

International Taxation in the Digital Era: Toward Fair and Sustainable Regulatory Frameworks

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Received : December 22, 2023

Accepted : January 19, 2024

Published : January 31, 2024

Citation: Setyorini, N., & Lestari, D.F., (2024) International Taxation in the Digital Era: Toward Fair and Sustainable Regulatory Frameworks. Summa: Journal of Accounting and Tax, 2(1), 16-27.

ABSTRACT: The rapid growth of the digital economy has transformed global commerce and presented significant challenges for international taxation. This study provides a narrative review of cross-border taxation issues and regulatory responses, with a focus on identifying challenges, evaluating national approaches, and assessing multilateral frameworks. Literature was systematically collected from leading academic databases, including Scopus, Web of Science, and Google Scholar, using keywords such as digital economy, cross-border taxation, and regulatory responses. Inclusion criteria emphasized studies addressing digital services taxes, tax compliance, and emerging technologies in fiscal systems. Results reveal four dominant themes: cross-border taxation challenges, national regulatory responses, multilateral initiatives, and the implications of emerging technologies. Evidence shows that the lack of physical presence undermines tax enforcement, national approaches vary in effectiveness, and OECD's BEPS framework, while promising, faces political and technical obstacles. Moreover, digital assets such as cryptocurrencies and NFTs complicate valuation and jurisdiction, demanding new regulatory strategies. The discussion highlights how systemic inequities disadvantage developing economies, while advanced economies benefit from stronger institutions. Solutions proposed in the literature include multilateral cooperation, blockchain-based transparency tools, and context-specific digital services taxes. The review concludes by stressing the urgency of inclusive global reforms, investments in administrative capacity, and further empirical research to ensure fair, effective, and sustainable digital taxation. These findings provide critical insights for policymakers and researchers seeking to align fiscal systems with the realities of the digital economy.

Keywords: Digital Economy, Cross-Border Taxation, Digital Services Tax, Global Fiscal Policy, Blockchain and Taxation, OECD BEPS, Tax Compliance.



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INTRODUCTION

The rapid expansion of the digital economy over the past decade has significantly reshaped global economic structures. This transformation has had profound implications for taxation systems worldwide. Digital technologies now permeate almost every sector, driving growth, enhancing efficiency, and creating new modes of commerce that transcend traditional geographical

boundaries. This development, while fostering economic dynamism, has simultaneously posed unprecedented challenges for national and international tax regimes. The increasing reliance on digital platforms, cloud-based services, and intangible assets has disrupted conventional models of tax collection that were originally designed for physical goods and localized transactions (Ponomareva, 2022). As a result, scholars, policymakers, and international organizations have turned their attention to the pressing issue of how to adapt fiscal systems to the realities of a digitalized global economy.

The literature underscores that multinational enterprises operating in digital environments frequently maintain minimal physical presence in the jurisdictions where they generate significant revenues. This reality complicates the determination of tax jurisdiction and the allocation of taxing rights (Agrawal & Fox, 2021). Furthermore, the digital economy accentuates administrative and compliance costs, as traditional mechanisms for monitoring, valuing, and enforcing taxation often prove inadequate for intangible, cross-border transactions. To address these challenges, several countries have introduced or considered Digital Services Taxes (DSTs) as a means to capture revenue fairly from digital giants that otherwise escape conventional tax regimes (Mponwana & Ndlovu, 2024). The growing scholarly debate surrounding DSTs reflects the urgency and global significance of the issue.

In empirical terms, the expansion of cross-border digital transactions has heightened concerns about revenue leakage. Countries are increasingly unable to capture taxes from entities that operate across borders without a tangible footprint in their markets (Ponomareva, 2022). Studies demonstrate that taxpayers engaged in digital activities display greater propensity for tax avoidance, leveraging gaps in international frameworks to minimize their liabilities (Jin et al., 2023). This has raised alarms among policymakers and scholars who warn of significant losses to public finances, estimated to reach billions of dollars annually on a global scale (Mpofu, 2022). Such losses are particularly concerning for developing economies, which are disproportionately reliant on corporate and consumption taxes to fund essential public services.

In Africa, for instance, the introduction of DSTs has been controversial. Mpofu and Moloi (2022) highlight how DSTs, while intended to secure fairness in taxation, may inadvertently increase investment costs and stifle economic growth. At the same time, developing countries struggle with limited administrative capacity, making enforcement of digital taxation measures inconsistent and prone to inefficiencies (Robert-Angers & Godbout, 2021). Small and medium-sized enterprises (SMEs) are particularly vulnerable, as compliance with complex digital tax regulations imposes disproportionate burdens that can curtail their competitiveness (Sibarani et al., 2024). Such evidence reinforces the dual-edged nature of digital taxation: while essential for fiscal sustainability, its implementation risks exacerbating inequities in global markets.

