CHALLENGES AND STRATEGIC APPROACHES IN DIGITAL VAT COLLECTION: EVIDENCE FROM INDONESIAN E-COMMERCE SECTOR

Ulfah Oktarida Sihaloho[1*]

[1]Department Diploma Program in Tax Administration, Universitas Sumatera Utara, Indonesia

Abstract

This research aims to analyze the implementation of digital VAT collection on e-commerce transactions in Indonesia, identify challenges, and propose strategies to address them. Focusing on PMK-60/PMK.03/2022, the study employs a descriptive qualitative approach, utilizing in-depth interviews with tax officials, e-commerce operators, and tax consultants, alongside documentation studies. Thematic analysis reveals key challenges, including regulatory inconsistencies, jurisdictional conflicts, inadequate technological infrastructure, system security vulnerabilities, and complexities in cross-border e-commerce compliance. Socio-economic disparities, such as the digital divide, further hinder inclusivity. The study emphasizes the need for comprehensive reforms, including regulatory strengthening, technological modernization, capacity building, and international collaboration. These findings offer actionable insights for policymakers to enhance digital VAT collection, promote equitable economic growth, and position Indonesia as a leader in digital tax policy innovation. The research contributes uniquely by integrating regulatory, technological, and socio-economic dimensions, addressing underexplored aspects of digital taxation in Indonesia.

Keywords*: digital vat, e-commerce taxation, indonesia*

Abstrak

Penelitian ini bertujuan untuk menganalisis implementasi pemungutan PPN digital pada transaksi e-commerce di Indonesia, mengidentifikasi tantangan, dan merumuskan strategi untuk mengatasinya. Berfokus pada PMK-60/PMK.03/2022, penelitian menggunakan pendekatan kualitatif deskriptif dengan metode pengumpulan data melalui wawancara mendalam bersama pejabat Direktorat Jenderal Pajak, pelaku e-commerce, dan konsultan pajak, serta studi dokumentasi. Analisis tematik mengungkap tantangan utama, termasuk inkonsistensi regulasi, konflik yurisdiksi, infrastruktur teknologi yang tidak memadai, kerentanan keamanan sistem, dan kompleksitas kepatuhan dalam e-commerce lintas batas. Disparitas sosio-ekonomi, seperti kesenjangan digital, juga menghambat inklusivitas. Studi ini menekankan perlunya reformasi komprehensif, seperti penguatan regulasi, modernisasi teknologi, peningkatan kapasitas, dan kolaborasi internasional. Temuan ini memberikan wawasan yang dapat ditindaklanjuti bagi pembuat kebijakan untuk meningkatkan pemungutan PPN digital, mendorong pertumbuhan ekonomi yang adil, dan memposisikan Indonesia sebagai pemimpin inovasi kebijakan pajak digital. Penelitian ini memberikan kontribusi unik dengan mengintegrasikan dimensi regulasi, teknologi, dan sosio-ekonomi, mengisi celah literatur yang masih terbatas mengenai pajak digital di Indonesia.

Kata kunci: digital vat, pajak e-commerce, indonesia

[*] ulfah@gmail.com

INTRODUCTION

Indonesia has been proactive in adapting its tax system to the digital economy. The significant milestone in digital tax reform was the passing of the Tax Regulations Harmonization Law on October 7, 2021, which became Law No 7/2021 on October 29, 2021. This law marked a crucial step towards modernizing Indonesia's tax system to address the implications of the digital economy, with provisions for VAT purposes effective from April 1, 2022 (Mahpudin, 2024). The government has also introduced strategic programs to accelerate digital infrastructure, human resource development, and technological adoption, particularly focusing on MSMEs (Micro, Small, and Medium Enterprises) to enhance their digital transformation (Hamjen et al., 2022).

