instead of analyzing governance factors separately, the research

combines organizational capabilities (e.g., human resource skills and financial management), governance procedures (contractual and monitoring mechanisms), environmental pressures (regulatory and institutional influences), and feedback mechanisms (audit and evaluation systems) within a single framework. This systemic approach goes beyond contract-focused or compliance-only analyses and provides a comprehensive explanation of governance effectiveness during project implementation. By emphasizing post-contract governance and applying a systems-based theoretical framework, this study adds to the literature by addressing a significant gap in understanding how governance functions during the implementation phase. In doing so, it promotes theoretical integration and offers a more complete basis for analyzing ongoing governance challenges in Malaysian public projects.

Although governance scholarship increasingly recognizes the complexity of public administration, limited research incorporates post-contract implementation dynamics into a coherent, systems-based model. Much of the literature remains divided along theoretical lines contractual design, monitoring mechanisms, accountability arrangements, or organizational capacity without examining how these elements work together during project execution.

This fragmentation may partly explain why governance reforms often lead to gradual improvements without fully addressing ongoing performance issues. Strengthening governance tools, such as updating procurement guidelines or improving audit procedures, can leave systemic alignment unaddressed. Weakness in one area can limit the effectiveness of others. For example, clear contracts may not improve performance if monitoring systems are weak or if institutional capacity is lacking to enforce compliance.

The lack of a comprehensive integrative framework is especially problematic in post-contract governance, where implementation realities create uncertainty, coordination difficulties, and adaptive needs. A systems-based approach allows for analyzing how governance inputs are shaped through institutional processes under environmental influences and how feedback loops support adjustments over time. Filling this theoretical gap is crucial for developing stronger explanations of governance success in complex public project settings.

LITERATURE REVIEW

Studying governance outputs, inputs, and transformation processes within the framework of Open Systems Theory (OST) is important because it helps to understand how organizations or systems respond to their environment, manage resources, and make decisions. By analyzing these components, researchers can identify key factors that influence performance, efficiency, and adaptability. It also provides insights into how inputs (resources) are transformed through governance processes into outputs (results), allowing for more informed decision-making and improvements in system management.

Quality Project Delivery

Effective project delivery in the public sector means meeting project goals within the agreed scope, schedule, budget, and quality standards. Recent research highlights that quality delivery in public infrastructure projects is increasingly linked to governance effectiveness rather than just technical implementation (Aigboduwa, 2025; Alalyani & Lee, 2024). Modern governance literature emphasizes that project performance outcomes are influenced by managerial oversight, adherence to regulations, and institutional capacity.

Recent empirical findings show that governance quality strongly predicts project success rates in the public sector (Avoyan et al., 2024; Adeusi et al., 2024). These studies argue that performance issues often come from weak oversight structures and insufficient institutional control systems rather than engineering or operational limitations. Therefore, quality project delivery is increasingly viewed as a result of governance processes.

Reduction of Financial Leakages

Financial leakages in public projects include cost overruns, misallocation of funds, inefficiencies, and violations of financial procedures. Recent research on public sector governance cites financial leakages as signs of weak monitoring systems and poor risk management (Akomea Frimpong et al., 2021; Alkaraan & Floyd, 2020).

Recent studies from the past five years show that strengthening financial governance systems, including audit integration and risk management, greatly reduces corruption risks and budget inefficiencies (Bategeka et al., 2021; Adeusi et al., 2024). Therefore, cutting financial leakages is widely seen as an outcome tied to governance rather than just an accounting matter.

Human Resource Capacity

Human resource capacity pertains to the skills, knowledge, and professional abilities of personnel involved in contract management, monitoring, and governance enforcement. Recent studies highlight that governance effectiveness relies on institutional competence and managerial expertise (Melton & Meier, 2017; Ayinkamiye & Njenga, 2022).

