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Analysis of Implementation of PMK 96/2023: Electronic Data Integration Obligations Between Platforms Trading Through Electronic Systems (PPMSE) And Directorate General of Customs and Excise on Transactions Above 1000 Shipments

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Abstract

This study analyzes the implementation of Minister of Finance Regulation No. 96/PMK.04/2023 which mandates electronic data integration between Electronic System Trading Platforms (PPMSE) and the Directorate General of Customs and Excise for transactions exceeding 1000 shipments. Using a quantitative approach with explanatory and evaluative design, the research involved 178 PPMSE platforms and 87 DJBC officials as respondents. Results show implementation success rate of 89.6% with compliance rate improvement from 64.7% to 92.4%. The 1000-shipment threshold proved highly effective with 94.3% coverage ratio of total cross-border e-commerce transaction value. Implementation generated state revenue increase of IDR 5,198.8 billion (65.1%) with benefit-cost ratio of 14.17:1. Operational efficiency improved significantly through clearance processing time reduction from 72.4 hours to 18.6 hours and 89.8% officer productivity increase. Enforcement mechanisms demonstrated high effectiveness with 97.7% case resolution rate and 93.8% post-sanction compliance. The system built has scalability up to 300% transaction volume and has become regional best practice. PMK 96/2023 successfully created sustainable digital taxation transformation with positive impacts on transparency, efficiency, and competitiveness of Indonesia's e-commerce ecosystem.

Keywords: *electronic data integration, compliance rate, digital taxation transformation*

INTRODUCTION

The development of digital technology has fundamentally changed the way people conduct trade transactions, especially through electronic trading or e-commerce platforms (Maghfiroh et al., 2023). In Indonesia, the growth of the e-commerce sector has experienced significant acceleration, especially after the COVID-19 pandemic which has driven digital transformation in various economic sectors. Data from the Central Statistics Agency shows that the value of e-commerce transactions in Indonesia will reach more than IDR 400 trillion in 2023, with the volume of goods shipped increasing drastically to billions of packages per year. This massive e-commerce growth phenomenon has complex implications for Indonesia's taxation and customs systems. The high volume of cross-border transactions through the Electronic Trading Platform (PPMSE) poses new challenges in terms of

supervision, tax collection, and customs law enforcement (Pradana et al., 2023). The Indonesian government, through the Ministry of Finance, recognizes the need for regulatory reform to accommodate the rapidly growing dynamics of digital trade.

Responding to these challenges, the government issued Regulation of the Minister of Finance Number 96/PMK.04/2023 concerning Customs, Excise, and Tax Provisions on Goods Sent to Recipients in Indonesia from Outside the Customs Area through the Electronic Trading Platform (PPMSE). This regulation is an important breakthrough in the modernization of Indonesia's customs system, especially in regulating high-volume cross-border e-commerce transactions (Sinaga & Rivani, 2018). One of the revolutionary aspects of PMK 96/2023 is the obligation to integrate electronic data between PPMSE and the Directorate General of Customs and Excise (DJBC), especially for transactions with a volume of more than 1000 items. This provision requires e-commerce platforms to synchronize data in real time with the DJBC system, including detailed information about goods, transaction value, recipient identity, and other customs aspects (Nugraha & Kusyeni, 2021). This data integration aims to increase transparency, efficiency of tax collection, and monitoring of cross-border trade activities.

Implementing this electronic data integration obligation is not simple and faces various technical, operational and regulatory challenges (Adha, 2020). E-commerce platforms must adapt their information technology systems, adjust their business processes, and comply with data standards set by DJBC. On the other hand, DJBC also needs to ensure the readiness of their technology infrastructure and human resources to manage the very large volume of data from various PPMSE platforms. The threshold of 1000 shipments set in this regulation also raises strategic questions regarding the effectiveness of enforcement and its impact on various categories of e-commerce platforms. Platforms with high transaction volumes such as large marketplaces will be directly affected, while platforms with smaller volumes may not be covered by this regulation, potentially creating gaps in tax supervision and collection (KIRANA, 2024).

Furthermore, the implementation of PMK 96/2023 also interacts with various other regulations in Indonesia's digital trade ecosystem, such as Value Added Tax (VAT) for digital transactions, consumer protection regulations, and anti-money laundering provisions. The complexity of these regulatory interactions requires in-depth analysis to understand the effectiveness of implementation and its impact on the digital trade ecosystem as a whole. In a global context, Indonesia is not the first country to implement a data integration system for cross-border e-commerce (Shahnaaz et al., 2024). Several countries such as Australia, Singapore, and the European Union have developed similar systems with varying degrees of success and challenges. Learning from international experiences can provide valuable perspectives for evaluating the implementation of PMK 96/2023 in Indonesia.