The rapid expansion of e-commerce has significantly complicated the landscape of Value Added Tax (VAT) collection, especially in emerging markets like Indonesia. One prevalent challenge is the difficulty in tracking and taxing transactions conducted by non-resident entities that operate without a physical presence in the country. As highlighted by (Catubig et al., 2024), the requirement for these entities to establish a representative office can deter foreign businesses from entering the market, ultimately stifling economic growth. Furthermore, the digital economy's dynamic nature makes it hard for tax authorities to keep pace, as traditional collection methods often fail to capture the nuances of online transactions. The evolving landscape necessitates innovative strategies that combine advanced data analytics with enhanced cross-border cooperation, revealing the complexity of transforming VAT compliance into a more streamlined process. According to (Kim et al., 2022), countries must adapt to these challenges by refining their policies to effectively harness digitalization for improved tax outcomes.

The Indonesian government has made significant strides in adapting its tax policies to the digital era. However, the implementation of VAT collection in the e-commerce sector remains fraught with challenges. Issues such as low compliance rates, the lack of real-time reporting systems, and the difficulty in tracking cross-border transactions have underscored the need for innovative strategies. These challenges are compounded by the diverse nature of e-commerce players, ranging from large multinational platforms to small and medium-sized enterprises (SMEs), each with varying capacities to comply with tax regulations.

The rapid growth of the e-commerce sector has exposed significant compliance issues that warrant scrutiny, particularly in developing nations like Indonesia. As digital transactions proliferate, ensuring accurate tax collection and compliance becomes increasingly complex. This complexity is exacerbated by the varying degrees of digital literacy among taxpayers and the lack of robust regulatory frameworks. For instance, the challenges posed by the digital economy necessitate adaptive tax policies that account for e-commerces unique attributes, a sentiment echoed in the assertions that effective tax policies must encompass a wide array of processes related to taxpayer engagement (Kim et al., 2022). Additionally, learning from the successful implementations in more developed markets, such as Singapore, could serve as a critical reference point for Indonesian authorities. Minister of Finance Regulation Number 60 of 2022 seeks to address these compliance challenges by providing a structured approach to taxation in the digital marketplace, thereby enhancing tax equity and sustainability (Sudirman et al., 2024).

Research on digital VAT collection is crucial to address these pressing issues and align Indonesia's tax system with global best practices. Understanding the barriers faced by stakeholders, the effectiveness of existing policies, and potential technological interventions can provide valuable insights for policymakers and industry players alike. The Indonesian context also offers a unique case study for examining the interplay between regulatory frameworks and digital economic activities in emerging markets.

This study explores the challenges and strategic approaches to digital VAT collection in Indonesia's e-commerce sector. The research seeks to answer key questions: What are the primary obstacles to VAT compliance in the digital marketplace? How can the government leverage technology and stakeholder collaboration to enhance efficiency and compliance? By addressing these questions, the study aims to contribute to the growing body of knowledge on digital taxation and offer actionable recommendations for optimizing VAT collection mechanisms.

Ultimately, this research underscores the importance of balancing the need for robust tax enforcement with the imperative to support the growth of the digital economy. It advocates for an inclusive and adaptive approach to taxation that not only enhances revenue collection but also fosters trust and cooperation among stakeholders.

LITERATURE REVIEW

The digital economy presents challenges for Value Added Tax (VAT) systems traditionally based on physical transactions. Several countries have implemented or proposed strategies to tax digital transactions effectively. Indonesia introduced VAT on foreign suppliers in 2020 (Suwardi et al., 2020), while South Africa amended its VAT Act in 2019 to regulate cross-border digital trade (Ruddy Kabwe & Sp Van Zyl, 2021). The European Union has been a leader in designing a VAT framework for electronically supplied goods and services, introducing measures like the Mini One Stop Shop (MOSS) to simplify compliance. Key considerations in digital VAT policy include the destination principle, consumption-based taxation, and equality in treatment of domestic and foreign suppliers (Rini & Murwendah, 2020). Governments are focusing on dissemination, implementation frameworks, and technology-based solutions to optimize VAT collection on digital transactions while minimizing administrative costs and compliance burdens (Rini & Murwendah, 2020).

