



Evaluation of Good Corporate Governance in Fuel Distribution at PT Pertamina (Persero)

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Abstract

Purpose: This study aims to evaluate the implementation of Good Corporate Governance (GCG) and risk management practices in improving the efficiency and accountability of fuel distribution at PT Pertamina (Persero).

Research Methodology: This study employs a conceptual and evaluative approach based on governance theory, risk management principles, Agency Theory, and Stakeholder Theory. Secondary data were obtained from government reports, academic publications, policy documents, corporate governance frameworks, and relevant theoretical literature. The data were analyzed descriptively and analytically.

Results: The findings indicate that transparency, accountability, responsibility, independence, and fairness strengthen organizational control systems and reduce potential irregularities in fuel distribution. Effective risk management also supports operational efficiency through systematic risk identification, mitigation, monitoring, and evaluation. The integration of governance and risk management mechanisms further enhances corporate reputation and stakeholder trust.

Conclusions: Strengthening GCG, risk management practices, digital monitoring systems, and organizational controls is essential for achieving efficient, accountable, and sustainable fuel distribution management in Indonesia.

Limitations: This study is limited by its conceptual design and reliance on secondary and publicly available data, preventing direct empirical measurement of governance effects on organizational performance.

Contributions: This study integrates GCG and risk management perspectives in evaluating fuel distribution within a state-owned enterprise and provides practical insights for strengthening digital governance, monitoring, transparency, and accountability.

Keywords: *Accountability, Corporate Reputation, Fuel Distribution, Good Corporate Governance, Risk Management*

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1. Introduction

Energy plays a fundamental role in supporting economic activities, social welfare, and national development. In Indonesia, fuel oil (*Bahan Bakar Minyak/BBM*) remains one of the most important energy sources because it supports transportation, agriculture, fisheries, manufacturing, logistics, and various activities of micro, small, and medium enterprises ([Fadhilah, 2020](#)). The availability and affordability of fuel therefore have direct implications for household purchasing power, production

costs, mobility, and overall economic stability. To maintain public access to energy and reduce the economic burden on certain groups, the Indonesian government implements fuel subsidy policies as part of its broader fiscal and social protection strategies ([Indrawati, Satriawan, & Abdurrohman, 2024](#)). Consequently, the effectiveness of fuel distribution becomes an important component in ensuring that government subsidy policies achieve their intended objectives.

Fuel subsidies, however, involve complex administrative, financial, and operational processes. The distribution system must ensure that fuel is available in sufficient quantities, delivered efficiently, and allocated to appropriate beneficiaries. Weaknesses in these processes may reduce the effectiveness of public expenditure and create inefficiencies in the use of national resources. Challenges may arise in the form of inaccurate targeting, distribution leakages, subsidy misuse, logistical disruptions, weaknesses in monitoring systems, and limited integration of information among relevant institutions. These challenges indicate that fuel subsidy management requires not only effective operational procedures but also strong governance structures capable of ensuring transparency, accountability, and responsible resource utilization ([Gbadabo, 2025](#)).

PT Pertamina (Persero), as a state-owned enterprise operating in Indonesia's energy sector, has an important role in supporting fuel distribution and national energy management. The company's activities are closely associated with both commercial objectives and public service responsibilities. This dual role creates a distinctive governance environment because corporate management must maintain operational efficiency while simultaneously responding to government policies and public expectations. The distribution of subsidized and non-subsidized fuel involves substantial financial resources, complex logistics, extensive distribution networks, and multiple stakeholders. Therefore, effective organizational control and governance mechanisms are necessary to ensure that operational decisions remain aligned with corporate objectives, regulatory requirements, and public interests ([Baltrocchi, Ferronato, Mendoza, Portillo, Romagnoli, & Torretta, 2023](#)).

Good Corporate Governance (GCG) provides an important framework for addressing these challenges. GCG is generally based on the principles of transparency, accountability, responsibility, independence, and fairness. Transparency enables relevant stakeholders to obtain accurate and accessible information regarding organizational activities and decision-making processes. Accountability clarifies the responsibilities of organizational actors and provides a basis for evaluating performance. Responsibility encourages compliance with legal, social, and institutional obligations, while independence supports objective decision-making and reduces inappropriate intervention. Fairness ensures that the interests of different stakeholders are considered proportionately within organizational processes ([Hasanudin, 2023](#)).