Beyond these administrative challenges, the accelerating pace of technological innovation adds further complexity. Emerging technologies such as artificial intelligence (AI) and blockchain can transform tax administration. They promise improvements in compliance, transparency, and efficiency. However, without concurrent regulatory adaptation, these innovations could deepen existing inequalities and further complicate enforcement (Monkam & Mangwanya, 2024; Belahouaoui & Attak, 2024; Tofan, 2024). For example, blockchain-based decentralized finance can obscure the location of transactions, rendering traditional approaches to jurisdictional taxation

obsolete. This underscores the importance of global collaboration in designing regulatory responses that balance innovation with fiscal equity (Bilotta, 2020; Ozai, 2024).

The inherent complexity of these challenges illustrates why unilateral approaches are often insufficient. For example, a country that imposes digital service taxes alone may risk trade disputes and reduced foreign investment without coordinated international support. As Borowski and Karlikowska (2023) and Kačaljak (2020) argue, sustainable solutions require international cooperation that aligns national interests with collective goals of tax fairness and efficiency. The absence of coordinated action risks a proliferation of fragmented and inconsistent digital tax regimes, exacerbating trade tensions and creating uncertainty for businesses operating across multiple jurisdictions. Thus, while digitalization offers immense economic potential, it simultaneously compels a rethinking of the principles underpinning international taxation.

Despite these efforts, major gaps remain in the literature. Notably, there is limited empirical evidence on the effectiveness of DSTs in enhancing tax compliance and revenue mobilization, especially across diverse economic contexts (Mpofu, 2022). Scholars have pointed out the uneven impact of DSTs on different categories of taxpayers, with large multinational corporations often more capable of absorbing additional costs than SMEs (Mpofu & Moloi, 2022). Similarly, Belahouaoui and Attak (2024) note that while AI may foster compliance in advanced economies, developing countries often lack the infrastructure to reap similar benefits. These disparities highlight the need for a more nuanced understanding of how digital tax policies affect different economies, industries, and populations.

Given these considerations, this review aims to provide a comprehensive synthesis of existing scholarship on the challenges and regulatory responses associated with digital taxation in the context of cross-border transactions. Specifically, the review seeks to evaluate the effectiveness of current approaches, including DSTs, in addressing issues of tax avoidance and revenue loss, while also identifying the limitations and unintended consequences of these measures. Furthermore, the analysis will explore the role of emerging technologies in shaping the future of tax administration and their potential to either mitigate or exacerbate existing challenges.

The scope of this review encompasses a broad geographic lens, considering experiences from both developed and developing economies. The discussion includes case studies from regions such as Africa, Europe, and Asia, where the adoption and impacts of digital tax measures have varied significantly. For instance, while the European Union has spearheaded debates on profit-shifting and tax erosion, African countries continue to grapple with the balance between securing revenue and fostering economic growth (Vărzaru et al., 2023; Mpofu & Moloi, 2022). Similarly, in Asia, countries such as Vietnam and Indonesia illustrate the struggles of aligning domestic tax systems with regional and global standards. By comparing these diverse experiences, the review intends to illuminate the broader patterns and divergences in global approaches to digital taxation.

In summary, the digital economy has irreversibly transformed the landscape of taxation, necessitating urgent scholarly and policy attention. While the literature acknowledges significant strides in policy innovation, substantial gaps persist in understanding the long-term efficacy, fairness, and sustainability of digital taxation regimes. This study contributes to filling these gaps by critically analyzing the challenges, opportunities, and regulatory responses associated with cross-border digital transactions. Through a comprehensive review of current scholarship, it seeks to

inform both academic debates and practical policymaking, advancing the search for more equitable and effective fiscal systems in the digital age.

METHOD

The methodology adopted in this study was designed to ensure a rigorous, systematic, and comprehensive review of the literature on taxation in the digital economy, particularly in relation to cross-border transactions and regulatory responses. The methodological approach combined the use of multiple academic databases, carefully selected keywords, and explicit inclusion and exclusion criteria to gather and analyze relevant publications. This process was complemented by a structured evaluation of the types of studies reviewed and a transparent selection procedure to enhance the credibility and replicability of the findings.