The Value Added Tax (VAT) presents unique challenges and opportunities within the digital economy, primarily due to the borderless nature of online transactions. As businesses leverage digital platforms to operate globally, traditional tax structures struggle to keep pace, leading to discrepancies in revenue collection and enforcement. For example, the digital marketplace often obscures the lines of jurisdiction, complicating tax compliance for both sellers and buyers. Furthermore, the rise of blockchain technology and cryptocurrencies exemplifies the need for adaptable taxation frameworks, as these innovations present questions around non-sovereign issuance and regulation by code, which are pivotal in understanding the evolving economic landscape (Guadamuz & Marsden, 2014). Adapting VAT regulations in this context requires a concerted effort from policymakers across nations, harmonizing approaches to ensure fairness and efficiency in tax collection, while mitigating risks associated with anonymity and the potential for tax evasion (Mann, n.d.) . Ultimately, a well-structured VAT system could foster equity in the digital realm, allowing all players to contribute fairly to national revenues.

In today's increasingly digital economy, the implementation of Digital VAT emerges as an essential mechanism for ensuring equitable taxation across borders. As businesses operate online with minimal physical presence, traditional tax systems struggle to effectively allocate tax revenue, often leading to significant tax base erosion. This shift necessitates re-evaluating tax frameworks, as outlined in analyses that reveal the inadequacies of existing systems in addressing the complexities of digital transactions (Grinberg, 2018). By embracing Digital VAT, governments can create a fairer approach that captures value-added contributions from digital services, promoting fiscal stability. Furthermore, aligning the VAT base strictly with accounting principles can prevent inconsistencies and promote transparency (Carpentieri et al., n.d.). By reforming tax systems to incorporate Digital VAT, nations can respond promptly to globalization and digitalization, ensuring that companies contribute their fair share in a rapidly evolving economic landscape.

METHODOLOGY

This study employs a qualitative approach to explore the challenges and strategic approaches in digital VAT collection within the Indonesian e-commerce sector. The research procedures are structured into three main stages: data collection, data processing, and data analysis. The data collection process involves a combination of secondary data and primary insights. Secondary data is sourced from government reports, academic literature, and industry analyses, focusing on tax policies, compliance rates, and e-commerce growth statistics in Indonesia. Additionally, primary data is gathered through semi-structured interviews with key stakeholders, including policymakers, e-commerce platform representatives, and tax practitioners. A purposive sampling method is used to select participants for the interviews, ensuring the inclusion of diverse perspectives from large-scale platforms, SMEs, and regulatory bodies. This method allows for the identification of challenges and strategies directly relevant to the study's objectives. Data analysis is conducted through thematic analysis to identify recurring patterns and key themes related to digital VAT collection challenges and strategies. Thematic coding is applied to organize the qualitative data, and the results are interpreted to derive actionable recommendations. This methodological approach ensures a comprehensive understanding of the multifaceted issues surrounding digital VAT collection in Indonesia while providing practical insights for policymakers and industry stakeholders.

RESULTS AND DISCUSSION

This section explores the multifaceted challenges and strategic approaches to implementing digital VAT collection in Indonesia's e-commerce sector. By analyzing the regulatory, technological, cross-border, and socio-economic dimensions, it provides a comprehensive understanding of the obstacles impeding effective tax collection and offers insights into potential solutions.

Regulatory and Legislative Framework

Indonesia has made strides in digital tax reform, notably with the Tax Regulations Harmonization Law. However, the regulatory framework remains inconsistent and inadequate, necessitating further legislative progress to ensure robustness and fairness in tax collection (Cahyadini, Putri, et al., 2024; Mahpudin, 2024). This law aims to modernize tax administration and ensure fairness in digital VAT collection. However, despite these advancements, the regulatory framework remains fragmented and insufficiently robust. The inconsistency in implementing policies across various levels of government and between sectors often leads to confusion among taxpayers and undermines compliance efforts. For instance, while some platforms are required to collect VAT on behalf of sellers, others operate under less stringent regulations, creating loopholes that reduce overall effectiveness.

The inadequacies in the current legislative framework also pose challenges in adapting to the dynamic nature of digital transactions. E-commerce platforms, by design, evolve rapidly, introducing new business models that often outpace regulatory responses. This gap highlights the need for continuous policy updates and the establishment of a comprehensive digital tax code that ensures uniform application and addresses the specific needs of the e-commerce sector. The findings align with previous research (Cahyadini, Putri, et al., 2024; Mahpudin, 2024), which emphasizes the importance of legislative consistency in fostering fairness and compliance in tax systems.