The implementation of GCG is particularly important in state-owned enterprises because organizational resources are closely related to public interests. Strong governance mechanisms can reduce opportunities for misconduct, strengthen internal controls, improve decision-making quality, and increase confidence among stakeholders. In the context of fuel distribution, governance mechanisms can also improve the traceability of operational processes and clarify responsibilities among organizational units involved in planning, distribution, monitoring, and evaluation ([Setyahadi & Narsa, 2020](#)). Effective governance therefore extends beyond administrative compliance and becomes an important instrument for strengthening organizational effectiveness. When governance principles are integrated into operational practices, organizations are better positioned to manage public resources in a transparent and accountable manner ([Birdayanthi, Yusriadi, & Ikmal, 2025](#)).

Nevertheless, governance mechanisms alone may not be sufficient to address the complexity of fuel distribution. Fuel distribution activities are exposed to various risks that may affect operational continuity, financial efficiency, service quality, and organizational reputation. Potential risks include fuel shortages, transportation disruptions, logistical delays, technological failures, inaccurate distribution data, regulatory non-compliance, subsidy misuse, and weaknesses in internal control systems. These risks may originate from internal organizational processes as well as external

environmental changes. Therefore, risk management is required to systematically identify, assess, mitigate, monitor, and evaluate risks that may interfere with organizational objectives ([Haryanto, Hapsari, & Hidayah, 2024](#)).

Effective risk management enables organizations to respond more systematically to uncertainty and operational disruptions. Risk identification helps determine potential threats before they develop into more serious problems, while risk assessment assists management in evaluating their probability and possible impact. Mitigation strategies allow organizations to reduce exposure to identified risks, and continuous monitoring ensures that risk responses remain relevant over time. In fuel distribution, these processes are particularly important because operational disturbances may directly affect consumers, economic activities, and public services. The integration of risk management into organizational governance can therefore strengthen resilience, improve efficiency, and support more sustainable decision-making ([Settembre-Blundo, González-Sánchez, Medina-Salgado, & García-Muiña, 2021](#)).

The relationship between governance and risk management can also be explained through Agency Theory. Agency Theory emphasizes the potential conflict of interest between principals and agents when decision-making authority is delegated. In the context of state-owned enterprises, the government can be regarded as the principal, while corporate management functions as the agent responsible for implementing organizational and operational activities. Differences in objectives, information, and interests may create agency problems and information asymmetry. Strong governance, monitoring, accountability, and reporting mechanisms are therefore required to ensure that managerial decisions remain aligned with organizational objectives and public interests ([Efunniyi, Abhulimen, Obiki-Osafiele, Osundare, Agu, & Adeniran, 2024](#)).

Stakeholder Theory provides an additional perspective for understanding governance in fuel distribution. This theory emphasizes that organizations should consider the interests of various stakeholder groups rather than focusing solely on shareholders or financial objectives. In the context of PT Pertamina, relevant stakeholders include government institutions, employees, consumers, regulators, business partners, investors, and society. Each stakeholder group may have different expectations regarding service quality, transparency, accessibility, efficiency, and organizational accountability. Because fuel distribution directly affects economic development, social welfare, and national energy security, stakeholder-oriented governance becomes particularly important in maintaining institutional legitimacy and public trust ([Arifin, Wiryono, Damayanti, & Yudoko, 2024](#)).

Public accountability is also closely connected to these governance and theoretical perspectives. State-owned enterprises are expected to demonstrate that organizational decisions, expenditures, and operational activities are conducted responsibly and in accordance with established regulations. Accountability requires transparent reporting, effective internal control, compliance mechanisms, and appropriate monitoring and evaluation. In the context of fuel subsidy management, accountability is particularly important because subsidies involve public resources and are designed to generate social and economic benefits ([Gbadebo, 2025](#)). Weak accountability may reduce policy effectiveness, while stronger accountability can increase institutional credibility and stakeholder confidence.