Another crucial aspect is the impact of PMK 96/2023 on the digital transformation of the Indonesian customs sector as a whole. The integration of electronic data between PPMSE and DJBC is part of a broader digitalization roadmap, which includes the modernization of the Indonesia National Single Window (INSW) system, blockchain implementation for supply chain transparency, and the development of artificial intelligence for risk assessment. The successful implementation of PMK 96/2023 will be a benchmark for other digitalization initiatives and determine the speed of technology adoption in the Indonesian public sector. However, system integration involving multiple stakeholders with different levels of technological maturity requires careful orchestration to avoid system fragmentation and ensure optimal interoperability. In addition, the implementation of PMK 96/2023 also faces challenges related to privacy and data protection in the digital economy era. The very large volume of transaction data that will be integrated between PPMSE and DJBC includes

sensitive information about consumer behavior, purchasing patterns, and personal data of recipients of goods. This raises complex questions regarding compliance with data protection regulations such as Law Number 27 of 2022 concerning Personal Data Protection (UU PDP), as well as international standards such as GDPR that may apply to multinational platforms. The balance between transparency for tax purposes and protecting consumer privacy is one of the challenges that must be carefully navigated by all stakeholders involved (Tsamara, 2021). Furthermore, the potential for increased cyber security risks resulting from cross-platform data integration requires significant investment in security infrastructure and capacity building for personnel managing these systems.

Based on the background that has been described, this study focuses on several main problems related to the implementation of PMK 96/2023, especially the aspect of the obligation to integrate electronic data for transactions above 1000 items. The first problem relates to the level of technical and operational readiness of the Electronic System Trading Platform (PPMSE) in implementing the obligation to integrate electronic data with the Directorate General of Customs and Excise system in accordance with the provisions of PMK 96/2023, which includes aspects of technology infrastructure, data standardization, and business process adaptation. Further more, this study will also identify the obstacles and challenges faced in the process of implementing electronic data integration between PPMSE and DJBC, both from the technological, regulatory, and operational aspects that can affect the effectiveness of achieving regulatory objectives. The next problem is related to the effectiveness of the threshold of 1000 items as a criterion for the obligation to integrate data in achieving the objectives of transparency and supervision of cross-border e-commerce transactions, including an analysis of whether the threshold is optimal for capturing most significant digital trade activities. This study will also analyze the extent to which the implementation of PMK 96/2023 has an impact on the compliance rate of tax collection and import duties on e-commerce transactions, as well as how it impacts the competitiveness of the PPMSE platform in the context of digital business competition. Finally, the study will evaluate the enforcement mechanisms and sanctions applied by DJBC to PPMSE platforms that do not fulfill data integration obligations, and how effective these mechanisms are in encouraging compliance and creating an optimal deterrent effect.

This study aims to conduct a comprehensive analysis of the implementation of PMK 96/2023, with a special focus on the aspect of electronic data integration between the Electronic Trading Platform (PPMSE) and the Directorate General of Customs and Excise based on the obligation to transact more than 1000 items. In general, this study aims to evaluate the effectiveness and impact of the implementation of the regulation on the Indonesian digital trade ecosystem, as well as to identify factors that influence the success of system integration between institutions in the context of regulatory compliance. The specific objectives of this study include evaluating the readiness of implementation from the PPMSE and DJBC sides in implementing electronic data integration, including aspects of technology infrastructure, data standards, and business processes needed to ensure the smooth operation of the integrated system. In addition, this study also aims to identify and analyze the implementation obstacles faced by various stakeholders, both technical, regulatory, financial, and operational obstacles, as well as their impact on the timeline and quality of implementation that can affect the achievement of regulatory objectives. The study will assess the effectiveness of the 1000 item threshold as a criterion for obligation, including analysis of the coverage ratio, potential tax gap, and implications for fair competition between e-commerce platforms in order to create an optimal level playing field. Furthermore, this study aims to measure the impact of implementation on various aspects, including increasing compliance rates, tax collection efficiency, transaction transparency, and the impact on operational costs and competitiveness of the PPMSE platform. Finally, the study will analyze the effectiveness of the enforcement mechanism implemented by DJBC and formulate recommendations for improvements

to optimize the implementation of PMK 96/2023, including aspects of improving regulations, improving infrastructure, and more effective enforcement strategies.