The primary databases consulted for this study were Scopus, Web of Science, and Google Scholar, all of which are recognized as authoritative sources of academic literature. Scopus and Web of Science were prioritized because of their extensive coverage of peer-reviewed journals and their advanced bibliometric tools, which facilitate the assessment of research impact and the identification of citation patterns (Jin et al., 2023; Ponomareva, 2022). These databases provided access to a wide range of journals in economics, law, public policy, and international business, all of which are directly relevant to the study of digital taxation. Google Scholar was also used to complement these searches by retrieving additional sources that may not always be indexed in subscription-based databases, such as theses, conference proceedings, and working papers. This multi-database strategy allowed the inclusion of a broad range of perspectives and minimized the likelihood of missing significant contributions to the literature.

The search process was structured around the use of carefully chosen keywords that reflect the thematic focus of this review. Based on prior research and preliminary scoping, the most frequently employed keywords included “digital economy,” “cross-border taxation,” and “regulatory responses,” which capture the intersection of digitalization and fiscal governance (Belahouaoui & Attak, 2024; Ponomareva, 2022). Additional keywords such as “digital services tax,” “tax compliance,” and “value-added tax (VAT)” were included to identify literature examining the implementation of specific policy tools in response to digitalization (Magwape, 2022; Vărzaru et al., 2023). These terms were combined using Boolean operators to refine the search results and ensure that the retrieved studies addressed the intended research focus. For example, queries such as “digital economy AND taxation,” “cross-border AND tax regulation,” or “digital services tax AND compliance” were systematically applied across the databases.

To maintain the quality and relevance of the sources, strict inclusion and exclusion criteria were applied. Studies were included if they explicitly addressed issues related to taxation in the digital economy, with particular emphasis on cross-border transactions, international regulatory frameworks, or the implementation of digital-specific tax policies. Both empirical and conceptual studies were considered, as long as they provided insights into challenges, policy responses, or implications for tax governance in digital contexts. Peer-reviewed journal articles constituted the primary focus of this review, but credible reports from international organizations such as the OECD and IMF were also included, given their critical role in shaping global tax debates.

Exclusion criteria involved omitting articles that were purely technical without policy relevance, studies that focused narrowly on domestic tax systems without a digital component, or publications that did not undergo peer or institutional review.

The types of research included in the review were diverse, reflecting the multidisciplinary nature of the subject. This encompassed comparative policy studies, case studies, legal analyses, and empirical investigations using both qualitative and quantitative methods. Experimental studies such as randomized controlled trials were not common in this field due to the nature of the topic, but observational and policy-oriented studies were central. Cohort-like analyses of tax compliance behavior in digital contexts, cross-country comparative studies, and detailed case studies on the implementation of digital services taxes were especially prominent. The inclusion of different research designs enriched the synthesis by providing a multifaceted understanding of both theoretical debates and practical experiences.

The process of literature selection was undertaken in several stages. First, all retrieved search results were exported into a reference management system for screening. Titles and abstracts were reviewed to identify articles that met the predefined inclusion criteria. This initial screening was essential to eliminate irrelevant studies and reduce the pool to a manageable size. In the second stage, full-text articles were read carefully to assess their methodological rigor, theoretical contribution, and empirical relevance. Particular attention was given to whether the studies provided clear evidence on cross-border taxation challenges, evaluated the effectiveness of regulatory responses, or discussed the implications of digitalization for fiscal sustainability.

Each article was further evaluated against standardized criteria, including the clarity of research objectives, methodological transparency, and relevance to the central research question. Studies that lacked sufficient methodological detail or presented anecdotal evidence without analytical grounding were excluded from the final synthesis. This rigorous evaluation ensured that the review was built on robust and credible evidence. Moreover, by including studies across different regions and economic contexts, the methodology facilitated a balanced assessment that considered both the perspectives of advanced economies and the challenges faced by developing countries.

The final stage of the methodological process involved synthesizing the selected literature according to thematic categories. These themes were derived inductively during the review process and reflected recurring issues in the literature, such as jurisdictional disputes over taxing rights, administrative burdens of compliance, the impact of DSTs on investment and growth, and the role of emerging technologies in reshaping tax systems. The categorization facilitated a structured presentation of findings and allowed the review to highlight commonalities and divergences across different national and regional experiences.