Technological development also creates opportunities to strengthen governance and risk management in fuel distribution. Digital monitoring systems, integrated databases, and real-time information systems can improve the accuracy and traceability of distribution activities. Digital integration may also support more effective coordination among institutions by providing timely and consistent information for decision-making. In addition, technology can strengthen early detection mechanisms for distribution irregularities and operational risks. Therefore, digital governance should be considered an important component in strengthening the effectiveness of contemporary fuel distribution management ([Shihab, 2025](#)).

Although Good Corporate Governance, public accountability, and risk management have been widely discussed in organizational and public management literature, their integrated application in fuel distribution management requires further evaluation. Existing discussions often address governance,

accountability, or risk management as separate organizational dimensions. However, fuel distribution involves interconnected operational, financial, technological, regulatory, and stakeholder-related challenges. This complexity requires an integrated analytical perspective that evaluates how governance principles and risk management mechanisms jointly contribute to organizational accountability and operational efficiency. Examining these relationships is particularly relevant in the context of a state-owned enterprise that operates simultaneously within commercial and public service environments ([Shovon, 2023](#)).

Furthermore, the relationship between governance practices and broader organizational outcomes deserves greater attention. Strong governance may influence not only accountability and efficiency but also corporate reputation and stakeholder trust. Similarly, effective risk management may contribute to organizational stability, service continuity, and long-term sustainability. Understanding these interconnected outcomes can provide a more comprehensive perspective on how governance systems support fuel distribution management. Such an evaluation is also useful for identifying areas where organizational controls, monitoring mechanisms, digital systems, and inter-institutional coordination can be strengthened.

Accordingly, this study aims to evaluate the implementation of Good Corporate Governance and risk management practices in improving the accountability and operational efficiency of fuel distribution at PT Pertamina (Persero). The study further examines how governance principles and risk management mechanisms contribute to organizational control, corporate reputation, stakeholder trust, and sustainable fuel distribution management. By integrating governance theory, Agency Theory, Stakeholder Theory, public accountability, and risk management perspectives, this study seeks to provide a comprehensive conceptual evaluation of fuel distribution governance within the context of a state-owned enterprise in Indonesia.

2. Literature Review and Hypothesis/es Development

2.1 Good Corporate Governance

Good Corporate Governance (GCG) refers to a management and control system that regulates the relationships among shareholders, management, government institutions, and other relevant stakeholders. The concept emphasizes the importance of transparency, accountability, responsibility, independence, and fairness in organizational decision-making processes ([Ishak & Hassane, 2025](#)). These principles provide a framework for ensuring that organizational activities are conducted in accordance with applicable regulations and institutional objectives. Transparency requires organizations to provide accurate and accessible information regarding their activities and performance. Meanwhile, accountability ensures that decision-makers are responsible for the consequences of their actions and the use of organizational resources ([Kusnadi, Hidayah, Pramono, & Sutopo, 2024](#)).

The implementation of GCG can contribute to organizational effectiveness by strengthening monitoring systems, improving internal control mechanisms, and reducing opportunities for misconduct. Effective governance also supports more systematic decision-making because responsibilities and authorities are clearly defined within the organization ([Mansour, Salleh, Al-ahdal, Almaqtari, & Abdulsalam, 2022](#)). In state-owned enterprises, GCG has a particularly important role because organizational resources and activities are closely related to public interests. Strong governance mechanisms can help ensure that public resources are managed responsibly, efficiently, and in accordance with established objectives. Therefore, the implementation of GCG is essential for improving institutional integrity, organizational performance, and stakeholder confidence ([Ismail, Khatib, Abbas, Khan, Sulimany, & Bazhair, 2024](#)).

2.2 Public Accountability

Public accountability refers to an organization's obligation to explain, justify, and take responsibility for its decisions, actions, and use of resources to relevant stakeholders. This concept is particularly important in public-sector organizations and state-owned enterprises because their activities are directly connected to public interests and government expenditures ([Biondi & Bracci, 2018](#)). Accountability requires organizations to demonstrate that resources are utilized in accordance with predetermined objectives and applicable regulations. It also involves the disclosure of information that enables stakeholders to evaluate organizational performance and decision-making processes. Therefore, public accountability serves as an important mechanism for maintaining institutional legitimacy and public confidence.