Recent governance research (2021-2024) indicates that lacking technical skills in contract administration and monitoring greatly weakens governance performance and raises the risk of project failure (Alamsyah et al., 2023; Adeusi et al., 2024). Empirical evidence shows that public agencies with greater governance capacity achieve better compliance, stronger monitoring and enforcement, and improved project delivery results.

Human resource capacity directly improves quality project delivery by strengthening monitoring effectiveness and enforcement discipline. Additionally, it indirectly helps reduce financial leakages by reinforcing financial oversight mechanisms and enhancing risk detection and control capabilities.

Clear Accountability Structures

Clear accountability structures involve defined roles, reporting lines, oversight responsibilities, and enforcement mechanisms in public project governance. Recent governance literature highlights that clarity in accountability significantly boosts compliance and transparency of performance (Ahmad et al., 2023; Bategeka et al., 2021).

Studies within the past five years argue that fragmented accountability arrangements increase coordination failures and weaken enforcement capacity, especially in multi-agency public projects (Avoyan et al., 2024). Clear accountability improves monitoring effectiveness and boosts compliance.

Clear accountability structures improve quality project delivery by strengthening oversight consistency and institutional enforcement discipline within post-contract governance processes. They also help prevent financial leakages by reducing role ambiguity and enhancing financial supervision and accountability mechanisms.

Comprehensive Contract Clauses

Comprehensive contract clauses ensure the completeness, clarity, and enforceability of provisions that govern project execution. Recent research in governance and contract management emphasizes the importance of contract specificity and enforcement ability (Aben et al., 2021; Rokkan & Haugland, 2022).

Recent studies show that incomplete contracts raise the likelihood of opportunistic behavior, scope creep, and cost overruns (Ketokivi & Mahoney, 2020; Akomea Frimpong et al., 2021). Well-designed contract clauses improve clarity in risk allocation and decrease ambiguity during project execution.

Comprehensive contract clauses promote quality project delivery by enhancing contractual clarity and strengthening enforcement of performance obligations. They also reduce financial leakage by improving cost-control discipline and establishing clear risk-allocation frameworks within post-contract governance.

Performance Monitoring

Performance monitoring functions as the transformation mechanism within the governance system. Recent empirical research demonstrates that monitoring intensity significantly mediates the relationship between governance inputs and project performance (Ahmed et al., 2021; Ayinkamiye & Njenga, 2022).

Monitoring guarantees that contractual terms, financial procedures, and accountability structures become enforceable performance standards. Studies (2021-2024) show that strong monitoring systems improve transparency, enhance corrective actions, and greatly reduce project deviations.

Performance monitoring directly improves quality project delivery by increasing oversight effectiveness, ensuring adherence to contractual obligations, and allowing for timely corrective actions during project execution. Additionally, it indirectly helps reduce financial leakages by identifying irregularities, deviations, and financial non-compliance early on.

Change and Risk Management

Change and risk management involve predicting, evaluating, and addressing uncertainties during project execution. Recent governance research indicates that risk management capacity is crucial for protecting public funds and ensuring project stability (Akomea Frimpong et al., 2021; Alolayan, 2020). Current studies show that poor risk management increases vulnerability to financial inefficiencies and delays (Aigboduwa, 2025). Robust change control processes help prevent cost overruns and scope creep. As an adaptive governance tool, effective change and risk management directly reduce financial leaks by managing uncertainties and promoting fiscal discipline. At the same time, they support successful project delivery by preserving implementation stability and avoiding disruptive cost and scope changes.

Proposed Research Framework

Recent research shows that governance inputs such as contractual mechanisms, accountability structures, and organizational capacity influence project outcomes through organized oversight and control processes (Joslin & Müller, 2015; Ketokivi & Mahoney, 2020). However, these factors are often analyzed separately, which limits theoretical integration and conceals the dynamic interdependencies among governance elements (Müller & Lecoeuvre, 2014). Open Systems Theory offers a strong foundation for rethinking governance as an interconnected, adaptive system where inputs, processes, environmental factors, and feedback mechanisms together shape performance results (Scott & Davis, 2016).