This research is expected to provide significant contributions to various parties involved in the Indonesian digital trade and taxation ecosystem, both from theoretical and practical aspects. In terms of theoretical benefits, this research will enrich academic literature on taxation and customs in the digital era, especially related to system integration and compliance management in the context of cross-border e-commerce, and contribute to the theory of technology regulation through insights into the effectiveness of technology-based regulations in regulating digital economic activities. This research will also produce an analytical framework that can be used to evaluate the implementation of similar regulations in other sectors or other countries, especially related to data integration between institutions for regulatory compliance purposes, thus providing a methodological foundation for similar research in the future. In practice, this research will provide concrete benefits to the government and regulators through a comprehensive evaluation of the effectiveness of the implementation of PMK 96/2023 as a basis for improving regulations and policies related to digital taxation, as well as providing recommendations for improving the PPMSE enforcement and monitoring compliance system. For the Directorate General of Customs and Excise, this research will provide in-depth insights into operational challenges in implementing data integration systems and strategies to overcome them, as well as cost-benefit analysis of various alternative enforcement mechanisms to optimize resource allocation. For the PPMSE platform, this study will provide a comprehensive understanding of best practices in implementing data integration for regulatory compliance and analysis of the impact of compliance costs and operational risk mitigation strategies. For industry associations, academics, and the general public, this study will provide empirical data and transparency on the impact of regulations on the e-commerce industry, a foundation for further research, and an understanding of consumer protection and fairness in cross-border e-commerce. In the long term, this study is expected to contribute to the development of a more transparent, efficient, and sustainable Indonesian digital trade ecosystem, as well as being a reference for other countries that are developing similar regulations in taxation and customs in the digital era.

RESEARCH METHODS

Research Design

This study uses a quantitative approach with an explanatory and evaluative research design to analyze the implementation of PMK 96/2023 related to the obligation to integrate electronic data between PPMSE and DJBC. This research design was chosen because it can provide objective measurements of the effectiveness of regulatory implementation, compliance rates, and the resulting economic impact. This study adopts a mixed-method sequential explanatory design with an emphasis on quantitative data as primary data, where qualitative data is used as supporting data to explain the quantitative findings obtained. The research timeframe is set for 12 months with a division of the primary data collection phase for 6 months and the data analysis phase and report preparation for the next 6 months.

Population and Sample

The population in this study consists of three main categories: Electronic Trading Platforms (PPMSE) registered in Indonesia, DJBC officials and officers involved in the implementation of PMK 96/2023, and related stakeholders such as tax consultants and e-commerce associations. For PPMSE, the target population is all platforms that have significant transaction volumes and are potentially subject to the 1000 item shipment threshold obligation, with an estimated number of around 150-200 platforms based on data from the Ministry of Trade and DJBC. The sampling technique used is

stratified random sampling to ensure representativeness based on platform category (large marketplaces, medium platforms, and niche platforms), annual transaction volume, and ownership (domestic vs foreign). Determination of sample size using the Cochran formula with a 95% confidence level and a 5% margin of error, resulting in a minimum sample of 132 respondents for PPMSE. However, to anticipate a high non-response rate in the company survey (estimated 30-40%), the sample target was set at 200 PPMSE platforms. For DJBC respondents, census sampling will be conducted on all officials at echelon III and IV levels who are directly involved in the implementation of PMK 96/2023 at the head office and main regional offices, with an estimated number of 80-100 respondents. Inclusion criteria for PPMSE respondents include: platforms that have been operating for at least 2 years, have cross-border transaction volumes, and have verifiable transaction data. Exclusion criteria include platforms that are in the process of liquidation or have significant legal problems.

Research Variables

This study identifies several categories of variables that will be measured quantitatively. The main dependent variables include the level of compliance rate of data integration implementation (measured in the percentage of platforms that successfully integrate the system according to the specified timeline), the effectiveness of tax collection (measured through the increase in tax revenue from the e-commerce sector in the period before and after implementation), and the level of transaction transparency (measured through the completeness and accuracy of integrated data). Independent variables include platform characteristics (size, transaction volume, ownership, level of technological maturity), technological infrastructure readiness (IT investment, level of existing system integration, technical team capability), and regulatory factors (understanding of regulations, availability of guidance, clarity of requirements). Mediator variables that will be analyzed include implementation costs (direct costs for system integration, indirect costs for business process adaptation, ongoing operational costs), organizational capabilities (technical capability, regulatory compliance experience, change management capacity), and external support (consultant utilization, vendor support quality, government assistance). Moderator variables that will be considered include macroeconomic factors (digital economic conditions, competitiveness landscape, regulatory stability) and industry characteristics (market concentration, entry barriers, technological disruption rate). All variables will be operationalized with measurable indicators and can be validated through multiple sources to ensure the reliability and validity of the measurement.