Effective accountability mechanisms generally include transparent reporting systems, regulatory compliance, internal control procedures, and external audits. Transparent reporting allows stakeholders to access relevant information regarding organizational activities and resource utilization. Compliance mechanisms ensure that operational activities are conducted in accordance with legal and institutional requirements. Internal controls help organizations identify weaknesses, prevent irregularities, and maintain consistency in operational processes. Consequently, strong accountability mechanisms can support the achievement of organizational objectives while strengthening public trust and institutional credibility ([Mees & Driessen, 2019](#)).

2.3 Risk Management

Risk management is a systematic process that involves the identification, assessment, mitigation, monitoring, and evaluation of risks that may affect organizational objectives. The primary purpose of risk management is to reduce uncertainty and minimize the negative consequences of potential operational disruptions. Through structured risk assessment, organizations can identify both internal and external factors that may influence performance. Risk management also assists decision-makers in determining appropriate responses to identified risks based on their probability and potential impact. Therefore, effective risk management can strengthen organizational resilience and support sustainable operational performance ([Abdel-Basset, Gunasekaran, Mohamed, & Chilamkurti, 2019](#)).

In fuel distribution systems, various types of risks may emerge from operational, financial, technological, regulatory, and governance-related factors. Operational disruptions may result in delays in fuel delivery, while financial inefficiencies may affect the effectiveness of resource allocation. Technological failures can disrupt monitoring systems and data accuracy, whereas governance weaknesses may increase the possibility of irregularities or non-compliance. Regulatory risks may also arise when organizational practices are not aligned with applicable laws and government policies. Accordingly, comprehensive risk management is necessary to ensure continuity, efficiency, and accountability in fuel distribution activities @zami.

2.4 Agency Theory

Agency Theory explains the relationship between principals and agents in situations where authority for decision-making is delegated from one party to another. In the context of state-owned enterprises, the government can be regarded as the principal, while company management functions as the agent responsible for carrying out operational activities. The principal expects the agent to act in accordance with organizational objectives and public interests. However, differences in information, interests, and priorities may create potential conflicts between both parties. These conditions are commonly referred to as agency problems and may negatively affect organizational effectiveness if they are not properly managed ([Tekin & Polat, 2020](#)).

Governance mechanisms are required to reduce agency problems by aligning managerial behavior with the objectives of the principal. Transparency, accountability, monitoring, and internal control can reduce information asymmetry between management and government institutions. Effective

supervision can also limit opportunities for managerial actions that are inconsistent with organizational objectives. In state-owned enterprises, these governance mechanisms are particularly important because managerial decisions may have broader implications for public resources and public services ([Ishak, & Hassanee, 2025](#); [Kusnadi, Hidayah, Pramono, & Sutopo, 2024](#)). Therefore, Agency Theory provides a relevant theoretical basis for understanding the importance of governance structures in strengthening managerial accountability and organizational control.

2.5 Stakeholder Theory

Stakeholder Theory argues that organizations should consider the interests of multiple stakeholders rather than focusing exclusively on shareholders. Stakeholders may include government institutions, employees, customers, investors, regulators, business partners, and society. Each stakeholder group may have different expectations regarding organizational performance, accountability, and service quality. Consequently, organizational decisions should take into account the potential effects on various groups that are directly or indirectly influenced by corporate activities. This perspective emphasizes that long-term organizational sustainability depends on the organization's ability to maintain balanced and responsible relationships with its stakeholders ([Valentinov & Chia, 2022](#)).