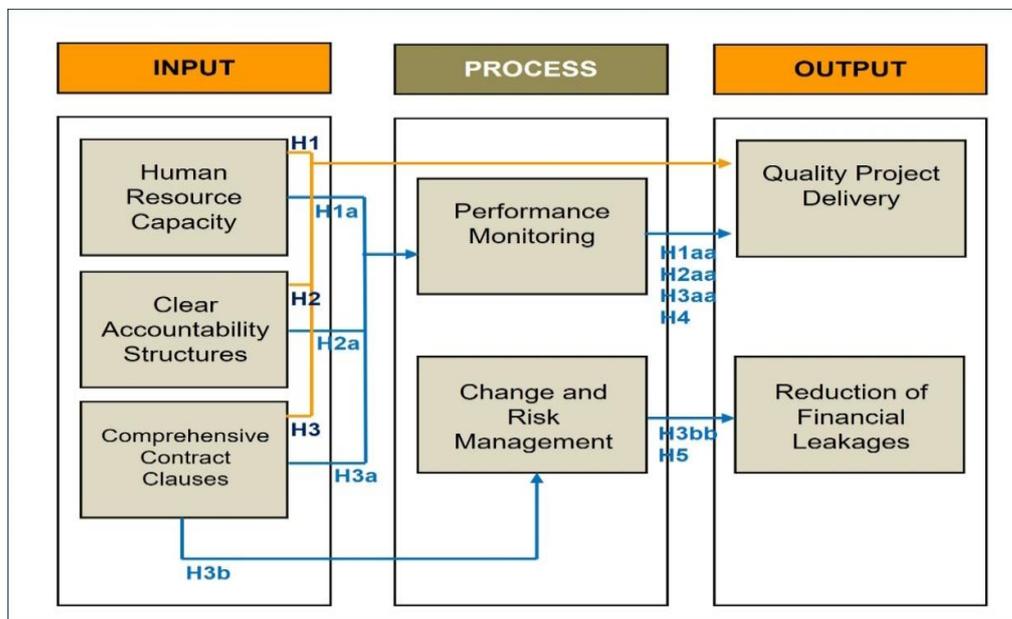


Figure 1. Conceptual Framework of Post-Contract Public Project Governance

As shown in Figure 1, human resource capacity, clear accountability structures, and comprehensive contract clauses are viewed as governance inputs. These inputs influence project outcomes both directly and indirectly through transformation processes, especially performance monitoring, change management, and risk management. In line with the systemic logic of OST, governance effectiveness results from the interaction and alignment of institutional capacities, monitoring mechanisms, and adaptive risk control processes.

CONCLUSION

This study examines ongoing governance challenges in Malaysian public projects by analyzing post-contract implementation dynamics. Despite having formal regulatory frameworks and procedural controls, ongoing delays, cost overruns, and monitoring issues suggest that governance problems stem from systemic misalignment rather than a lack of regulations.

Aligned with the study's main argument, Open Systems Theory (OST) provides a strong framework for rethinking post-contract public project governance as an adaptive system shaped by evolving interactions among institutional inputs, governance processes, environmental factors, and feedback loops. Human resource capacity, clarity of accountability, and contract completeness are identified as key inputs, with their effects transmitted through monitoring and risk management processes to influence performance outcomes.

By incorporating these elements into an input–process–output framework, this research clarifies how governance effectiveness results from systemic alignment rather than merely procedural compliance. This approach shifts focus from pre-contract procurement design to the implementation phase, where governance is enacted and performance outcomes are realized.

To clarify the broader theoretical and practical implications of this study, the findings show that sustainable governance reform needs coordinated efforts to strengthen institutional capacity, integrate enforcement, and develop adaptive feedback systems. Fragmented or compliance-focused reforms are unlikely to solve ongoing performance problems.

Understanding public project governance as an open and interconnected system is crucial for delivering quality projects and minimizing financial losses in Malaysian public sector projects and similar institutional settings.

