



# Evaluating the impact of internal control systems on organizational effectiveness at PT Angkasa Pura Indonesia

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## ABSTRACT

This research aims to analyze the impact of the implementation of internal control systems (ICS) on organizational effectiveness at PT Angkasa Pura Indonesia, focusing on the goal attainment approach in the field of airport services. This research is motivated by the inconsistency between the increase in the Customer Satisfaction Index (CSI) score from ACI World and the number of complaints received by the company. The COSO internal control framework is used as a theoretical foundation to evaluate the implementation of ICS in the company. The empirical analysis results show that the simultaneous implementation of ICS has a significant effect on organizational effectiveness. Specifically, the control environment, information and communication, and monitoring have been proven to have a significant impact on organizational effectiveness, while risk assessment and control activities do not show a significant impact. This study recommends that PT Angkasa Pura Indonesia update its company regulations related to ICS by adopting the latest COSO framework, as well as developing guidelines for internal auditors to evaluate the implementation of ICS effectively. The implication of this research is the importance of focusing on developing ICS elements that have been proven effective in improving organizational effectiveness.

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## INTRODUCTION

Organizations, defined as structured entities with specific goals (KBBI), are abstract constructs with diverse interpretations (Lubis, Hari, and Husaeni 2009) Experts like Bernard and Davis view them as coordinated systems or groups aiming for shared objectives. Contingency theory (Hatch 2013) highlights the impact of organizational size and environment on structure, with larger, dynamic organizations requiring decentralized decision-making and integrated mechanisms. In the complex business world, effectiveness has become central to organizations. Organizations rely on their employees, given their involvement in complex political, economic, and sociocultural environments, to achieve their set goals (Fedyk et al. 2022).

In Indonesia, a vast archipelago, airports are vital for national connectivity. Soekarno-Hatta International Airport, a major hub managed by PT Angkasa Pura Indonesia, faces operational complexities due to its scale. A crucial instrument for achieving organizational goals is ensuring alignment with governance and objectives. According to the COSO framework, effective internal control systems (ICS) extend beyond financial aspects to encompass all operational facets, safeguarding service quality, assets, and performance targets. (COSO 2013) defines ICS as integrated activities providing reasonable assurance to stakeholders regarding adherence to sound corporate governance. This enables effective risk management, aligning with the fundamental purpose of organizations to achieve performance objectives.

Despite high customer satisfaction scores, complaint data reveals inconsistencies, indicating potential gaps in service delivery. Passenger satisfaction is the key role for airport image, airport service quality has a greater influence on tourist visit interest to the destination country than the airport's image itself, in other words, an airport that successfully provides quality service and satisfies passengers will be more effective in attracting tourists than just a good airport images (Saut and song 2022).

This discrepancy raises questions about the effectiveness of ICS in achieving organizational goals, particularly in service quality, as emphasized by (Seetanah, Teeroovengadum, and Nunkoo 2020). (Länsiluoto, Jokipii, and Eklund 2016) emphasize that the effectiveness of a company's internal control does not solely depend on individual COSO components but also on their interaction. (Cao et al. 2024) underscores the necessity for managers and policymakers to prioritize robust internal controls to optimize organizational efficiency, particularly in human capital investments.

Therefore, to achieve desired outcomes with internal control implementation, a holistic evaluation of all COSO components is crucial, rather than focusing on isolated parts (Otoo, Kaur, and Rather 2023) conclude that well-designed internal control systems with robust components aid organizations in achieving goals and enhancing overall effectiveness. (Musah et al. 2022) found that effective internal control across all components improves financial performance in listed SMEs in Ghana. Thus, effective internal control directly correlates with achieving organizational goals, such as improved financial performance.

Previous studies have shown inconsistent findings regarding the impact of internal control systems (ICS) on organizational goals. (Hanum, Hafsah, and Ritonga 2021) found no significant influence of ICS on Islamic campus performance in Medan, attributing this to its superficial implementation for accreditation purposes, rather than adherence to COSO standards. (Henk 2020) notes the lack of a unified definition and structured research on ICS, highlighting the need for a comprehensive framework. Adopting widely recognized ICS frameworks is crucial for effective implementation. (Musah et al. 2022) demonstrated that comprehensive ICS implementation enhances financial performance in Ghanaian SMEs, a key indicator of organizational effectiveness. Organizational effectiveness, analyzed through models like McKinsey's 7S (Alam 2017), has evolved from a focus on goal attainment to include resource and process considerations. Effective organizations align all 7S elements, with shared values at the core. Organizational effectiveness remains a prominent research area (Dhoopar, Sihag, and Gupta 2023), extending beyond performance to encompass overall organizational success and value.