In the context of PT Pertamina (Persero), stakeholder-oriented governance is particularly important because fuel distribution has broad economic and social implications. Government institutions are concerned with policy implementation and subsidy effectiveness, while consumers require reliable and equitable access to fuel. Employees and management are responsible for maintaining operational efficiency and compliance, whereas regulators expect adherence to applicable standards and policies. Society is also affected because fuel distribution influences transportation, economic activities, social welfare, and national energy security. Therefore, Stakeholder Theory provides a relevant framework for evaluating how governance practices can support organizational accountability while addressing the interests of different stakeholder groups ([Stocker, de Arruda, de Mascena, & Boaventura, 2020](#)).

2.6 Integration of Good Corporate Governance and Risk Management in Fuel Distribution

The integration of Good Corporate Governance and risk management provides a comprehensive framework for improving accountability, transparency, and operational efficiency in fuel distribution. Good governance establishes the principles and institutional mechanisms required to guide organizational decision-making, while risk management provides systematic procedures for identifying and responding to potential threats ([Jensen & Meckling, 2019](#)). When these two mechanisms are implemented simultaneously, organizations can strengthen internal controls and improve the quality of operational supervision. This integration is particularly important in fuel distribution because the process involves complex logistics, public resources, regulatory requirements, and multiple stakeholders. Therefore, governance and risk management should be viewed as complementary mechanisms rather than separate organizational functions.

In the context of PT Pertamina (Persero), the integration of governance and risk management can support more accountable and sustainable fuel distribution. Transparent reporting and monitoring mechanisms can help identify irregularities in distribution processes, while risk assessment can anticipate operational disruptions, subsidy misuse, technological failures, and regulatory non-compliance. Strong accountability structures also clarify responsibilities among organizational units involved in fuel distribution and monitoring activities. Furthermore, digital monitoring and integrated information systems can strengthen oversight by providing more accurate and timely information for decision-making ([Zamil, & Faruq, 2022](#); [Settembre-Blundo, González-Sánchez, Medina-Salgado, & García-Muiña, 2021](#)). Accordingly, the integration of GCG and risk management can contribute to improved operational efficiency, stronger stakeholder trust, and more effective management of fuel distribution and subsidy programs.

2.7 Digital Governance in Fuel Distribution

Digital governance refers to the utilization of information technology, integrated data systems, and digital monitoring mechanisms to strengthen transparency, accountability, coordination, and organizational control. In the context of fuel distribution, digital governance is increasingly important because distribution activities involve complex logistical processes, multiple institutional actors, large volumes of operational data, and extensive geographic coverage. Digital systems can support the collection, processing, and dissemination of information in a more timely and accurate manner. These capabilities enable organizations to monitor distribution activities, identify irregularities, and evaluate operational performance more effectively. Therefore, digital governance can function as an important supporting mechanism for both Good Corporate Governance and risk management ([Mahdafikia & Ridhwan, 2026](#)).

The application of digital monitoring systems may strengthen transparency by providing more traceable information regarding fuel allocation, distribution patterns, and operational activities. Integrated databases can also reduce information fragmentation among organizational units and external institutions involved in fuel subsidy management. In addition, real-time monitoring can support early identification of distribution problems, logistical disruptions, or potential misuse of subsidized fuel. From a governance perspective, digital systems can improve accountability by creating more reliable records that can be used for supervision and performance evaluation. Consequently, the integration of digital governance into fuel distribution management can improve decision-making quality, strengthen institutional control, and support more efficient and accountable public service delivery ([Wibasuri, Ginting, Asrul, & Yuliyana, 2025](#)).

3. Research Methodology

This study employs a conceptual and evaluative research approach to examine the implementation of Good Corporate Governance (GCG) and risk management in supporting accountability and operational efficiency in fuel distribution at PT Pertamina (Persero). The analysis is grounded in governance theory, risk management principles, Agency Theory, and Stakeholder Theory. This approach was selected because the study focuses on evaluating governance mechanisms and organizational practices based on existing theoretical and documentary evidence rather than collecting primary empirical data ([Jaakkola, 2020](#)).

The study relies on secondary data obtained from publicly available and relevant sources, including government reports, academic publications, policy and regulatory documents, corporate governance frameworks, organizational reports, and theoretical literature related to Good Corporate Governance, public accountability, risk management, and fuel subsidy management ([Matsiliza, 2017](#)).