The absence of a physical presence and the complex nature of digital transactions complicate the establishment of a reliable tax system.

This complexity makes it difficult to capture all taxable activities accurately (Andikara et al., 2022; Mahpudin, 2024). Digital transactions differ fundamentally from traditional commerce, as they often lack a physical presence, which complicates the process of identifying taxable activities. For instance, an Indonesian consumer purchasing services from an international platform may not trigger the same reporting and tax compliance mechanisms as a local transaction. This absence of a reliable system to capture all taxable activities not only reduces potential revenue but also undermines the government's ability to enforce tax laws.

The complexity is further exacerbated by the varied nature of transactions, including those involving digital goods, cross-border services, and hybrid business models. Each of these requires distinct treatment under VAT regulations, and the lack of clarity in addressing them often results in inconsistent compliance. Andikara et al. (2022) and Mahpudin (2024) highlight similar challenges, noting that the nature of digital transactions demands more sophisticated tools for tracking and taxation.

To address this, the Indonesian government must consider adopting advanced technological solutions, such as blockchain and artificial intelligence, to enhance the transparency and traceability of digital transactions. These tools can help bridge the gap between the complexity of e-commerce activities and the need for an effective tax system.

Tax Sovereignty and Jurisdictional Issues

Digital platforms can operate across multiple regions without a physical presence, challenging traditional tax systems based on physical presence. This scenario complicates the determination of tax sovereignty and the allocation of taxing rights (Cahyadini, Safiranita, et al., 2024; Juswanto & Abiyunus, 2022).

The rise of digital platforms operating across multiple regions without a physical presence has fundamentally challenged traditional concepts of tax sovereignty. In conventional tax systems, physical presence forms the basis for determining tax obligations and allocating taxing rights. However, digital platforms blur these boundaries, enabling businesses to generate substantial revenues in jurisdictions where they lack a physical foothold. This development complicates the enforcement of tax laws and raises significant questions about the sovereignty of nations to impose taxes on such transactions. As noted by Cahyadini, Safiranita, et al. (2024) and Juswanto & Abiyunus (2022), the current system is ill-equipped to address these jurisdictional complexities, leading to gaps in tax collection and enforcement.

A key consequence of this challenge is the inability to allocate taxing rights effectively among jurisdictions. In Indonesia, for example, multinational platforms operating in the e-commerce space may generate income from Indonesian users but may not be subject to local VAT rules unless explicitly required by specific policies. This creates a situation where local businesses face higher tax burdens than their digital counterparts, undermining equity and market competition. Addressing these challenges requires international cooperation to develop unified tax frameworks, such as those proposed by the OECD's Base Erosion and Profit Shifting (BEPS) initiative.

The shift to digital transactions has led to conflicts between central and local governments over taxing rights. Local governments, which traditionally tax certain forms of consumption, are losing revenue as digital platforms centralize tax collection (Saptono et al., 2023). The shift to digital transactions has also intensified conflicts between central and local governments over taxing rights. Traditionally, local governments in Indonesia have relied on consumption taxes to fund regional development. However, as digital platforms centralize tax collection at the national level, local governments are experiencing revenue losses. This conflict is particularly evident in regions with high e-commerce activity, where the potential tax base is significant but largely untapped due to jurisdictional overlaps and inefficiencies.

Saptono et al. (2023) highlight that the lack of clarity in the allocation of taxing rights exacerbates these tensions, creating administrative inefficiencies and reducing overall tax compliance. Local governments argue that they should have a share of the revenues generated within their jurisdictions, while the central government prioritizes a streamlined approach to VAT collection to maximize efficiency and minimize compliance costs.

Resolving these conflicts requires a more nuanced approach that balances the interests of both central and local governments. One potential solution is the introduction of revenue-sharing mechanisms, where a portion of centrally collected VAT revenues is redistributed to local governments based on consumption patterns. Additionally, clearer guidelines on jurisdictional responsibilities can reduce overlaps and improve the overall efficiency of the tax system.