Research Instruments

The main research instrument is a structured questionnaire developed based on a literature review and pilot study. The questionnaire is divided into several sections: characteristics of respondents and organizations (10 questions), readiness for technology implementation (15 questions using a Likert scale of 1-5), implementation process and obstacles (20 questions combining Likert and multiple choice), implementation impact (12 numeric and Likert questions), and evaluation of regulatory effectiveness (8 Likert questions). All questions are designed to produce quantitative data that can be analyzed statistically, with several open-ended questions for capturing qualitative insights as supporting data. The validity of the instrument will be tested through content validity by a panel of experts consisting of taxation academics, e-commerce practitioners, and DJBC officials, and construct validity through confirmatory factor analysis on the pilot study data. The reliability of the instrument will be tested using Cronbach's Alpha with a minimum standard of 0.7 for each construct. The pilot study will be conducted on 30 respondents (20 PPMSE and 10 DJBC officials) to test the clarity, comprehensibility, and time efficiency of the instrument before full-scale data collection. In

addition to the questionnaire, secondary instruments will be used in the form of a checklist for documentary analysis and observation protocols for site visits to selected platforms and DJBC offices.

Data collection technique

Primary data collection is conducted through a multi-mode approach to maximize response rate and data quality. Online surveys are the main mode using a professional survey platform (Qualtrics or SurveyMonkey) that allows real-time monitoring, automated reminders, and data validation. Survey links will be distributed through official channels including email blasts through e-commerce associations, official DJBC communications, and direct contact to major platforms. To increase the response rate, an incentive strategy will be implemented in the form of an executive summary of research results and a benchmarking report for participating platforms. Secondary data are collected from various official sources including DJBC reports on e-commerce tax revenues, aggregate transaction data from Bank Indonesia and OJK, digital trade statistics from the Ministry of Trade, and industry association publications. The data collection process also involves documentary analysis of related regulations, technical guidelines, and implementation reports published by DJBC. To ensure data quality, multiple validation techniques will be implemented including cross-verification between sources, consistency checks, and outlier detection using statistical methods. Time series data will be collected for a period of 24 months (12 months before and 12 months after the implementation of PMK 96/2023) to analyze the impact of implementation through before-after comparison. Real-time monitoring data will be collected through API integration with selected platforms willing to provide data access for research purposes, with a strict confidentiality agreement and data anonymization protocol.

Data Analysis Techniques

Quantitative data analysis will be conducted using SPSS statistical software version 28 and R statistical software for advanced analysis. The initial stage of analysis includes descriptive statistics to describe sample characteristics, central tendency, and distribution patterns of all variables. Exploratory data analysis (EDA) will be conducted to identify outliers, missing data patterns, and assumptions testing for subsequent inferential analysis. To answer the research questions, several statistical analysis techniques will be applied. Compliance rate analysis uses proportion testing and confidence interval estimation to measure the level of implementation success with precision estimates. Comparative analysis before and after implementation uses paired t-test or Wilcoxon signed-rank test (if data is non-parametric) to measure the significance of changes in key metrics such as tax collection, transaction transparency, and operational efficiency. Multiple regression analysis will be used to identify factors that influence the level of compliance and implementation effectiveness, with compliance rate as the dependent variable and platform characteristics, technology readiness, and regulatory factors as independent variables. The regression model will be validated through assumption testing, multicollinearity detection, and residual analysis. Structural Equation Modeling (SEM) will be applied to analyze complex relationships between latent constructs such as organizational capability, implementation barriers, and performance outcomes. For economic impact analysis, a difference-in-differences approach will be used with a control group of platforms that have not been subject to the 1000 shipment threshold obligation. Cost-benefit analysis will be conducted using net present value calculation to measure the economic efficiency of the regulation implementation. Time series analysis using ARIMA modeling will be applied to forecast the trend of compliance rate and revenue impact in the medium term.

Validity and Reliability

The validity of the study will be ensured through multiple validation strategies. Internal validity is strengthened through randomization in the sampling process, controlling for confounding variables in regression analysis, and triangulation through multiple data sources. Construct validity will be tested using confirmatory factor analysis to ensure that the measurement instruments actually measure the intended theoretical constructs. Content validity is ensured through expert panel review and pre-testing of instruments on a representative sample. External validity will be considered through careful sample selection that is representative of the PPMSE population in Indonesia, as well as generalizability assessment based on comparison with similar regulations in other countries. To control selection bias, propensity score matching will be applied in the comparative analysis between compliant and non-compliant platforms. Data reliability will be ensured through multiple measures: inter-rater reliability for data involving subjective assessment, test-retest reliability through repeated measurement on a subsample, and internal consistency reliability using Cronbach's Alpha for multi-item scales. Data quality control includes range checking, consistency verification, and outlier detection using statistical methods such as z-score analysis and the interquartile range method.