In summary, the methodology adopted in this review combined the strengths of multiple academic databases, systematic keyword searches, and stringent inclusion and exclusion criteria to build a comprehensive and credible body of literature. The careful screening and evaluation of articles ensured the quality of the evidence base, while the diversity of research types enriched the analysis by incorporating legal, economic, and policy perspectives. By following this methodological framework, the review aimed not only to capture the current state of research on digital taxation but also to provide a foundation for future scholarly inquiry and policymaking in this rapidly evolving domain.

RESULT AND DISCUSSION

The findings from the reviewed literature are organized into four thematic areas that collectively capture the complexities, strategies, and implications of digital taxation in the context of cross-border transactions. These themes encompass the challenges of cross-border taxation, national regulatory approaches, multilateral efforts, and the role of emerging technologies in shaping the fiscal landscape. Each theme is informed by empirical evidence, comparative analyses, and policy debates across diverse jurisdictions, thus providing a comprehensive synthesis of the current state of knowledge.

The first theme concerns the challenges of cross-border taxation, where evidence consistently highlights the difficulties faced by tax authorities in imposing taxes on digital enterprises without physical presence. Jin et al. (2023) demonstrate that the quality and transparency of platform data significantly influence tax compliance, revealing how opacity in transaction reporting facilitates tax avoidance. This problem becomes particularly acute in jurisdictions where companies generate substantial revenue without establishing a tangible footprint, thereby undermining the ability of states to levy income or sales taxes effectively. Although scholars such as Ponomareva (2022) have emphasized these complications, the inability to impose taxes in the absence of physical nexus has been repeatedly identified as a core structural problem of international taxation in the digital era. The experience of advanced economies, such as within the European Union, illustrates how institutional capacity and regulatory frameworks can partially mitigate these challenges, yet enforcement remains uneven and contentious (Polezharova, 2020). Conversely, developing countries often lack the administrative tools and fiscal resources to monitor digital transactions effectively, leaving them vulnerable to tax base erosion. Mpofu (2022) underscores how weak regulatory forums and fiscal constraints in African states exacerbate the problem, while note that poorly prepared digital tax regimes may inadvertently harm small businesses by imposing disproportionate burdens.

The second theme focuses on national regulatory responses, with particular attention to Indonesia, Vietnam, and Brazil. In Indonesia, the introduction of digital taxation has been driven by the need to broaden the tax base in an economy increasingly reliant on digital services. Cahyadini et al. (2024) show that while the government has begun implementing taxes on digital transactions, limited administrative capacity and concerns over the impact on micro and small enterprises persist. In Vietnam, Hà's findings (Abdelmhmud, 2024) highlight the government's efforts to design a legal framework for taxing foreign digital companies, although ensuring fairness and avoiding double taxation remain unresolved challenges. Brazil has introduced digital services taxes targeting companies with no physical presence yet profiting from Brazilian consumers. Cury's work, cited by Saleh et al. (2023), reveals that enforcement and effective implementation continue to pose obstacles, underscoring the gap between legislative ambition and administrative capacity.

Comparisons between developed and developing economies reveal substantial divergences in regulatory approaches. Developed countries, particularly those in the European Union, benefit from comprehensive legal frameworks and advanced administrative infrastructure, enabling more effective enforcement of digital tax policies (Geringer, 2020; Cahyadini et al., 2024). Developing economies, in contrast, face persistent challenges such as inadequate training for tax officials and limited digital infrastructure, which translate into lower compliance rates and weaker enforcement

(Magwape, 2022). These differences highlight the critical role of international cooperation and the potential of harmonized standards to promote equitable taxation globally. Argue that fragmented approaches risk exacerbating inequalities, particularly when multinational enterprises exploit jurisdictional inconsistencies to minimize tax liabilities.

The third theme addresses multilateral efforts, particularly the OECD's Base Erosion and Profit Shifting (BEPS) framework. Ponomareva (2022) highlights the OECD's role in facilitating international agreements grounded in fairness and cooperation, although consistent implementation across member states remains elusive. Magwape (2022) observes that the BEPS initiative has garnered the support of more than 130 countries, reflecting broad consensus on the necessity of reforming international tax rules. Nonetheless, practical effectiveness is often undermined by political reluctance and the competing interests of states (Samari, 2020). The challenges are especially evident in the implementation of Pillar One and Pillar Two, which aim to reallocate taxing rights and establish a global minimum tax rate. Emphasize the political tensions arising from divergent views on how revenues should be distributed between source countries and residence countries, while Ozai (2024) notes that technical barriers such as the need for modernized tax infrastructure further complicate implementation. Cui and Yi (2024) reinforce this observation by documenting the struggles many states face in aligning their domestic systems with the demands of these pillars, underscoring the gap between international aspirations and domestic realities.