Technological and Administrative Hurdles

Effective implementation of digital VAT requires robust technological infrastructure to track and tax digital transactions accurately. The current technological architecture may not be fully equipped to handle the nuances of digital tax collection (Cahyadini, Putri, et al., 2024).

The successful implementation of digital VAT systems heavily depends on the robustness of the technological architecture used to track, report, and tax digital transactions. However, Indonesia's existing technological infrastructure may not yet be equipped to address the intricate demands of digital tax collection. Cahyadini, Putri, et al. (2024) highlight that the complexity of digital transactions—such as cross-border activities, platform-based sales, and peer-to-peer commerce—requires advanced systems capable of real-time tracking and integration across platforms. The absence of such capabilities leads to inefficiencies in tax collection, including the inability to capture taxable transactions accurately and in a timely manner.

Another significant issue is the security of data and online systems. Digital VAT systems rely on large volumes of sensitive data, including transaction records, personal information, and tax filings. Ensuring the integrity and security of these systems is paramount to preventing revenue leakage and maintaining taxpayer trust. Vulnerabilities in system security can expose the system to cyberattacks, fraud, and data breaches, which not only reduce the effectiveness of tax collection but also undermine the credibility of tax authorities. Farliana et al. (2024) underscore the critical role of secure technological systems in maintaining the integrity and efficiency of digital VAT implementation.

To address these challenges, Indonesia must invest in upgrading its technological infrastructure to align with global standards. Advanced technologies such as blockchain, artificial intelligence, and machine learning can be deployed to enhance the transparency, traceability, and accuracy of digital tax systems. Blockchain, for example, offers tamper-proof records of transactions, while AI and machine learning can automate the detection of anomalies and non-compliance.

Ensuring the security of data and online systems is crucial for the successful implementation of digital VAT. Any vulnerabilities could lead to revenue leakage and undermine the tax system's integrity (Farliana et al., 2024). Beyond technology, administrative hurdles also hinder the effective implementation of digital VAT systems. For example, the lack of adequate training and resources for tax authorities can slow the adoption of new technologies. Administrative inefficiencies, such as overlapping responsibilities and unclear guidelines, further complicate compliance for businesses and enforcement for tax authorities. Resolving these challenges requires streamlining administrative processes, providing continuous training, and fostering collaboration among stakeholders to build a coherent and efficient digital VAT system.

International and Cross-Border Challenges

The international nature of e-commerce complicates VAT collection, as different countries have varying classifications and regulations for digital goods and services. This inconsistency can create trade barriers and complicate compliance with international obligations (Sun et al., 2021; Tanodomdej, 2023). The global nature of e-commerce presents unique challenges for VAT collection, particularly in cross-border transactions. Digital goods and services often transcend national boundaries, making it difficult to enforce tax compliance and allocate taxing rights effectively. One of the key complications is the lack of standardization in how countries classify and regulate digital goods and services. For example, some jurisdictions may consider streaming services as a taxable digital service, while others may exempt them or classify them differently. This inconsistency creates confusion for businesses operating across multiple markets and poses significant compliance challenges (Sun et al., 2021; Tanodomdej, 2023).

For Indonesia, the implications are significant. When Indonesian consumers purchase goods or services from international e-commerce platforms, the enforcement of VAT collection often relies on cooperation with foreign entities. However, not all foreign businesses comply with Indonesian VAT regulations, either due to lack of awareness, insufficient enforcement mechanisms, or conflicting regulations in their home countries. This situation results in revenue leakage and places domestic businesses at a competitive disadvantage, as they are subject to stricter compliance obligations.

Moreover, cross-border e-commerce can create trade barriers. Disparities in VAT treatment and reporting requirements may discourage international sellers from entering the Indonesian market or complying fully with its tax regulations. For Indonesia, balancing the need for effective VAT collection with the goal of fostering an open, competitive digital marketplace remains a critical policy challenge.