Data analysis was conducted using descriptive and analytical evaluation. First, relevant information from the selected sources was identified and classified according to major themes, including GCG principles, public accountability, risk management, operational efficiency, and stakeholder interests. Second, the identified information was interpreted using the theoretical perspectives adopted in this study. Third, the findings across the different sources were compared and synthesized to assess how governance and risk management mechanisms contribute to accountability and efficiency in fuel distribution. Finally, the analysis was used to identify governance challenges and formulate practical implications for strengthening fuel distribution management at PT Pertamina (Persero) ([Jia, Huang, & Zhang, 2019](#)).

To maintain analytical consistency, the evaluation focused on the five core principles of GCG transparency, accountability, responsibility, independence, and fairness along with the main stages of risk management, including risk identification, assessment, mitigation, monitoring, and evaluation.

These dimensions served as the analytical framework for interpreting the secondary evidence. The results were subsequently synthesized to explain the relationship between governance practices, risk management, operational efficiency, accountability, corporate reputation, and stakeholder trust within the context of fuel distribution.

4. Results and Discussions

4.1 Effectiveness of Good Corporate Governance

The findings indicate that the implementation of Good Corporate Governance (GCG) contributes to strengthening organizational accountability and transparency in fuel distribution management. Transparency enables operational information, distribution processes, and resource utilization to be more accessible and verifiable by relevant stakeholders. This condition supports better oversight and reduces information asymmetry between management, government institutions, and other stakeholders. Accountability mechanisms also facilitate clearer responsibility allocation and performance evaluation across organizational units. These findings suggest that GCG functions not only as a formal governance framework but also as an operational mechanism for improving institutional control ([Apriliani, 2021](#)).

The principles of responsibility, independence, and fairness further support organizational integrity by encouraging compliance with regulations and reducing potential conflicts of interest. Responsibility ensures that organizational actions are aligned with legal, social, and institutional obligations, while independence helps decision-making processes remain objective and free from inappropriate influence. Fairness promotes balanced treatment of stakeholders and strengthens the legitimacy of organizational decisions. From the perspective of Agency Theory, these governance mechanisms help reduce agency problems by strengthening monitoring and aligning managerial actions with organizational and public objectives. Therefore, effective GCG implementation is essential for maintaining accountability, transparency, and institutional credibility in fuel distribution management ([Liong, 2022](#)).

4.2 Risk Management and Operational Efficiency

The findings also show that risk management plays an important role in supporting the efficiency and continuity of fuel distribution operations. Fuel distribution is exposed to various risks, including fuel shortages, distribution delays, logistical disruptions, subsidy misuse, technological failures, and regulatory non-compliance. Structured risk identification and assessment enable organizations to recognize potential disruptions before they develop into more serious operational problems. Risk mitigation strategies can then be implemented to reduce the probability and impact of these threats. Consequently, risk management strengthens the organization's ability to maintain operational stability and service continuity.

An integrated risk management framework also supports more responsive and adaptive decision-making. Continuous monitoring and evaluation enable the organization to adjust operational strategies in response to emerging risks and changes in the external environment. This process is particularly important in fuel distribution because operational disruptions can directly affect public services and economic activities. Effective risk management therefore complements GCG by translating governance principles into preventive and corrective operational actions. The integration of risk management with governance mechanisms can ultimately enhance efficiency, resilience, and accountability throughout the fuel distribution process ([Haryanto, Hapsari, & Hidayah, 2024](#)).

4.3 Governance, Financial Performance, and Corporate Reputation

The findings suggest that strong governance mechanisms can contribute to improved organizational performance by reducing inefficiencies and strengthening resource allocation processes. Transparent procedures and effective accountability systems can support more disciplined use of financial and operational resources. Strong internal controls can also reduce opportunities for irregularities, thereby

minimizing potential financial losses and improving the efficiency of organizational activities. Although this study does not provide direct quantitative measurement of financial performance, the conceptual evaluation indicates that effective governance creates conditions that support more efficient resource management. This relationship highlights the strategic importance of governance in strengthening organizational performance ([Mansour, Salleh, Al-ahdal, Almaqtari, & Abdulsalam, 2022](#); [Abdel-Basset, Gunasekaran, Mohamed, & Chilamkurti, 2019](#)).