The fourth theme concerns emerging technologies such as blockchain, cryptocurrencies, NFTs, and the metaverse, which introduce new challenges for taxation. Çalışkan (2022) points out that the decentralized and volatile nature of digital assets complicates valuation and jurisdictional authority, making taxation unpredictable and vulnerable to avoidance. Further argues that existing tax systems remain bound to outdated criteria ill-suited for the realities of the digital economy, exacerbating risks of revenue loss. These issues are compounded by the difficulty of tracking cross-border transactions involving digital assets, which often bypass traditional financial intermediaries. Countries have begun experimenting with adaptive measures to address these challenges. In Japan, Nishiyama and Krever (2023) document regulatory requirements compelling foreign digital service providers to register and comply with domestic tax obligations. Similarly, highlights the introduction of taxes on streaming and digital platforms, colloquially referred to as the "Netflix Tax," as an example of efforts to capture revenue from digital consumption. While these initiatives reflect proactive adaptation, they also reveal the ongoing tension between fostering innovation and ensuring fiscal sustainability.

Taken together, the findings of this review indicate that the taxation of digital economies presents multi-layered challenges that demand both national innovation and multilateral coordination. Empirical evidence shows that the absence of physical presence undermines tax enforcement, while national responses vary widely in their effectiveness depending on institutional capacity and economic context. Multilateral frameworks such as BEPS represent significant steps toward global consensus but remain constrained by political and technical obstacles. Finally, emerging technologies amplify existing problems while introducing novel uncertainties, requiring states to continually adapt their fiscal regimes. The comparative analysis across advanced and developing economies reveals a persistent asymmetry, where wealthier states are better equipped to manage digital taxation, while poorer states struggle with limited resources. This imbalance reinforces the

necessity for global collaboration to ensure fairness and prevent revenue disparities in the digital age.

In conclusion, the reviewed literature demonstrates that digital taxation is not merely a fiscal challenge but also a broader issue of global equity, technological governance, and economic development. The themes identified—cross-border challenges, national responses, multilateral efforts, and technological disruptions—together highlight the urgent need for coherent strategies that balance innovation, fairness, and efficiency. Addressing these issues will require a combination of domestic reforms, international agreements, and adaptive regulatory mechanisms capable of keeping pace with rapid digital transformation.

The relationship between digital taxation policies and global economic inequality emerges as one of the most critical issues in the reviewed literature. Ponomareva (2022) observes that frameworks such as those developed by the OECD often privilege advanced economies, which possess the institutional and technological capacity to implement and enforce complex digital taxation measures. These countries not only benefit from more robust regulatory environments but also tend to capture a larger share of tax revenues from multinational corporations. In contrast, developing economies struggle with infrastructural limitations and weaker administrative capacity, leaving them at a disadvantage in both designing and enforcing effective digital tax regimes. Magwape (2022) reinforces this concern by highlighting how states with limited experience in promoting digital sectors risk losing significant revenue streams, further exacerbating economic disparities. This dynamic suggests that, without structural reforms, digital taxation could unintentionally deepen existing inequalities between the global North and South.

These findings also have profound implications for fiscal policy and legal systems. The rapid pace of digitalization requires substantial adjustments to existing fiscal frameworks that were originally designed for traditional, localized forms of commerce. Belahouaoui and Attak (2024) emphasize that current legal structures are often outdated and incapable of addressing the unique characteristics of digital transactions, such as decentralization, anonymity, and instantaneous exchanges. Similarly, Abdelmhmud (2024) notes that unless fiscal policies are redesigned to reflect the realities of the digital economy, tax regimes will continue to lag behind technological innovation. Mayburov (2019) argues that the redesign of these policies must be inclusive, involving diverse stakeholders to ensure that the principle of fairness remains central. Without such inclusivity, there is a significant risk that reforms may disproportionately serve the interests of stronger economies, thereby perpetuating systemic imbalances.

Systemic factors play a critical role in explaining the persistent challenges of digital taxation. The structural dependency of developing countries on limited tax bases, often reliant on corporate or consumption taxes, leaves them particularly vulnerable to revenue erosion in the digital age. Inadequate training for tax administrators, limited technological infrastructure, and weak data-sharing mechanisms further compound these vulnerabilities (Magwape, 2022). Jin et al. (2023) highlight that the transparency and quality of data reported by digital platforms significantly influence compliance outcomes, underscoring how systemic issues in data governance directly affect tax enforcement. The absence of strong institutional frameworks in many developing economies thus reflects not only an administrative shortfall but also a broader systemic inequity embedded in the international fiscal architecture.