(Masanae, Morasa, and Budiarto 2022) noted that despite the acknowledged importance of internal controls, implementation challenges persist. A common obstacle is the absence of dedicated internal control units, leading to inadequate oversight and potential human error. Consequently, the goals of internal control—maintaining financial information integrity and ensuring regulatory compliance—are difficult to achieve. This research aims to provide guidance on evaluating internal control system implementation. The importance of implementing internal controls is explained by (Kabuye et al. 2019) that the implementation of good internal control

systems along with effective working capital management can jointly contribute to improving the financial performance of supermarkets in Uganda.

(Otoo, Kaur, and Rather 2023) identified that control environment, control activities, and risk assessment significantly influence organizational effectiveness, while information, communication, and monitoring did not. Internal control systems (ICS) are vital for operational efficiency, effectiveness, and competitive advantage. (Barišić and Tušek 2016) described Enhanced risk and control awareness within a company's control environment significantly improves internal audit effectiveness. Conversely, ethical awareness and management philosophy showed no discernible impact. Thus, fostering a strong risk and control-conscious environment is crucial for optimizing internal audit functions. (Koeswayo, Haryanto, and Handoyo 2024) defines Internal Control Systems function to ensure employees act in accordance with company's vision, thereby reducing conflicts of interest. Previous research concludes that effective internal controls have an impact on increasing employee engagement. Based on those description, the research hypothesis is explained as follows : H1: Control environment significantly impacts organizational effectiveness. H2: Risk assessment significantly impacts organizational effectiveness. H3: Control activities significantly impacts organizational effectiveness. H4: Information and communication significantly impacts organizational effectiveness. H5: Monitoring significantly impacts organizational effectiveness.

## RESEARCH METHOD

This study employs a positivist approach, which emphasizes objectivity and rigorous methods for testing causal relationships through quantitative data analysis (Creswell and Creswell 2018). A quantitative method is used to assess relationships between internal control system (ICS) implementation and passenger service quality at PT Angkasa Pura Indonesia, aiming to answer research questions on ICS implementation and its role in maintaining service quality at Soekarno-Hatta Airport. A descriptive quantitative method is chosen to provide an objective overview of the variables (Neuman 2014).

A deductive approach is used for analysis, starting with identifying general patterns from collected data to formulate and test specific hypotheses. Data collection involves company document studies on ICS implementation and airport service goals, as well as primary data from surveys of PT Angkasa Pura Indonesia employees.

Key actors in ICS implementation, including the Board of Directors, top management, internal auditors, audit committee, and operational managers (Henk 2020), are considered. This study examines the relationship between ICS (independent variable) and organizational effectiveness (dependent variable) using a quantitative approach (Maryati, Sumartini, and Sofyan 2021). From the preceding theoretical discussion, the following research framework is proposed.

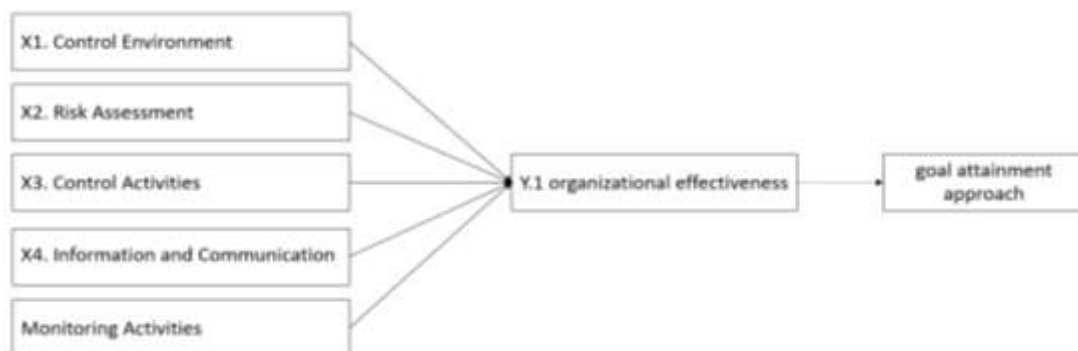


Figure 1. Research Framework

This research focuses on PT Angkasa Pura Indonesia's head office employees, the key policy-making body, as the population for studying internal control systems (ICS). Organizational effectiveness is evaluated through employee perceptions (Dhoopar, Sihag, and Gupta 2023). A sample of 80 employees was derived from a population of 383 using Slovin's formula with a 10% margin of error. A reflective measurement model (Hair et al. 2017) was employed and analyzed using SMARTPLS 3.0 to identify significant factors influencing ICS implementation.

