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Customs Import Compliance Risk Assessment: A Case Study Of Tanjung Priok, Indonesia

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Abstract

Import non-compliance may affect state revenue and the continuity of port-related operations. This study identifies import-compliance risk events found in the Tanjung Priok customs context, assesses their likelihood and potential financial and operational impacts, and describes existing control measures. A descriptive qualitative case study was conducted through semi-structured interviews with three participants and document review. Risk identification, analysis and evaluation referred to Minister of Finance Decision No. 105/KMK.01/2022, with assessment criteria adapted to the study. Nine risk events were identified: under-invoicing, over-invoicing, HS-code misdeclaration, product misdeclaration, undeclared products, quality misdeclaration, smuggling, shipments without required documents and attempted bribery of officers by external parties. Under-invoicing and over-invoicing received the highest priority scores, at 15 for financial impacts and 10 for operational impacts. Identified controls included verification of documents and declared values, examination of company information, physical inspection, laboratory testing, container scanning and reporting procedures. The findings provide a basis for discussing the prioritization of import-compliance risks.

Keywords: Import Compliance, Customs, Risk Assessment, Financial Risk, Operational Risk

INTRODUCTION

Accurate import declarations are essential to customs compliance and the orderly movement of goods. Non-compliance may take the form of inaccurate transaction values, tariff classifications, product descriptions or supporting documents. Such practices can create financial consequences through incorrect import declarations and operational consequences when additional examination or administrative handling is required. Risk assessment provides a structured way to identify these events, consider their likelihood

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and impacts, and determine which risks should be prioritized (Jean & Mitaritonna, 2010; Sahara et al., 2022).

NEXT Indonesia Center (2025) estimated import trade misinvoicing in Indonesia at approximately IDR 10,080 trillion during 2014–2023, encompassing under-invoicing and over-invoicing. This national estimate illustrates the scale of potential problems associated with inaccurate trade values, although it is not a measurement of losses at Tanjung Priok. It provides background for examining the risks associated with import declarations.

Tanjung Priok is a major import gateway where customs supervision is closely connected with port logistics. Incorrect declarations or incomplete import documentation can require further document review, physical inspection or other procedures. These processes may affect the movement and clearance of imported goods. For this reason, this study assesses the financial and operational dimensions of import non-compliance separately (International Organization for Standardization, 2018).

Minister of Finance Decision No. 105/KMK.01/2022 (KMK 105) provides a framework for identifying, analysing and evaluating risks (Kementerian Keuangan Republik Indonesia, 2022). Customs-specific guidance is also provided through Circular SE-16/BC/2025 concerning risk and control matrices (Direktorat Jenderal Bea dan Cukai, 2025). Drawing on these provisions, the present study applies an adapted risk-assessment approach to types of importer non-compliance identified in the Tanjung Priok customs setting. The assessment focuses on research-based risk classification and prioritization.

OBJECTIVES

This study aims to:

1. Identify the forms of importer non-compliance found in the Tanjung Priok customs context.
2. Assess the likelihood and potential financial and operational impacts of each identified risk using criteria adapted from KMK 105/KMK.01/2022.
3. Describe existing controls related to importer non-compliance.

The study focuses on importer-related risks and does not examine internal misconduct or determine the effectiveness of individual controls.

LITERATURE REVIEW

Compliance Risk Management

Compliance risk assessment involves identifying regulatory non-compliance and assessing the consequences of possible events. Esayas and Mahler (2015) describe a structured approach to modelling compliance risks, while ISO 31000 emphasises risk

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identification, analysis and evaluation within a broader risk-management process (International Organization for Standardization, 2018). For the Indonesian public-finance context, KMK 105 provides a risk-assessment framework that can be adapted to financial and operational impacts (Kementerian Keuangan Republik Indonesia, 2022).