Proposed solutions in the literature suggest pathways to improve both the effectiveness and fairness of cross-border digital taxation. Magwape (2022) advocates the development of tailored digital services taxes (DSTs) for developing countries as a means to address tax avoidance by major digital firms while ensuring revenue mobilization. However, the success of such measures depends heavily on careful design to avoid overburdening smaller enterprises and consumers. Jin et al. (2023) propose that a multilateral approach, involving enhanced cooperation and data-sharing among jurisdictions, offers the most promising strategy for leveling the playing field. By fostering greater transparency, shared knowledge, and coordinated enforcement, multilateralism can mitigate the asymmetries between developed and developing economies. Belahouaoui and Attak (2024) further argue that the integration of advanced technologies such as blockchain into tax administration systems can strengthen transparency, reduce opportunities for evasion, and build public trust. Dalton et al. (2023) similarly highlight the potential of digital technologies to improve both compliance monitoring and cross-border reporting, provided that adequate regulatory frameworks are put in place.

Nevertheless, the literature also underscores the limitations and risks associated with these solutions. For example, while DSTs may provide short-term revenue gains, they can also provoke trade disputes and retaliatory measures from countries hosting multinational corporations. Similarly, while blockchain and other digital technologies promise greater transparency, they require significant upfront investment and technical capacity that many developing economies may lack. Moreover, the multilateral approach promoted by OECD frameworks, while desirable, remains politically contentious, as evidenced by the difficulties in implementing Pillar One and Pillar Two of the BEPS framework (Ponomareva, 2022; Cui & Yi, 2024). These challenges highlight that solutions cannot be divorced from the broader political economy of global taxation, where power asymmetries and national interests continue to shape outcomes.

The limitations of the existing literature point to several avenues for future research. First, there is a lack of comprehensive empirical studies evaluating the actual effectiveness of DSTs across different economic contexts. Much of the current evidence is conceptual or based on early-stage policy implementation, leaving significant uncertainty about long-term impacts. Second, the role of emerging technologies such as AI and blockchain in tax administration remains underexplored, particularly in terms of their differential accessibility between advanced and developing economies. Third, the literature has yet to fully address the distributive consequences of digital taxation policies, including their potential to exacerbate or mitigate inequality both within and across nations. Addressing these gaps requires interdisciplinary approaches that integrate legal analysis, economic modeling, and technological assessment.

By situating digital taxation within the broader context of systemic inequities and fiscal governance, the discussion underscores that effective solutions must go beyond technical fixes. They require structural reforms that account for global disparities in capacity and resources, as well as genuine commitment to cooperative frameworks that prioritize fairness alongside efficiency. The interplay between systemic limitations, policy innovation, and technological adaptation thus defines the future trajectory of digital taxation debates.

CONCLUSION

This narrative review highlights the profound challenges posed by the digital economy for international taxation, particularly in the context of cross-border transactions. The findings demonstrate that the absence of physical presence undermines traditional taxation models, complicating the ability of states to enforce compliance and capture revenue effectively. National responses, such as those in Indonesia, Vietnam, and Brazil, illustrate diverse approaches but also expose limitations in administrative capacity and risks of burdening small enterprises. Comparisons with advanced economies underscore the disparities in institutional readiness, with wealthier states benefiting from comprehensive legal frameworks and stronger infrastructure, while developing countries face persistent vulnerabilities. Multilateral initiatives, most notably the OECD's BEPS framework, represent critical steps toward greater global coordination but remain constrained by political and technical obstacles. Emerging technologies, including blockchain, cryptocurrencies, and the metaverse, introduce new uncertainties, further emphasizing the urgency of adaptive regulation.

The review reinforces the necessity for inclusive and equitable digital tax reforms. Policy interventions should prioritize harmonized standards, data transparency, and multilateral cooperation, while also tailoring digital services taxes to the contexts of developing economies. Investments in technological infrastructure and administrative training are vital to strengthening enforcement and ensuring fairness. Future research should provide empirical evidence on the long-term impacts of digital services taxes, the distributive consequences of global tax reforms, and the role of emerging technologies in tax governance. Ultimately, achieving a fair, effective, and sustainable digital tax regime will require balancing innovation with equity, ensuring that no country is disproportionately disadvantaged in the digital age.

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