



INTERNAL CONTROL EFFECTIVENESS ANALYSIS AT PT ECODOE WIDYA CANDIA INTERNASIONAL USING COSO INTERNAL CONTROL FRAMEWORK

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Abstract: This study analyzes the effectiveness of internal control at PT Ecodoe Widya Candia Internasional using the COSO Internal Control—Integrated Framework. Operational problems included actual costs above planned budgets and delays in order completion. A descriptive qualitative case study was conducted and supported by descriptive quantification of an Internal Control Questionnaire (ICQ). Data were collected through observation, documentation, and questionnaires from 22 respondents. The 26 dichotomous ICQ items covered the five COSO components. Overall effectiveness was 72.2%, categorized as moderately effective. Monitoring recorded the highest score (90.9%), followed by information and communication (78.8%), control activities (70.9%), control environment (67.6%), and risk assessment (65.4%). The main weaknesses concerned incomplete end-to-end procedures, inconsistent SOP implementation, limited segregation of duties, and insufficient formalization of project and vendor risks. Strengthening integrated SOPs, project risk registers, compensating controls, and exception-based monitoring is recommended to improve cost control and delivery timeliness

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Introduction

Internal control is an integral part of organizational governance because it connects objectives, risks, work procedures, information, and monitoring within a process that provides reasonable assurance regarding the achievement of operational, reporting, and compliance objectives. The COSO framework defines internal control as a process carried out by the board, management, and other personnel rather than merely a set of administrative documents (Committee of Sponsoring Organizations of the Treadway Commission [COSO], 2013). Accounting literature also indicates that the quality of internal control is associated with information reliability, process efficiency, risk control, and the quality of managerial decision-making (Chalmers et al., 2019). Udeh (2020) further emphasizes the iterative nature of COSO implementation: effectiveness improves when weaknesses are identified, corrected, and subsequently reassessed on a continuous basis.

The need for integrated control is even greater in companies operating through platform-based business models and involving numerous third parties. Empirical evidence shows that the implementation of internal control can contribute to the profitability of small and medium-sized enterprises by reducing inefficiencies and increasing process formalization (Vu & Nga, 2022). Hoai et al. (2022) found that internal control systems can also strengthen organizational performance by supporting innovation and resource utilization, while Otoo et al. (2023) showed that the control environment, control activities, and risk assessment are closely related to organizational effectiveness. In the SME context, sound governance practices may reinforce the benefits of all internal control components for financial performance (Musah et al., 2022), and more recent evidence also indicates a positive relationship between internal control mechanisms and financial performance when supported by corporate governance (Oppong et al., 2024).

PT Ecodoe Widya Candia Internasional provides souvenirs, gifts, merchandise, and corporate supplies through a business-to-business model that connects clients with a network of MSMEs. The order cycle includes quotation, selection of creators or MSMEs, design and sampling, mass production, quality control, delivery, invoicing, and payment. Operational data underlying this study indicate deviations between planned and actual costs. In one group of projects analyzed, budgeted profit of IDR 76,907,500 declined to IDR 70,624,000, a decrease of IDR 6,283,500, causing the profit margin to fall from 36.28% to 33.31%. In addition, several orders experienced delays ranging from two weeks to three months, and one partial order cancellation resulted in a nominal impact of IDR 34,000,000. These conditions demonstrate that control problems are not limited to procedural compliance but directly affect costs, timeliness, service quality, and client relationships.

Studies on small and medium-sized entities show that limited staffing, imperfect segregation of duties, and insufficiently documented procedures are frequent sources of internal control weaknesses. Adegboyegun et al. (2020) demonstrated that the contribution of control components to SME operating performance is not always uniform, meaning that improvements should be directed toward components that are genuinely weak. Setyawan et al. (2021) identified a gap between COSO principles and control practices in SMEs, particularly in control

activities and segregation of duties. At the same time, resource constraints do not eliminate the need for control; control design should be adjusted to organizational scale, cost, and capabilities through managerial supervision and proportionate compensating controls (Nqala & Musikavanhu, 2023). Therefore, a COSO evaluation in a B2B platform company should view internal control as an end-to-end process covering both internal operations and risks arising from MSME partners.