Previous Customs Risk Research

In customs research, Firdiansyah (2019) examined risk identification related to tariff determination at Tanjung Priok, whereas Sahara et al. (2022) analysed factors associated with erroneous HS-code classification in an import case. These studies address specific compliance processes. The present research extends this discussion by examining nine importer-related compliance risk events together and assessing their likelihood as well as their potential financial and operational impacts. The contribution is a structured, case-specific prioritisation of risks rather than a claim that these events had not previously been recognised.

RESEARCH METHODOLOGY

Research Design and Data Sources

The research employed a descriptive qualitative case-study design at Tanjung Priok during July–September 2026. Data were collected through semi-structured interviews with three participants with knowledge of customs activities, together with documentary sources, relevant regulations, research literature and publicly reported cases. Interview information is presented in aggregate to safeguard participant confidentiality. A qualitative case-study approach enabled the findings to be examined in relation to customs and port activities (Creswell & Poth, 2018; Yin, 2018).

Interviews and documentation supported the identification and description of import-compliance risk events and existing controls. Likelihood and operational-impact levels were determined through the study's assessment process and reviewed with a participant familiar with the subject. Financial impacts were estimated by the researcher with reference to publicly reported Indonesian cases, including comparable cases outside Tanjung Priok where local figures were unavailable. The results were examined through source triangulation and validation of the assessments (Carter et al., 2014).

Risk Assessment Procedure

Following KMK 105, the analysis consisted of three stages: identification of import-compliance risk events; analysis of their likelihood, financial impacts, operational impacts and existing controls; and evaluation using priority rankings and separate 5 × 5 risk maps. Decisions on mitigation measures, risk appetite and residual-risk targets were outside the research scope.

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Three five-level assessment scales were used. Likelihood was classified by the estimated frequency of each event in one month. Financial impact was classified by the estimated monetary consequence of a reference event (x), using the Fraud K-Wide financial thresholds in KMK 105. Operational impact was classified by the degree of disruption to work processes and port activities. These assessment criteria were adapted for the study and are presented in Tables 1–3.

Table 1 Likelihood assessment scale

Level	Description	Estimated event frequency per month
1	Almost never	Fewer than 5 events
2	Rare	5–10 events
3	Sometimes	11–15 events
4	Often	16–20 events
5	Almost certain	More than 20 events

Source: Study-specific likelihood criteria adapted from the thesis (2026).

Table 2 Financial-impact assessment scale

Level	Description	Estimated financial impact per assessed event (x)
1	Insignificant	x ≤ IDR 10 million
2	Minor	IDR 10 million < x ≤ IDR 100 million
3	Moderate	IDR 100 million < x ≤ IDR 1 billion
4	Significant	IDR 1 billion < x ≤ IDR 10 billion
5	Very significant	x > IDR 10 billion

Source: KMK No. 105/KMK.01/2022, Fraud K-Wide thresholds, as applied in the thesis (2026).

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Table 3 Operational-impact assessment scale

Level	Description	Disruption criterion
1	Insignificant	No disruption to operational processes.
2	Minor	Operational processes are disrupted, but primary duties can continue normally.
3	Moderate	Work processes and primary duties are disrupted without disrupting port operations.
4	Significant	Disruption to work processes delays some port operations.
5	Very significant	Major disruption to work processes causes some port activities to be postponed.

Source: Operational-impact criteria adapted in the thesis (2026).

Priority scores were calculated separately for financial and operational effects: priority score = likelihood level × impact level. For example, under-invoicing was assessed at likelihood level 5, financial-impact level 3 and operational-impact level 2, giving financial and operational priority scores of 15 (5 × 3) and 10 (5 × 2), respectively. Equal scores were assigned the same priority. These calculated scores were not substituted for the values printed in the KMK 105 risk matrix: the 5 × 5 maps use each intersecting cell value to determine the risk category (very low, 1–5; low, 6–11; moderate, 12–15; high, 16–19; and very high, 20–25). Financial and operational maps were presented separately.