RECOMMENDATIONS

This study advocates a fundamental shift in how public project governance is understood and reformed, especially during the post-contract implementation phase. Instead of viewing governance as merely a compliance-driven administrative task focused solely on procurement procedures and regulations, it should be recognized as a dynamic and adaptable system. The ongoing issues in Malaysian public projects suggest that isolated efforts, like tightening contract clauses or issuing more procedural guidelines, are unlikely to produce lasting improvements if the underlying institutional capacities and governance processes stay misaligned. Post-contract governance should be considered a matter of system alignment rather than just rule enforcement. Traditional reform efforts often address individual governance components separately, such as improving audits or enhancing contractual documentation. However, from an Open Systems viewpoint, governance effectiveness relies on the coherence among inputs (institutional capacity), transformation processes (monitoring and risk management), and outputs (project performance outcomes). Therefore, reform strategies should focus on systemic integration, ensuring that human resources, accountability frameworks, contractual mechanisms, and monitoring systems work together cohesively rather than in isolation.

Second, governance reform should extend beyond procedural compliance toward strengthening adaptive capacity. Audit findings and monitoring reports should not merely document non-compliance; they must function as active feedback mechanisms embedded within the governance system. Public agencies should establish structured feedback loops through which audit insights inform capability development, contract redesign, recalibration of monitoring, and refinement of risk management. In this way, governance evolves into a learning-oriented system capable of continuous adjustment rather than remaining a static regulatory apparatus.

Third, policymakers should focus on developing governance capabilities as a strategic institutional investment. Enhancing human resource skills in contract management, performance monitoring, and risk evaluation should be viewed as a core governance function rather than just supplementary operational support. Institutional competence determines whether contractual clauses and accountability systems lead to effective enforcement and performance discipline. Without aligned human capacity, governance tools risk remaining symbolic rather than operational.

Fourth, future research should expand the systemic approach used in this study to empirically examine governance coherence across different institutional settings. Comparative analyses of ministries, sectors, or federal–state structures could assess how variations in capacity alignment affect project outcomes. Long-term studies might also investigate how adaptive feedback mechanisms help governance develop over time. Such research would enhance the theoretical understanding of governance as an evolving institutional system formed by interaction, adaptation, and environmental factors.

In clarifying the broader importance of these recommendations, this study emphasizes that public project governance is not just an administrative matter but a key factor in fiscal sustainability, public trust, and institutional credibility. Governance failures cause systemic effects that go beyond isolated project issues. By adopting a systems-based approach, this research offers a conceptual basis for reform strategies that focus on alignment, integration, and adaptive learning rather than just expanding procedures.

Implementing a systems-based governance approach requires institutional mechanisms that deliberately connect governance inputs, processes, and feedback structures. For example, capacity development initiatives should be directly linked to audit findings and performance monitoring results, ensuring that training investments address recurring implementation issues. Likewise, contractual reform should be coordinated with recalibrating monitoring and redesigning risk management to make sure that new contractual provisions are enforceable in practice.

Inter-agency coordination platforms can also act as tools for systemic alignment. Structured governance review forums involving project managers, auditors, financial controllers, and policy oversight bodies help promote cross-functional learning and shared accountability. Embedding such integrative mechanisms shifts governance from a siloed administrative task to a coordinated institutional process.

Furthermore, performance indicators should focus on systemic coherence rather than just isolated compliance metrics. Evaluating governance maturity might involve examining the alignment between institutional capacity, enforcement consistency, feedback use, and adaptive responsiveness. Such multidimensional frameworks can enhance the sustainability of long-term governance.

Ultimately, this study's main recommendation is clear: enhancing public project governance requires systemic consistency. Possessing regulatory expertise alone is not enough without institutional coordination. Viewing governance as an open, interconnected, and adaptive system helps policymakers and scholars build more resilient, accountable, and performance-oriented public project environments.

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