Based on these problems, this study aims to analyze the internal controls implemented at PT Ecodoe Widya Candia Internasional and assess their effectiveness using the five components of the COSO Internal Control—Integrated Framework: control environment, risk assessment, control activities, information and communication, and monitoring. The study contributes by focusing on a platform-based B2B procurement cycle in which control quality is influenced not only by the company's internal structure but also by third-party capacity, cross-functional coordination, and order completion speed. This perspective extends the discussion of internal control beyond administrative compliance toward the ability of controls to prevent cost deviations and project delays.

Research Methods

This study employed a descriptive case-study design with a qualitative approach supported by descriptive quantification of an Internal Control Questionnaire (ICQ). The case-study design was selected because the analysis focused on one organization and one specific set of business processes, allowing control practices to be assessed within their operational context. The research object was PT Ecodoe Widya Candia Internasional. Primary data were obtained through observation and questionnaires, while secondary data were derived from organizational structures, records, and internal documents related to orders, purchasing, payments, and project monitoring.

Respondents were selected purposively based on their direct involvement or functional relationship with the processes being analyzed. A total of 22 respondents completed the ICQ, consisting of employees and management representatives from the Board of Directors, IT, Marketing, Commerce, Project, and Finance & HR functions. This cross-functional composition was maintained so that internal control would not be assessed solely from the perspective of one unit, as the order cycle requires the transfer of information and responsibilities across departments.

The ICQ consisted of 26 dichotomous questions using a Guttman scale. A "Yes" answer was scored 1 and a "No" answer was scored 0. The items were mapped to the five COSO components, as presented in Table 1. Effectiveness scores were calculated as the proportion of positive responses to total responses for each component and for the instrument as a whole. Overall interpretation followed the criteria used by Paramitha (2017): 0–25% ineffective, 26–50% less effective, 51–75% moderately effective, and 76–100% highly effective. Because the measurement was descriptive, percentages were used as indicators of implementation levels rather than as tests of causal relationships.

Table 1. Operationalization of COSO Components in the ICQ

COSO Component	Assessment Focus	ICQ Items
Control Environment	Structure, ethics, authority and responsibility, staffing policies, work instructions, understanding and implementation of SOPs.	8
Risk Assessment	Risk identification, risk-management strategy, threats and opportunities, and risk anticipation.	5
Control Activities	Mitigation, segregation of duties, verification and authorization, SOP access, reward and punishment.	5
Information & Communication	Communication of objectives, vertical and horizontal communication, access to leaders, and communication media.	6
Monitoring	Monitoring by leaders/unit heads and performance assessment of unit achievement.	2

Data analysis involved data collection, reduction, presentation, comparison across components, and conclusion drawing. The credibility of the findings was strengthened through technique and source triangulation by comparing questionnaire results, observations, and documentation. This approach was used to assess information consistency and reduce dependence on a single type of evidence (Harahap, 2020). The quantified ICQ results were then interpreted together with operational evidence such as cost deviations, order delays, authorization mechanisms, communication-channel usage, and management monitoring patterns.

Result and Discussion

PT Ecodoe operates a cross-functional procurement process. After a client approves a quotation, the order is transferred to the project officer to be coordinated with creators or MSMEs, followed by design and sampling, mass production, quality control, delivery, invoicing, and payment settlement. A total of 22 respondents participated in the ICQ: 12 men (55%) and 10 women (45%), with 95% of respondents aged 20–39 years. The participation of the Board of Directors, IT, Marketing, Commerce, Project, and Finance & HR units shows that control over the order cycle is a cross-functional responsibility and cannot be evaluated solely through the finance function.

Across the 26 items answered by 22 respondents, 572 responses were obtained, consisting of 413 “Yes” answers and 159 “No” answers. The 72.2% positive response rate places the company’s internal control in the moderately effective category. This result indicates that most control practices are available and implemented, although certain weaknesses may still interfere with the achievement of operational objectives. The imbalance among components is an important finding: monitoring and information and communication were classified as highly effective, whereas control environment, risk assessment, and control activities remained moderately effective. This condition is consistent with the COSO view that internal control effectiveness is not determined by one strong component but by the

interrelationship of all components in supporting organizational objectives (COSO, 2013).