RESULT

Identifies Import-Compliance Risks

Interviews and documentation identified forms of importer non-compliance within the Tanjung Priok customs setting. These included discrepancies in declared values, classifications, types and quality of goods, as well as undeclared goods, smuggling, documentation irregularities and attempted bribery by external parties. The findings were organized into nine risk events so that their likelihood, impacts and related controls could be examined using consistent criteria.

The risk assessment combined the types of non-compliance identified during the research with estimated likelihood and impact levels. This separation is important because identifying a risk event and assigning a numerical score are different analytical

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steps. The assessment therefore explains how each score was produced rather than treating the calculated priority as a direct measure of the number of cases or the total monetary losses.

The identified events are summarized below according to their characteristics and the assessment dimensions used in this study.

The research identified nine import-compliance risk events at Tanjung Priok: (1) under-invoicing; (2) over-invoicing; (3) incorrect Harmonized System (HS) code declarations; (4) incorrect product declarations; (5) undeclared products; (6) incorrect quality declarations; (7) smuggling; (8) shipments without required documentation; and (9) attempted bribery of customs officers by external parties. These events include inaccurate or incomplete reporting and deliberate violations, with different causes and consequences for customs compliance.

HS-code misdeclaration concerns incorrect tariff classification, while product misdeclaration refers to declaring a different type of goods. Quality misdeclaration concerns inaccurate descriptions of grade or specifications, and undeclared products refers to goods omitted from import declarations. Distinguishing these events supports a more specific assessment of the likelihood, financial effects, operational effects and controls associated with each type of non-compliance.

Table 4 Likelihood, impact levels and priority scores for the nine risk events

Risk event	Likelihood (1–5)	Financial impact	Financial score	Operational impact	Operational score
Under-invoicing	5	3	15	2	10
Over-invoicing	5	3	15	2	10
HS-code misdeclaration	4	3	12	2	8
Product misdeclaration	2	5	10	2	4
Undeclared products	1	5	5	2	2
Quality misdeclaration	2	3	6	2	4
Smuggling	1	5	5	3	3
Shipments without documents	1	4	4	3	3
Attempted bribery of officers	1	4	4	3	3

Source: Researcher's assessment based on the thesis (2026). Priority score = likelihood × impact level; the 5 × 5 KMK matrix uses separate cell values.

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Assesses Financial and Operational Risks

Under-invoicing and over-invoicing each received a likelihood level of 5 and financial-impact level of 3, producing priority scores of 15. These were followed by HS-code misdeclaration (12), product misdeclaration (10), quality misdeclaration (6), and undeclared products and smuggling (5 each). The latter two were assessed as potentially having substantial financial impacts but lower estimated likelihood. The ranking shows how frequency and financial impact influence research-based prioritization.

For operational impacts, under-invoicing and over-invoicing ranked first with scores of 10, followed by HS-code misdeclaration (8). Product misdeclaration and quality misdeclaration each scored 4; smuggling, shipments without documents and attempted bribery each scored 3; and undeclared products scored 2. Operational impacts were considered in relation to possible additional examination, administrative handling and consequences for the movement of imported goods.

Prioritizes Risks Using Separate Matrices

Figures 1 and 2 present the nine identified risk events in separate 5 × 5 matrices for financial and operational impacts. The K and O codes refer to the same event numbers in Table 4. The values shown inside the matrix cells follow the KMK 105 heatmap, whereas Table 4 uses the product of likelihood and impact levels for priority ordering.