To address these issues, Indonesia could benefit from adopting a standardized framework for digital VAT collection in collaboration with international organizations like the OECD. Mechanisms such as the OECD's VAT/GST guidelines for cross-border supplies of services and intangibles provide a blueprint for creating a more harmonized and efficient system. Implementing these guidelines could reduce compliance costs for businesses while increasing tax revenues.

Additionally, strengthening bilateral and multilateral agreements with major trading partners can enhance cooperation in VAT collection. For instance, establishing mutual agreements on information sharing, reporting standards, and enforcement mechanisms can ensure that foreign entities comply with Indonesian VAT laws. Leveraging technology, such as automated VAT collection systems integrated with international platforms, can also streamline compliance processes and improve enforcement.

While some countries have introduced unilateral measures to tax the digital economy, a globally accepted solution is still in development. Indonesia must navigate these international dynamics while formulating its digital tax policies (Juswanto & Abiyunus, 2022). In response to the complexities of taxing the digital economy, some countries have implemented unilateral measures, such as digital services taxes (DSTs) or expanded VAT frameworks. These approaches aim to capture revenue from international digital platforms that operate within their jurisdictions but often create friction in international trade relations. While effective in the short term, unilateral measures are not a sustainable solution, as they can lead to double taxation, compliance burdens for businesses, and potential retaliation from other countries.

Indonesia, like many nations, is navigating these dynamics while formulating its own digital tax policies. Its decision to implement a digital VAT framework reflects a pragmatic approach to capturing revenue from the growing e-commerce sector. However, the absence of a globally accepted solution poses challenges. For example, Indonesia must ensure that its policies align with international trade agreements while maintaining its sovereignty in designing tax systems suited to its economic context (Juswanto & Abiyunus, 2022).

The development of a global framework, such as those proposed under the OECD's Base Erosion and Profit Shifting (BEPS) initiatives, holds promise for resolving these issues. A multilateral agreement would standardize the treatment of digital transactions, reducing trade barriers and compliance complexities. For Indonesia, participation in these discussions is critical, as it ensures that the country's interests are represented in the formulation of global norms.

Until such a framework is established, Indonesia faces the dual challenge of implementing effective domestic policies while maintaining flexibility to adapt to future international agreements. This involves leveraging advanced technologies for tax collection, enhancing cooperation with major digital platforms, and participating actively in global tax forums.

Economic and Social Implications

The digital transformation has highlighted disparities in digital access and skills among different groups. Addressing these disparities is essential to ensure equitable tax collection and compliance (Farliana et al., 2024). The rapid digital transformation of the economy has brought significant opportunities for growth and efficiency, but it has also exposed disparities in digital access and skills among different societal groups. This phenomenon, commonly referred to as the digital divide, poses challenges to equitable tax collection in the e-commerce sector. Groups with limited access to digital infrastructure, such as rural communities and economically disadvantaged populations, are often left out of the formal economy, reducing the tax base and exacerbating inequality.

Farliana et al. (2024) highlight that the digital divide not only affects consumer participation in e-commerce but also creates barriers for small and medium-sized enterprises (SMEs) trying to adopt digital platforms. SMEs play a critical role in Indonesia's economy, and their exclusion from digital transformation hinders their ability to comply with VAT regulations, as many lack the technological capacity or knowledge to navigate digital tax systems. This, in turn, undermines the effectiveness of tax collection and deepens disparities between large e-commerce players and smaller, traditional businesses. Human resource development is equally critical in addressing these challenges. The shift toward digital taxation demands a workforce equipped with digital skills to manage compliance and adapt to evolving technological tools. Tax authorities, businesses, and consumers alike require targeted training programs to bridge skill gaps. Without these efforts, the potential of digital VAT systems to streamline tax processes and enhance revenue collection remains unrealized.

The findings of this study reveal that addressing the challenges of digital VAT collection in Indonesia requires a multifaceted and collaborative approach. The identified hurdles—ranging from regulatory inconsistencies and technological inadequacies to cross-border complexities and economic disparities—highlight the need for targeted interventions at both the national and international levels.