In addition to operational and financial implications, governance practices contribute to corporate reputation and stakeholder confidence. Organizations that demonstrate transparency, accountability, integrity, and regulatory compliance are more likely to gain public trust and institutional legitimacy. For state-owned enterprises, public trust represents an important intangible asset because their operations are closely associated with public interests and government responsibilities. From a Stakeholder Theory perspective, maintaining trust requires the organization to consider the expectations and interests of multiple stakeholder groups. Therefore, strong governance can enhance corporate reputation by demonstrating organizational credibility, responsibility, and commitment to sustainable public service ([Valentinov & Chia, 2022](#)).

4.4 Implications for Fuel Subsidy Management

The findings indicate that improvements in fuel subsidy management should prioritize digital integration, data transparency, inter-agency coordination, and stronger monitoring mechanisms. Digital systems can improve the accuracy, timeliness, and traceability of fuel distribution data, allowing irregularities to be detected more efficiently. Greater data transparency can also strengthen accountability by enabling relevant institutions to evaluate distribution patterns and subsidy utilization. Inter-agency coordination is necessary because fuel subsidy management involves multiple institutions with different regulatory, monitoring, and operational responsibilities. Strengthening these mechanisms may therefore reduce distribution leakages and improve the accuracy of subsidy allocation ([Mahdafikia & Ridhwan, 2026](#)).

Continuous evaluation should also become an integral part of governance and risk management frameworks. Regular assessment can help organizations identify weaknesses, monitor changing operational risks, and adapt governance practices to new technological, regulatory, and social conditions. The integration of digital monitoring with governance principles can strengthen preventive controls and support evidence-based decision-making. These improvements are particularly relevant for ensuring that subsidized fuel reaches intended beneficiaries while minimizing misuse and inefficiency. Overall, the findings emphasize that sustainable fuel subsidy management requires an integrated approach combining governance, risk management, digital systems, and continuous institutional evaluation ([Shovon, 2023](#)).

4.5 Digital Governance and Monitoring Systems

The findings suggest that digital governance represents an important supporting mechanism for strengthening accountability and operational control in fuel distribution. Fuel distribution involves extensive operational activities that require accurate information regarding allocation, transportation, availability, and utilization. Digital monitoring systems can improve the availability of timely information and provide stronger traceability across distribution processes. This capability is particularly important for identifying abnormal distribution patterns and detecting potential irregularities. As a result, digital governance can strengthen both preventive and corrective control mechanisms within the organization.

The integration of data across organizational units and relevant government institutions can further improve monitoring effectiveness. Fragmented information systems may create inconsistencies and reduce the ability of decision-makers to obtain a comprehensive understanding of distribution activities. In contrast, integrated databases can facilitate coordination and improve the consistency of operational information. Real-time monitoring systems can also support faster responses to fuel shortages, logistical disruptions, and other operational risks. These mechanisms demonstrate that

digital governance is closely connected to the effectiveness of both GCG and risk management ([Hasanudin, 2023](#)).

From an accountability perspective, digital systems can provide more reliable documentation of organizational activities and resource utilization. Accurate and accessible records make it easier for management, regulators, and other stakeholders to evaluate operational performance. Digital monitoring can therefore reduce information asymmetry and strengthen the transparency of decision-making processes ([Mahdafikia & Ridhwan, 2026](#)). In addition, digitalization may improve the efficiency of monitoring activities by reducing dependence on manual reporting and fragmented administrative processes. Overall, the findings indicate that digital governance should be treated as an integral component of sustainable fuel distribution management.

4.6 Theoretical Implications

The findings of this study provide several theoretical implications for the understanding of governance and risk management within state-owned enterprises. From the perspective of Agency Theory, the implementation of transparency, accountability, monitoring, and internal control mechanisms can reduce information asymmetry between government institutions as principals and corporate management as agents ([Tekin & Polat, 2020](#)). Stronger governance mechanisms can also align managerial actions with organizational objectives and broader public interests. In this context, the findings reinforce the relevance of Agency Theory in explaining the importance of institutional controls in organizations that manage strategic public resources.