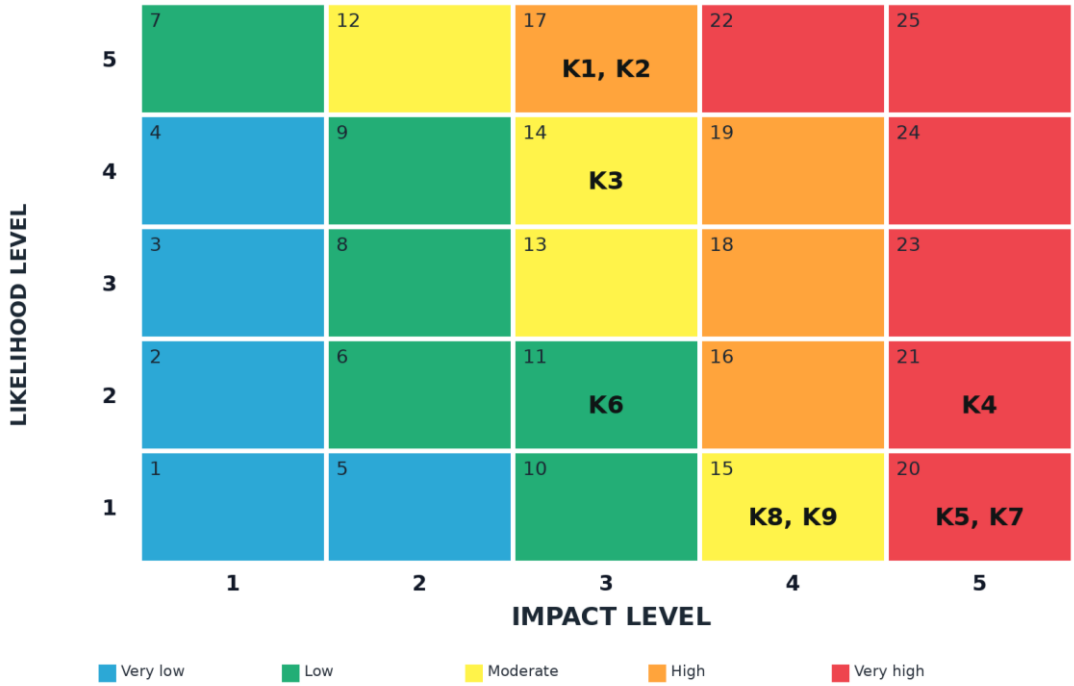


Figure 1 Financial impact risk map (adapted from the thesis and KMK 105)

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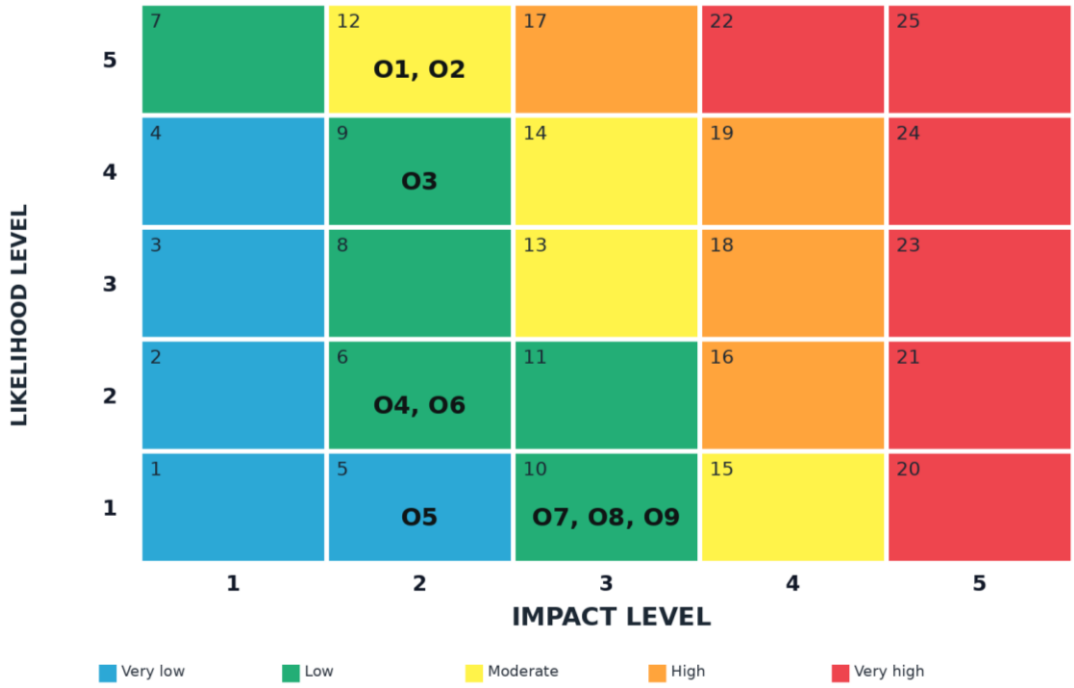