First, the regulatory and legislative framework must be strengthened to provide clarity and consistency in applying VAT rules across digital transactions. A robust legal structure will ensure fairness and foster compliance among businesses operating in the digital economy. This requires not only domestic reforms but also alignment with international tax norms to address jurisdictional and cross-border complexities effectively.

Second, technological and administrative challenges necessitate significant investment in digital infrastructure and capacity-building initiatives. Advanced technologies, such as AI and blockchain, can enhance the accuracy and efficiency of tax collection, while targeted training programs for tax authorities and businesses can bridge skill gaps and improve compliance.

Third, addressing the digital divide and fostering human resource development are critical for ensuring inclusivity in the tax system. Policies that promote equal access to digital platforms and tools, particularly for SMEs and underserved regions, can expand the tax base and foster economic equity.

Finally, Indonesia must actively participate in international efforts to develop a globally accepted solution for taxing the digital economy. By engaging in multilateral dialogues and adopting best practices from other jurisdictions, Indonesia can align its policies with international standards while safeguarding its economic interests.

These implications underscore the importance of adopting a holistic approach that combines regulatory reforms, technological advancements, capacity building, and international cooperation. Future research could explore the long-term impact of these strategies and assess their effectiveness in enhancing digital VAT collection in Indonesia. This study provides a foundation for policymakers to develop innovative and inclusive solutions that balance fiscal objectives with economic growth in the digital era.

CONCLUSION

This study highlights the multifaceted challenges of implementing digital VAT collection in Indonesia’s rapidly evolving e-commerce sector. Key issues include inconsistent and inadequate regulations, the complexity of digital transactions, jurisdictional conflicts, and technological and administrative hurdles. Additionally, the international and cross-border nature of e-commerce poses significant challenges to aligning Indonesia's VAT policies with global practices. These findings underscore the need for comprehensive legislative reforms, robust technological infrastructure, and enhanced collaboration at both domestic and international levels to ensure fair and effective tax collection.

Despite these contributions, the research has limitations. It primarily focuses on Indonesia’s regulatory and technological landscape, which may not fully capture the diversity of challenges faced in other countries. Furthermore, data limitations and the exclusion of certain stakeholder perspectives, such as small-scale vendors or end-users, may constrain the depth of the analysis. Future research could expand on these areas by incorporating quantitative methods, exploring comparative international frameworks, and examining the socioeconomic impacts of digital taxation on diverse populations. Ultimately, addressing the challenges of digital VAT collection requires an integrated approach that balances technological innovation, stakeholder engagement, and policy adaptability to foster equitable and sustainable growth in the digital economy.

REFERENCES

Andikara, B., Astuti, D., & Hanum, I. U. (2022). Cross-Border Digital Taxation Challenges. In C. J. Kim, N. Hendriyetty, F. Taghizadeh-Hesary, & C. Evans, *Taxation in the Digital Economy* (1st ed., pp. 221–239). Routledge.

https://doi.org/10.4324/9781003196020-13

Cahyadini, A., Putri, S. A., Safiranita, T., & Hidayat, M. J. (2024). Technology Architecture as an Instrument for Digital Taxation. *Laws*, *13*(1), p. 7. https://doi.org/10.3390/laws13010007

Cahyadini, A., Safiranita, T., Muttaqin, Z., Fauzi, R., & Ramli, A. (2024). Digital Tax Regulation in Facing Society 5.0 Era to Realize Indonesian Tax Sovereignty. *PADJADJARAN Jurnal Ilmu Hukum (Journal of Law)*, *11*(1), pp. 145–163. https://doi.org/10.22304/pjih.v11n1.a7

Carpentieri, L., Micossi, S., & Parascandolo, P. (2019). *Overhauling Corporate Taxation in The Digital Economy*. Brussels: CEPS Policy Insight.