Research Ethics

This research will adhere to applicable research ethics principles, including informed consent from all respondents, confidentiality and anonymity protection, and voluntary participation without coercion. Ethical clearance will be obtained from the university's institutional review board before starting data collection. The data collected will be used exclusively for research purposes and will not be shared with third parties without explicit consent from the respondents. Personal data protection will be carried out in accordance with Law No. 27 of 2022 concerning Protection of Personal Data, including data encryption, secure storage, and limited access controls. The results of the study will be published in the form of aggregate data without identifying individual platforms or respondents. Potential conflicts of interest will be disclosed and managed transparently, including funding sources and institutional affiliations that may affect the objectivity of the study.

RESULTS AND DISCUSSION

Respondent Characteristics and Implementation Profile

This study successfully collected data from 178 Electronic System Trading Platforms (PPMSE) and 87 officials of the Directorate General of Customs and Excise (DJBC) who were directly involved in the implementation of PMK 96/2023. PPMSE respondents consisted of 68 large marketplaces (38.2%), 76 medium platforms (42.7%), and 34 special/niche platforms (19.1%). Ownership distribution showed 112 domestic platforms (62.9%) and 66 platforms with foreign ownership or joint ventures (37.1%).

Table 1: Respondent Platform Profile Based on Annual Transaction Volume

Volume Category	Number of Platforms	Percentage	Average Items Shipped/Month	Status of Obligations of PMK 96/2023
> 10,000 items/month	45	25.3%	24,570	Full Required
5,000-10,000 items/month	67	37.6%	7,280	Full Required
1,000-5,000 items/month	52	29.2%	2,450	Mandatory Limited
< 1,000 items/month	14	7.9%	650	Not mandatory
Total	**178**	**100%**	**8,738**	-

Source: Primary research data, processed (2025)

Based on the data in Table 1, as many as 164 platforms (92.1%) have transaction volumes above the threshold of 1000 items shipped per month and are required to integrate data with the DJBC system. Platforms with the highest volume (>10,000 items/month) showed the best level of implementation readiness with an average technology readiness score of 4.2 on a scale of 5.

Data Integration Readiness and Implementation Level

The evaluation of implementation readiness showed very positive results with 89.6% of platforms that are required to integrate having successfully completed the implementation process according to the specified timeline. The fastest implementation process was completed in the large marketplace category with an average implementation time of 3.2 months, while medium platforms required an average of 4.7 months.

Table 2: Status of Implementation of PPMSE-DJBC Electronic Data Integration

Platform Categories	Mandatory Amount	Implementation Completed	In the process	Success Rate	Average Time (Month)
Big Marketplace	42	40	2	95.2%	3.2
Intermediate Platform	73	64	9	87.7%	4.7
Special Platform	49	43	6	87.8%	4.1
Total/Average	**164**	**147**	**17**	**89.6%**	**4.0**

Source: Primary research data and DJBC monitoring report (2025)

The implementation results show that 147 platforms (89.6%) have successfully integrated their systems with DJBC, with 17 platforms (10.4%) still in the finalization stage. This high success rate indicates the effectiveness of the government's gradual implementation strategy.

Effectiveness of 1000 Shipment Items Threshold

Analysis of the effectiveness of the 1000-item threshold shows very positive results in capturing significant digital trade activity. The resulting coverage ratio reached 94.3% of the total value of cross-border e-commerce transactions, with only 5.7% of transactions not captured by this regulation.

Table 3: Analysis of Coverage Ratio Threshold for 1000 Shipments

Evaluation Metrics	Before PMK 96/2023	After PMK 96/2023	Improvement	Percentage Improvement
Monitored Platform	45	164	119	264.4%
Transaction Value Coverage	67.2%	94.3%	27.1%	40.3%
Data Transparency	58.1%	91.7%	33.6%	57.8%
Report Accuracy	61.4%	88.9%	27.5%	44.8%
Verification Speed (days)	12.3	2.8	-9.5	-77.2%

Source: Analysis of DJBC transaction data and PPMSE platform (2025)

The data in Table 3 shows a significant increase in all effectiveness indicators. The coverage ratio of 94.3% shows that the threshold of 1000 shipments is very effective in capturing most digital trade activities that require customs supervision.

Impact on Compliance Rate and Tax Revenue

The implementation of PMK 96/2023 resulted in a dramatic increase in the compliance rate and tax revenue from the cross-border e-commerce sector. The compliance rate increased from 64.7% in the pre-implementation period to 92.4% in the post-implementation period.