Figure 2 Operational impact risk map (adapted from the thesis and KMK 105)

Existing Risk Controls

The study identified several controls used in customs supervision in relation to the assessed events. For transaction-value discrepancies, the controls include reviewing import documentation, examining the declared value and checking relevant company information. For classification, product, quality and undeclared-goods issues, document checks are supported by physical inspections, technical examination and laboratory testing where relevant. Container scanning, actions against violations, guidance for customs users and reporting procedures also form part of the controls identified in the research. The article describes these measures generally without disclosing confidential operational details.

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Table 5 Existing Controls by Import-Compliance Risk Group

Risk Event Group	Existing Controls Identified
Under-invoicing and over-invoicing	Review of import documents, declared values and relevant company information.
HS-code, product and quality misdeclaration	Document examination and, when relevant, physical or technical examination and laboratory testing.
Undeclared products and smuggling	Document and physical checks, container screening and appropriate action on identified violations.
Shipments without required documents	Verification of required import documents and compliance handling.
Attempted bribery	Reporting and whistleblowing procedures.

Source: Summarized from the existing controls identified in this study (2026).

The identified controls provide an overview of existing measures related to importer non-compliance. This research did not measure the effectiveness of each control or calculate residual-risk levels; its assessment was limited to risk identification, analysis and priority evaluation.

DISCUSSION

Implications and Research Limitations

The findings illustrate how identified import-compliance events can be evaluated through separate assessments of likelihood, financial impact and operational impact. The highest priority scores for under-invoicing and over-invoicing suggest that transaction-value discrepancies deserve particular attention within the research-based ranking. The resulting table and risk maps may contribute to periodic documentation and review of import-compliance risks while complementing existing government risk-management arrangements under KMK 105 and the relevant customs guidelines.

The prioritisation is consistent with the structured treatment of compliance risks described by Esayas and Mahler (2015). It also complements the more focused customs work of Firdiansyah (2019) and Sahara et al. (2022): rather than examining tariff determination or a single HS-code case alone, this study separates nine identified event types and compares their financial and operational risk scores. These comparisons concern the scope of research methods and findings, not the adequacy of any institution's current procedures.

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The study has several limitations. First, the likelihood levels were determined through a qualitative assessment rather than a complete statistical dataset for each event. Second, financial-impact estimates drew on publicly reported cases from several locations in Indonesia because comparable monetary information was not available for every event at Tanjung Priok. Third, operational impacts were assessed through descriptive criteria rather than direct measurement of clearance times. Fourth, the study identified existing controls without testing their effectiveness. These limitations relate to the assessment method and do not negate the identification of the nine risk events within the research setting.

CONCLUSION

This descriptive qualitative study identified nine importer-related compliance risk events at Tanjung Priok and assessed their likelihood, financial impacts and operational impacts using criteria adapted from KMK 105. Under-invoicing and over-invoicing received the highest priority scores, at 15 for financial impacts and 10 for operational impacts. Existing controls included document and valuation checks, physical examination, laboratory testing, container scanning and reporting mechanisms. The results provide an organized assessment of the types of non-compliance, their potential consequences and their relative priority.

The study recommends documenting identified risk events and periodically reviewing their likelihood, impact levels and related controls. Further research may use more complete event-level data and examine control effectiveness to strengthen the assessment. These steps may support more structured prioritization of import-compliance risks within established customs risk-management procedures.

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