## RESULTS AND DISCUSSIONS

Prior to main data collection, a pilot test was conducted to ensure instrument reliability. Adhering to instrument development principles (Converse and Presser 1986), this test aimed to verify question clarity and prevent ambiguity. Involving 30 initial respondents, as recommended by (Ruel, Wagner, and Gillespie 2016) The pilot test evaluated the ability of the questionnaire items to accurately represent the measured dimensions: service quality, electronic government service quality, business entity satisfaction with service, and business entity satisfaction with electronic government services. CFA was used to assess convergent and discriminant validity. The questionnaire was then distributed to employees for primary data collection. The results of the validity test indicate that the proposed question items are valid. This can be seen from the sig. value  $< 0.05$ , which means that the indicator question items correlate significantly with the total indicators in the variable, thus the question items are said to be valid to represent the variable. Reliability was assessed using Cronbach's alpha, with scores indicating: excellent ( $>0.90$ ), strong ( $0.70-0.90$ ), moderate ( $0.50-0.70$ ), and poor ( $<0.50$ ). The reliability test results demonstrate that all variables exhibited strong reliability, as detailed below:

**Table 1.** Reliability Test

Variable	Croanbach's Alpha	Conclusion
X1	0.75	Strong Reliability
X2	0.72	Strong Reliability
X3	0.92	Strong Reliability
X4	0.79	Strong Reliability
X5	0.87	Strong Reliability
Y	0.94	Strong Reliability

Outer and inner model evaluations confirmed construct validity, reliability, and model fit. Path coefficient estimation via bootstrap t-tests revealed significant effects of latent variables X1, X4, and X5 on latent variable Y (95% confidence interval), while X2 and X3 showed no significant impact.

**Table 2.** Hypothesis test results

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics ( O/STDEV )	P Values	Description
X1 -> Y	0.19	0.20	0.09	2.21	0.03	Significant impact
X2 -> Y	0.09	0.09	0.09	0.95	0.34	No significant impact
X3 -> Y	-0.04	-0.04	0.11	0.41	0.68	No significant impact
X4 -> Y	0.18	0.17	0.09	2.03	0.04	Significant impact
X5 -> Y	0.60	0.59	0.09	6.44	0.00	Significant impact

The evaluation showed that all measured latent constructs met validity and reliability criteria, indicating accurate and consistent measurement. The structural model also demonstrated good fit with empirical data, confirming its ability to explain relationships between latent constructs. At a 95% confidence level, control environment, information and communication, and monitoring significantly influenced organizational effectiveness. This suggests a strong causal

relationship between these variables and organizational effectiveness. Conversely, risk assessment and control activities did not show significant effects. These findings imply that control environment, information and communication, and monitoring are strong predictors of organizational effectiveness. Although not all ICS variables showed significant statistical influence, their individual contributions are not negated.

Empirical data analysis revealed that three of the five ICS variables (control environment, information and communication, monitoring) significantly impacted organizational effectiveness at PT Angkasa Pura Indonesia. While risk assessment and control activities did not, all five variables are interconnected within the ICS framework. Practically, these findings can inform the development of a comprehensive ICS assessment framework. The Internal Audit Unit requires clear guidelines on relevant indicators, bridging theory and practice. Well-defined assessment standards will facilitate auditor compliance with internal audit practice standards (The Institute of Internal Audit 2024). This research provides an empirical basis for ICS assessment indicators, aligning with the COSO framework, to guide auditors in evaluating ICS implementation.

## CONCLUSION

Simultaneous implementation of internal control systems significantly impacts organizational effectiveness at PT Angkasa Pura Indonesia. This indicates that integrated implementation of internal control systems elements contributes to overall organizational effectiveness. Thus, control environment, information and communication, and monitoring are crucial for organizational effectiveness. However, risk assessment and control activities, as measured, did not show significant impacts. Despite this, all five internal control systems variables are integral. PT Angkasa Pura Indonesia should enhance risk assessment and control activity indicators. Specifically, improve risk identification and mitigation mechanisms, and clarify company targets. The Internal Audit Unit should use clear assessment indicators, aligning with IPPF (2024), to evaluate internal control systems effectiveness."

To ensure the effectiveness and sustainability of internal control systems, internal auditors should adopt an analytical and constructive approach. When assessments reveal indicators that do not meet established criteria, auditors must explicitly identify and document these deficiencies, including clear descriptions and cause-effect analyses. Auditors should also provide detailed, actionable recommendations, grounded in root cause analysis and operational context. The COSO framework can guide these recommendations, covering all five internal control systems components. This strategic contribution ensures effective and efficient internal control systems in supporting the company's vision.

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