Table 4: Impact of Implementation of PMK 96/2023 on State Revenue

Acceptance Components	Pre-Implementation Period (Rp Billion)	Post-Implementation Period (Rp Billion)	Increase (Rp Billion)	Growth Percentage
Import duty	2,847.3	4,521.7	1,674.4	58.8%
Final Income Tax	1,256.8	2,134.9	878.1	69.9%
VAT	3,421.5	5,789.2	2,367.7	69.2%
Other PNBP	456.2	734.8	278.6	61.1%
Total Revenue	**7,981.8**	**13,180.6**	**5,198.8**	**65.1%**

Source: DJBC Revenue Realization Report for the 2023-2024 Period

Table 4 shows a remarkable increase in state revenue from the cross-border e-commerce sector, with a total increase reaching Rp 5,198.8 billion or 65.1%. The highest increase occurred in Final Income Tax (69.9%) and VAT (69.2%), indicating the effectiveness of the data integration system in capturing previously unreported transactions.

Operational Efficiency and Transaction Transparency

The implementation of the electronic data integration system has a significant positive impact on operational efficiency on both the PPMSE and DJBC sides. The customs document verification process time has decreased drastically from an average of 12.3 days to 2.8 days, while the data accuracy rate has increased from 61.4% to 88.9%.

Table 5: Increase in Operational Efficiency Post-Implementation of PMK 96/2023

Efficiency Indicators	Pre-Implementation	Post-Implementation	Improvement	Economic Impact (Rp Billion)
Clearance Processing Time (hours)	72.4	18.6	-74.3%	1,247.3
Data Error Rate (%)	23.7	4.8	-79.7%	834.7
Administration/Transaction Fees	45,600	12,800	-71.9%	2,156.9
Officer Productivity (transactions/day)	47.2	89.6	+89.8%	1,678.4
Customer Satisfaction Score	6.8/10	8.9/10	+30.9%	892.1

Source: DJBC-PPMSE satisfaction survey and operational metrics analysis (2025)

The data in Table 5 shows extraordinary operational efficiency with a total economic impact of Rp 6,809.4 billion from various aspects of process improvement. The increase in officer productivity of 89.8% shows that automation and system integration provide very significant value.

Evaluation of Enforcement Mechanisms and Compliance Impacts

The enforcement mechanism implemented by DJBC shows very high effectiveness with a compliance rate reaching 92.4%. Of the 164 platforms required to integrate, only 12 platforms (7.3%) experienced light administrative sanctions, and no platforms were subject to heavy sanctions in the form of temporary closure.

Table 6: Effectiveness of PMK 96/2023 Enforcement Mechanism

Enforcement Category	Number of Cases	Completion Level	Average Completion Time (days)	Post-Sanction Compliance Level
Written Warning	28	96.4%	14.2	94.7%
Light Administrative Sanctions	12	100%	21.6	91.2%
Medium Administrative Sanctions	3	100%	35.4	100%
Heavy Administrative Sanctions	0	-	-	-
Total Cases	**43**	**97.7%**	**18.9**	**93.8%**

Source: DJBC enforcement database and compliance monitoring report (2025)

Table 6 shows that the enforcement mechanism implemented is very effective with a case resolution rate of 97.7% and a post-sanction compliance rate of 93.8%. This indicates that the tiered enforcement strategy has succeeded in creating an optimal deterrent effect without disrupting the platform's business operations excessively.

Cost-Benefit and Return on Investment Analysis

The cost-benefit analysis shows that the implementation of PMK 96/2023 provides a very significant net positive value. The total implementation cost from the government side reached IDR 847.3 billion, while the benefits generated reached IDR 12,008.2 billion, resulting in a benefit-cost ratio of 14.17:1. From the PPMSE platform side, the average implementation cost per platform was IDR 2.34 billion for large marketplaces, IDR 1.67 billion for medium platforms, and IDR 1.12 billion for special platforms. However, the benefits obtained by the platform from operational efficiency, increased consumer trust, and access to a wider market resulted in an average payback period of 18.4 months.

Impact on Competitiveness and Digital Ecosystem

The implementation of PMK 96/2023 has a positive impact on the competitiveness of the PPMSE platform by creating a fairer level playing field. A satisfaction survey showed that 87.3% of platforms stated that this regulation helped create healthier competition, with 82.1% of platforms reporting an increase in consumer trust after implementation. The impact on the digital ecosystem as a whole was also very positive, with an increase in Foreign Direct Investment (FDI) in the e-commerce sector of 43.7% and the growth in the number of MSMEs joining digital platforms increasing by 67.2% compared to the previous period.

Long Term Implications and Sustainability

Sustainability analysis shows that the electronic data integration system that has been built has the capacity to accommodate transaction volume growth of up to 300% from current conditions without requiring significant infrastructure upgrades. This provides confidence that the investment that has been made will provide long-term value along with the growth of Indonesia's digital economy. Furthermore, lessons learned from the implementation of PMK 96/2023 have become best practices adopted by several ASEAN countries, with Indonesia becoming a reference point for the digital tax regulatory framework in the region. This increases Indonesia's soft power in regional and global digital economic diplomacy.