The findings also support the relevance of Stakeholder Theory in fuel distribution management. PT Pertamina operates within an environment involving government institutions, consumers, regulators, employees, business partners, and society. Each stakeholder group has different expectations regarding access, efficiency, transparency, service quality, and accountability. The results suggest that governance practices that consider these diverse interests can strengthen stakeholder confidence and institutional legitimacy. Therefore, stakeholder-oriented governance is important not only for maintaining relationships with external parties but also for supporting long-term organizational sustainability ([Stocker, de Arruda, de Mascena, & Boaventura, 2020](#)).

In addition, this study contributes to the conceptual integration of Good Corporate Governance and risk management. Governance provides the institutional principles and control structures that guide organizational behavior, while risk management provides systematic procedures for responding to uncertainty and operational threats ([Liong, 2022](#)). Their integration creates a more comprehensive organizational framework that connects accountability, efficiency, resilience, and stakeholder trust. This theoretical integration helps explain why governance and risk management should not be treated as isolated organizational functions. Instead, both mechanisms can operate simultaneously to support sustainable performance in state-owned enterprises.

4.7 Practical Implications

The findings provide several practical implications for PT Pertamina (Persero) and government institutions involved in fuel distribution and subsidy management. First, governance mechanisms should continue to emphasize transparency, accountability, responsibility, independence, and fairness throughout distribution-related decision-making. Clear responsibility allocation and stronger monitoring systems can improve organizational control and reduce the possibility of irregularities. Internal audit and compliance mechanisms should also be strengthened to ensure that operational activities remain aligned with established policies and regulatory requirements.

Second, risk management should be integrated more closely with operational planning and monitoring activities. Potential risks related to shortages, transportation delays, technological failures, subsidy misuse, and regulatory changes should be identified and evaluated systematically. Risk mitigation strategies should also be regularly reviewed to ensure their relevance to changing operational conditions. This approach can improve organizational preparedness and reduce the negative

consequences of unexpected disruptions. Continuous risk monitoring should therefore become part of routine organizational decision-making rather than being treated as a separate administrative process.

Third, digital governance should be strengthened through integrated information systems, improved data quality, and more effective real-time monitoring. Data integration can support better coordination among organizational units and government institutions involved in fuel subsidy management. Reliable digital records can also enhance transparency and facilitate performance evaluation. In addition, the utilization of digital monitoring systems may support earlier detection of irregularities and improve the accuracy of distribution oversight. These practices can contribute to more efficient, accountable, and sustainable management of fuel distribution.

5. Conclusions

The implementation of Good Corporate Governance (GCG) and risk management plays an important role in strengthening accountability and operational efficiency in fuel distribution systems. The principles of transparency, accountability, responsibility, independence, and fairness contribute to stronger organizational control, clearer responsibility allocation, and improved compliance with applicable regulations. At the same time, effective risk management supports operational stability by facilitating the identification, mitigation, monitoring, and evaluation of potential risks that may disrupt fuel distribution.

The integration of governance and risk management also contributes to strengthening corporate reputation and stakeholder trust by promoting transparency, institutional integrity, and more reliable public service delivery. In the context of PT Pertamina (Persero), these mechanisms are particularly important because fuel distribution involves strategic public interests, government resources, and national energy management. Therefore, strengthening governance structures, risk management practices, digital monitoring systems, and continuous evaluation mechanisms is essential to support more accountable, efficient, and sustainable fuel distribution management.

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Author Contributions

AAM contributed to the conceptualization, literature review, secondary data collection, analysis, interpretation, and preparation of the original draft. S contributed to the conceptualization, supervision, methodology, validation, critical review, and editing of the manuscript. All authors contributed to the development of the study, reviewed the final manuscript, and approved the submitted version.

Conflict of Interest

The authors declare that there are no conflicts of interest regarding the research, authorship, or publication of this article. The study was conducted independently, and no personal, financial, or institutional relationships influenced the interpretation or presentation of the findings.

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