Catubig, S. E., Dangat, W. L., Inventado, C. F. M., Ortonio, A., Villapando, J., & Dotong, E. (2024). From Pixels to Taxes: A Comparative Study of Digital Economy Tax Policies in the Philippines to Selected ASEAN Member States. *European Journal of Theoretical and Applied Sciences*, *2*(2), pp. 240–253. https://doi.org/10.59324/ejtas.2024.2(2).21

Farliana, N., Murniawaty, I., & Hardianto, H. (2024). Sustainability of the Digital Economy in Indonesia: Opportunities, Challenges and Future Development. *Review of Business and Economics Studies*, *11*(4), pp. 21–28. https://doi.org/10.26794/2308-944X-2023-11-4-21-28

Grinberg, I. (2018). International Taxation in an Era of Digital Disruption: Analyzing the Current Debate. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.3275737

Guadamuz, A., & Marsden, C. (2014). Bitcoin: The Wrong Implementation of the Right Idea at the Right Time. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.2526736

Hamjen, H., Rumata, V. M., Damanik, M. P., & Sastrobroto, A. S. (2022). Understanding Digital Transformation: The Indonesian MSME Perspective. In P. Ordóñez De Pablos, X. Zhang, & M. N. Almunawar (Eds.), *Advances in Finance, Accounting, and Economics* (pp. 198–222). IGI Global. https://doi.org/10.4018/978-1-6684-5849-5.ch012

Juswanto, W., & Abiyunus, Y. F. (2022). Taxing the Digitalized Economy. In C. J. Kim, N. Hendriyetty, F. Taghizadeh-Hesary, & C. Evans, *Taxation in the Digital Economy* (1st ed., pp. 56–81). Routledge. https://doi.org/10.4324/9781003196020-5

Kim, C. J., Hendriyetty, N., Taghizadeh-Hesary, F., & Evans, C. (2022). *Taxation in the Digital Economy: New Models in Asia and the Pacific* (1st ed.). Routledge. https://doi.org/10.4324/9781003196020

Mahpudin, E. (2024). Digital tax reform in Indonesia: Perspective on tax policy development. *Journal of Infrastructure, Policy and Development*, *8*(8), 7032. https://doi.org/10.24294/jipd.v8i8.7032

Mann, C. L. (2000). T*ransatlantic Issues in Electronic Commerce.* Washington DC: Institute for International Economics.

Rini, E. S. & Murwendah. (2020). Taxing the Smart Retail: Value Added Tax Policy Analysis on

Digital Transactions in Indonesia. *2020 International Conference on ICT for Smart Society (ICISS)*, pp. 1–7. https://doi.org/10.1109/ICISS50791.2020.9307601

Ruddy Kabwe & Sp Van Zyl. (2021). Value-Added Tax in The Digital Economy: A Fresh Look at The South African Dispensation. *Obiter*, *42*(3). https://doi.org/10.17159/obiter.v42i3.12899

Saptono, P. B., Khozen, I., & Hodžić, S. (2023). Local Government Taxing Power for Digital Consumption: A Case Study of Hotel, Restaurant, and Entertainment Taxes in Indonesia. *Lex Localis - Journal of Local Self-Government*, *21*(4), pp. 1141–1165. https://doi.org/10.4335/21.4.1141-1165(2023)

Sudirman, L., Girsang, J., & Abao, G. A. (2024). The Legal Framework of E-Commerce Taxation in Indonesia and Singapore. *Legal Spirit*, *8*(2), pp. 315–324. https://doi.org/10.31328/ls.v8i2.5433

Sun, X., Ma, H., Song, L., & Yang, B. (2021). International reference and Enlightenment of value-added tax system for B2C cross-border service transactions under Digital Economy. *2021 The 9th International Conference on Information Technology: IoT and Smart City*, pp. 123–128. https://doi.org/10.1145/3512576.3512599

Suwardi, S. ., Budiandri, A., S., C., & A., G. N. (2020). Memajaki Transaksi Ekonomi Digital: Studi Kasus di India, Perancis, Dan Australia. *Jurnal Pajak Dan Keuangan Negara (PKN)*, *2*(1), pp. 1–12. https://doi.org/10.31092/jpkn.v2i1.971

Tanodomdej, P. (2023). The boundary between digital goods and E-services in cross-border E-commerce and implication for non-discrimination under the WTO system. *International Journal of Law and Information Technology*, *31*(3), pp. 213–230. https://doi.org/10.1093/ijlit/eaad022