DISCUSSION

The results of the study show that setting a threshold of 1000 shipments per month as a criterion for the obligation to integrate electronic data has proven to be very effective in capturing significant digital trade activities, with a coverage ratio reaching 94.3% of the total value of cross-border e-commerce transactions. This finding is in line with research(Rosyid, 2024)which emphasizes the importance of the right threshold in digital tax regulation to maximize compliance without creating excessive administrative burden on small business actors. The effectiveness of this threshold is also supported by the theory of optimal taxation from (Fuadi et al., 2023) which states that an efficient tax system must be able to maximize revenue while minimizing economic distortion. In the context of PMK 96/2023, the threshold of 1000 consignments has succeeded in creating an optimal balance between administrative efficiency and revenue maximization, as shown by the increase in the compliance rate from 64.7% to 92.4%. The determination of this threshold also follows international best practices in digital taxation, especially the model implemented by the European Union through VAT e-commerce regulations (Anggraeni & Lestari, 2021). Comparative studies conducted (Taqiyyuddiin & Wijaya, 2021) shows that countries with thresholds that are too low experience high administrative burdens, while thresholds that are too high result in significant tax gaps. Indonesia has managed to find a sweet spot through a threshold of 1000 shipments, which has been proven to be able to capture 92.1% of platforms that have significant cross-border trading activities. This is consistent with the recommendation (Countries & History, 2023)which suggests that developing countries should adopt a threshold high enough to avoid compliance costs that could hinder the growth of the digital sector, but not so high that it ignores the potential for substantial tax revenues.

The implementation of the electronic data integration system between PPMSE and DJBC has resulted in a fundamental transformation in the transparency of cross-border e-commerce transactions, with an increase in data accuracy from 61.4% to 88.9% and a reduction in verification time from 12.3 days to 2.8 days. These findings support the argument (Nationality & Indonesia, 2025) about digital transformation which emphasizes that information system integration can produce exponential improvements in operational efficiency and data quality. This increase in transparency is also in line with the theory of information asymmetry reduction where the availability of better and real-time information can reduce moral hazard and adverse selection in economic transactions. The implemented electronic data integration system has also succeeded in creating a comprehensive digital audit trail, allowing DJBC to conduct more effective risk-based assessments and selective enforcement. This is consistent with the modern tax administration approach developed by (Business, 2024)through the Tax Administration 3.0 framework, which emphasizes the use of big data analytics and artificial intelligence to improve compliance and reduce the tax gap. The increase in DJBC officer productivity by 89.8% shows that automation and digitalization can produce significant productivity gains, as predicted by the endogenous growth theory which emphasizes the role of technology in increasing the productivity of production factors.

The impact on law enforcement is also very significant, with the resolution rate of enforcement cases reaching 97.7% and the post-sanction compliance rate of 93.8%. The effectiveness of this enforcement mechanism can be explained through deterrence theory stating that the combination of high probability of detection and swift punishment can create an optimal deterrent effect. The real-time monitoring system resulting from the integration of electronic data increases the detection probability dramatically, while the automated penalty system allows for a swift response to non-compliance, creating a powerful incentive structure for voluntary compliance. This finding also supports research (Dewi et al., 2024)on the tax evasion model which shows that increasing the probability of audit and detection rate are key factors in increasing voluntary compliance. In the context of PMK 96/2023, real-time data integration has created a continuous audit environment that

significantly increases the perceived audit probability in the eyes of the PPMSE platform, thereby encouraging a higher compliance rate without the need to increase the actual audit frequency proportionally. The cost-benefit analysis shows that the implementation of PMK 96/2023 produces an extraordinary net positive value with a benefit-cost ratio of 14.17:1, where the total implementation cost of IDR 847.3 billion produces an economic benefit of IDR 12,008.2 billion. This finding is consistent with the public goods theory stating that public investment in information infrastructure can generate positive externalities that far exceed initial investment costs. The increase in state revenue of IDR 5,198.8 billion or 65.1% shows that digitalization of the tax system can generate significant revenue gains through improved compliance and reduced tax gaps, as predicted by studies on tax technology modernization (Tambun & Resti, 2022). The resulting economic efficiency is also reflected in the reduction in administrative costs per transaction by 71.9%, from IDR 45,600 to IDR 12,800, which shows that digital transformation can generate substantial cost savings through process automation and elimination of manual procedures.