Table 2. Effectiveness of the Five COSO Components

Component	Score	Interpretation
Control Environment	67.6%	Moderately effective; weaknesses mainly concern completeness of work instructions, employee understanding, and consistent SOP implementation.
Risk Assessment	65.4%	Moderately effective; risks are identified, but risk-management strategies are not yet fully formalized.
Control Activities	70.9%	Moderately effective; authorization and verification are relatively strong, but segregation of duties is constrained by staffing.
Information & Communication	78.8%	Highly effective; cross-functional communication is relatively open and supported by WhatsApp, e-mail, Slack, and Enterprise.
Monitoring	90.9%	Highly effective; weekly meetings, town halls, and KPI reviews are performed by leaders and unit heads.
Overall Effectiveness	72.2%	Moderately effective.

The control environment obtained a score of 67.6%. The company has an organizational structure and division of responsibilities, but these arrangements have not been fully accompanied by an even understanding of procedures. Only 32% of respondents stated that employees understood all applicable procedures, while 41% considered SOP implementation to be effective and 59% stated otherwise. The gap between documentation and implementation indicates that the control foundation is not yet sufficiently strong to create consistent operational behavior. This finding is relevant to Setyawan et al. (2021), who identified a gap between COSO design and practice in SME-scale entities, and to Udeh (2020), who emphasized that framework effectiveness depends on continuously correcting identified weaknesses. At PT Ecodoe, strengthening the control environment requires more than adding SOP documents; each procedure should specify the process owner, inputs and outputs, service-level agreements, authorization points, required evidence, and escalation mechanisms.

Risk assessment recorded the lowest score at 65.4%. A total of 73% of respondents stated that the company had identified potential risks, and the same percentage believed that controls had anticipated risks and threats. Practices such as adding production quantities as a buffer against rejected products and conducting quality control before delivery demonstrate existing risk responses. However, continuing delays and budget overruns indicate that risk identification has not been fully translated into formal project risk management. Risks related to MSME capacity, production queues, sample revisions, specification changes, rejected products, and rising costs should be assessed before orders are confirmed through project risk registers, vendor scorecards, cost-deviation thresholds, and early-warning indicators. This emphasis is consistent with Otoo et al. (2023), who identified risk assessment as an important

dimension of organizational effectiveness.

Because the company works with a network of MSMEs, third-party risk is a major element of risk assessment. A partner's failure to meet quality or schedule requirements can become a reputational risk, trigger client complaints, and reduce company margins. Therefore, capacity due diligence, alternative vendors, milestone schedules, and escalation requirements should be treated as preventive controls. This finding is consistent with evidence that internal control systems in SMEs need to be contextually designed and adapted to organizational limitations (Nqala & Musikavanhu, 2023). In addition, Vu and Nga (2022) showed that formalized internal controls can provide economic benefits for SMEs; therefore, risk documentation at PT Ecodoe should be regarded as a performance-improvement instrument rather than an administrative burden.

Control activities obtained a score of 70.9%. One relatively strong practice is the tiered payment-approval mechanism: payments below IDR 5,000,000 are submitted to the Finance Lead, payments of IDR 5,000,000–10,000,000 require approval from the Chief Financial Officer, and payments above IDR 10,000,000 require approval from the Chief Executive Officer. Before payment is processed, the finance team verifies the payment purpose, amount, terms, and recipient. This sequence creates preventive control through verification and authorization mechanisms. The pattern supports the findings of Adegboyegun et al. (2020) that control activities should be interpreted in relation to operational quality rather than merely the existence of formal rules.

The main weakness in control activities is the incomplete segregation of duties caused by limited staffing. Such conditions are common in relatively lean organizations and cannot always be resolved by adding new positions. Alternatives include compensating controls such as periodic CFO reviews, bank reconciliation by a different person, role-based system access, maker-checker arrangements, change logs, and exception reports for unusual transactions. Oyelakin and Abdullahi (2022) showed that the quality of SME controls is closely related to the capabilities of the personnel implementing them; consequently, stronger controls should be accompanied by better employee understanding of procedures and the rationale behind each control. The company has also implemented rewards and punishments, but the indicators would be more meaningful if linked to cost-estimate accuracy, milestone delays, rejection rates, compliance with authorization evidence, and complaint resolution.

Information and communication obtained a score of 78.8% and were classified as highly effective. A total of 82% of respondents stated that they could communicate information directly to management. The relatively lean structure supports vertical and horizontal communication through WhatsApp, e-mail, Slack, and the Enterprise system. This communication strength can accelerate responses to emerging problems, but the use of multiple channels also creates a risk of fragmented audit trails. Invoice requests already use the Enterprise system, while some payment requests may still be submitted through WhatsApp groups. Under the COSO framework, information must be relevant, high quality, timely, and capable of supporting the operation of controls (COSO, 2013). Nguyen and Hoai (2023) also showed that the effectiveness of control structures is associated with how organizational

mechanisms encourage consistent behavior; therefore, material decisions and control evidence should be centralized in an official repository or system.

Monitoring was the strongest component, with a score of 90.9%. Management and unit heads conduct weekly meetings to discuss progress and constraints, town hall meetings to communicate organizational developments, and monthly Key Performance Indicator assessments. Strong monitoring provides a foundation for improving the other components; however, monitoring should be directed toward specific risk indicators. A dashboard should display project aging, actual cost versus budget, the number of sample revisions, rejection rates, vendor delays, and client complaints. An exception-based approach enables management to focus attention on projects that exceed established tolerances. This is consistent with Hoai et al. (2022), who emphasized the role of internal control systems in providing feedback and helping organizations direct resources toward performance objectives.

When the five components are viewed as one system, the findings reveal a distinctive pattern: the company is relatively strong in detecting and discussing problems after information becomes available, but weaker in preventing problems through documented procedures and formalized risk assessment. Strong monitoring has not fully eliminated delays or cost deviations because some causes arise earlier during project planning, vendor selection, sample approval, and the establishment of cost limits. Therefore, improving effectiveness requires a shift from predominantly reactive controls toward preventive and documented controls. This finding reinforces the view of Triyuwono et al. (2020) that governance and risk management should be positioned as value-creation mechanisms rather than merely compliance functions.

In practical terms, improvement priorities can be concentrated on four areas: end-to-end SOPs, formalization of project risk registers, compensating controls for functions that cannot yet be segregated, and integration of information into systems that generate reliable audit trails. These priorities are summarized in Table 3. The proposed direction is also consistent with contemporary literature showing that the benefits of internal control increase when control mechanisms are supported by clear governance, traceable information, and strong accountability (Musah et al., 2022; Oppong et al., 2024).

Table 3. Priority Actions for Strengthening Internal Control

Priority	Main Weakness	Recommended Action	Expected Impact
End-to-end SOP	Work instructions and procedure understanding are inconsistent.	Develop order-cycle SOPs with process owner/RACI, SLA, approval points, evidence requirements, and escalation rules.	Reduce process variation, delay, and execution errors.
Project risk register	Risks are identified but not formalized and monitored	Create project risk registers, vendor scorecards, cost-variance thresholds, and early-warning	Reduce budget overruns and vendor/MSME

	systematically.	indicators.	failure.
Compensating controls	Segregation of duties is constrained by staffing.	Apply CFO/CEO review, independent reconciliation, role-based access, maker-checker, exception reports, and audit trails.	Reduce error, fraud exposure, and conflicts of function.
Information integration	Evidence of transactions remains dispersed across WhatsApp/e-mail and systems.	Centralize approval evidence in an official system/repository connected to project tracking.	Improve traceability, accountability, and review speed.
Exception-based monitoring	Routine monitoring is strong but not fully focused on risk indicators.	Use dashboards for project aging, budget variance, reject rate, vendor delay, and client complaints.	Accelerate escalation and corrective action.

Conclusion and Recommendation

The study concludes that PT Ecodoe Widya Candia Internasional has implemented all components of the COSO Internal Control—Integrated Framework with an overall effectiveness level of 72.2%, placing it in the moderately effective category. Monitoring was the strongest component at 90.9%, followed by information and communication at 78.8%, control activities at 70.9%, control environment at 67.6%, and risk assessment at 65.4%. The main weaknesses concern the completeness and consistency of SOPs, employee understanding of procedures, limitations in segregation of duties, and the lack of formal project and partner risk management. This pattern explains why the company is relatively capable of detecting and discussing problems but still faces cost deviations and delays in some orders. Accordingly, internal control effectiveness should be improved through stronger end-to-end SOPs, project risk registers and vendor scorecards, compensating controls for functions that cannot yet be segregated, integration of approval evidence into formal systems, and exception-based monitoring. This study is limited to one company and uses a dichotomous ICQ that primarily captures the existence or perception of controls. Future studies are recommended to incorporate in-depth interviews, walkthroughs, sample transaction testing, project-data analysis, and maturity assessments to obtain stronger evidence regarding the relationship between control quality, cost, timeliness, quality, and client satisfaction.

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