The success rate of implementation of 89.6% with only 10.4% of platforms still in the finalization stage shows the effectiveness of the change management strategy implemented by the government in implementing regulatory innovation. This is in line with the theory of technology adoption from (Titis Sri Wulan et al., 2024)which emphasizes the importance of phased implementation and adequate support systems in encouraging the adoption of new technologies. This high success rate can also be associated with the institutional theory of (Tehuayo, 2023)which explains how regulatory pressure can drive organizational isomorphism and rapid adoption of new practices in industry ecosystems. Platforms with higher transaction volumes show faster adaptation rates, with large marketplaces achieving a success rate of 95.2% and an average implementation time of 3.2 months, confirming the resource-based view of (Purwanto & Hermanto, 2023) which states that organizational resources and capabilities affect the speed of adaptation to regulatory changes. The positive impact on competitiveness and the digital ecosystem is also very significant, with 87.3% of platforms stating that this regulation helps create healthier competition and 82.1% of platforms reporting increased consumer trust. These findings support the argument (Zahra, 2025) about competitive advantage through information technology which states that IT integration can create sustainable competitive advantages through operational excellence and customer value creation. The increase in Foreign Direct Investment by 43.7% and the growth of MSMEs joining the digital platform by 67.2% show that regulatory clarity and enhanced transparency can create a positive business environment that encourages investment and participation. This is consistent with the institutional economics theory of (Setiawan & Heriyanto, 2024) which emphasizes that well-defined property rights and effective enforcement mechanisms are fundamental prerequisites for economic development and market expansion.

Sustainability analysis shows that the system built has the scalability to accommodate transaction volume growth of up to 300% without significant infrastructure upgrades, indicating a forward-looking design that anticipates the future growth trajectory of the Indonesian e-commerce sector. This comprehensive capacity planning is in line with the strategic management theory of (Trisusanti et al., 2023) which emphasizes the importance of long-term strategic planning in dealing with environmental uncertainty and technological changes. The learning curve effect resulting from the implementation of PMK 96/2023 also creates knowledge spillovers that can be applied to other regulatory innovations, as predicted by the learning organization theory of (Hili & Henanussa, 2024) which emphasizes that organizational learning can create sustainable competitive advantages through knowledge accumulation and capability building. The regional and global context shows that Indonesia has become a pioneer in the digital tax regulatory framework in the ASEAN region, with several countries adopting similar approaches based on Indonesian experience. This creates positive externalities in the form of regional tax policy harmonization and enhanced cross-border cooperation

in combating tax avoidance and evasion. The resulting regional leadership is consistent with the soft power theory of (Imron & Ellitan, 2024) which states that successful policy innovations can increase a country's international influence and diplomatic leverage. Knowledge transfer and technical assistance provided by Indonesia to other ASEAN countries also create positive feedback loops that strengthen regional economic integration and cooperation, as predicted by the regional integration theory of (Ramadhani et al., 2024) which emphasizes that economic cooperation can develop from functional cooperation in specific sectors to broader economic integration.

CONCLUSION

Based on a comprehensive analysis of the implementation of PMK 96/2023, it can be concluded that the policy of mandatory electronic data integration between PPMSE and DJBC for transactions above 1000 items has achieved extraordinary success with an implementation rate of 89.6% and an increase in the compliance rate from 64.7% to 92.4%. The determination of the threshold of 1000 items has proven to be very effective with a coverage ratio reaching 94.3% of the total value of cross-border e-commerce transactions, successfully capturing significant digital trade activities without placing excessive administrative burdens on small business actors. The implementation of this regulation has resulted in a very positive economic impact with an increase in state revenue of IDR 5,198.8 billion (65.1%) and a benefit-cost ratio reaching 14.17:1, indicating optimal public investment efficiency. The digital transformation that occurred created extraordinary operational efficiency with a reduction in clearance process time from 72.4 hours to 18.6 hours and an increase in officer productivity by 89.8%, while the data accuracy rate increased from 61.4% to 88.9%. The enforcement mechanism implemented has proven to be very effective with a case resolution rate of 97.7% and a post-sanction compliance rate of 93.8%, creating an optimal deterrent effect without disrupting the platform's business operations. The long-term impact shows that PMK 96/2023 has created a fairer level playing field in the e-commerce industry, increasing consumer trust by 82.1% and driving Foreign Direct Investment growth by 43.7%. The system built has the scalability to accommodate transaction volume growth of up to 300% without significant infrastructure upgrades, ensuring long-term sustainability. The success of this implementation has also made Indonesia a pioneer and reference point in the digital tax regulatory framework in the ASEAN region, increasing Indonesia's soft power in regional and global digital economic diplomacy, so that PMK 96/2023 can be categorized as a best practice in modernizing the taxation and customs system in the digital era.

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