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The Effectiveness of the Cigarette Tax Earmarking Policy for Healthcare Financing in Indonesia: A Systematic Literature Review

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Abstract

Optimizing cigarette tax earmarking is important as a fiscal instrument to support healthcare financing and strengthen Regional Original Revenue (*Pendapatan Asli Daerah* [PAD]) in Indonesia. Although this policy has been normatively regulated through various legal frameworks, its regional implementation continues to face challenges, including ineffective fund utilization, weak supervision, and limited transparency and accountability in budget management. This study aims to analyze the contribution of cigarette tax to regional revenue and evaluate the effectiveness of cigarette tax earmarking in supporting healthcare financing in Indonesia. A qualitative approach using the Systematic Literature Review (SLR) method was employed. Data were collected from relevant national and international scientific journal articles indexed in Google Scholar, SINTA, and Garuda. The literature selection process followed the PRISMA framework through identification, screening, eligibility assessment, and inclusion stages. Based on this process, 15 articles met the inclusion criteria and were analyzed using a descriptive-analytical approach. The findings indicate that cigarette tax contributes significantly to regional revenue and has substantial potential to support

healthcare financing through an earmarking mechanism. However, policy implementation remains suboptimal because of a persistent gap between regulatory design and practical execution. Major obstacles include low tax revenue realization, inappropriate budget allocation, weak monitoring systems, and disparities in regional governance capacity. The study concludes that cigarette tax earmarking in Indonesia is normatively sound but operationally weak, requiring stronger supervision, transparency, and accountability in fund management. This study contributes to public finance and health policy literature by clarifying the fiscal role and implementation constraints of cigarette tax earmarking, while its practical implications emphasize the need to improve regional fiscal governance to strengthen healthcare financing and regional fiscal autonomy.

Keywords: Cigarette Tax; Earmarking Policy; Healthcare Financing; Regional Original Revenue; Fiscal Governance

INTRODUCTION

The strengthening of regional fiscal capacity has become a central concern in public finance administration, particularly in developing countries that continue to pursue decentralization and fiscal autonomy. In Indonesia, regional governments are expected to optimize locally generated revenue to finance public services and regional development programs more independently. Local Own-Source Revenue (Pendapatan Asli Daerah/PAD) therefore serves as a crucial indicator of fiscal autonomy because it reflects the capability of regional governments to generate and manage revenue without excessive dependence on intergovernmental transfers from the central government (Halim, 2014). Fiscal decentralization consequently requires regional governments to diversify and maximize tax-based revenue sources to ensure sustainable public expenditure and governance performance (Sidik, 2002). Among various forms of regional taxation, cigarette tax possesses distinctive characteristics because it functions not merely as a fiscal instrument but also as a regulatory mechanism intended to influence public behavior. Cigarette taxation is specifically designed to generate public revenue while simultaneously discouraging smoking consumption due to the adverse health consequences associated with tobacco use (Ispriyarso, 2018). In contemporary taxation systems, the regulatory role of taxes has become increasingly important because taxation is expected to direct economic

and social behavior in accordance with broader public policy objectives (Darussalam & Septriadi, 2017).

The Indonesian government has institutionalized the earmarking tax mechanism within cigarette taxation to ensure that a designated proportion of cigarette-related revenue is allocated to health financing and tobacco-control initiatives. The earmarking mechanism represents a fiscal approach through which tax revenue is intentionally assigned to specific public objectives rather than absorbed into unrestricted budgetary expenditure (Nabila et al., 2025). From the perspective of public economics, earmarking policies are frequently justified as an instrument for internalizing negative externalities created by harmful consumption, particularly tobacco consumption that generates extensive healthcare burdens for society (Stiglitz & Rosengard, 2015). In Indonesia, earmarking tax on cigarette revenue has been formally regulated through fiscal policies requiring the allocation of revenue toward health services and law enforcement concerning illegal tobacco circulation. The implementation of earmarked cigarette tax is intended to improve healthcare financing while simultaneously reducing the harmful social impacts of smoking behavior (Kementerian Keuangan RI, 2015). In this regard, tobacco excise revenue may serve as a sustainable financing mechanism for healthcare systems. Mutiarahati and Sridyantari (2024) argue that earmarked tobacco taxation can strengthen healthcare financing sustainability by supporting preventive and curative health programs, including broader public health coverage initiatives. Such arrangements position cigarette taxation as an instrument that combines fiscal, social, and health objectives within a single public policy framework (Mardiasmo, 2016). Despite its normative foundation, the implementation of earmarked cigarette tax in Indonesia remains surrounded by administrative and governance challenges. Several regions continue to experience difficulties in translating fiscal mandates into effective healthcare financing outcomes due to weaknesses in budget planning, financial management, and institutional supervision (Mandagi et al., 2019). This condition indicates that the existence of regulation alone does not automatically guarantee the effectiveness of policy implementation in practice (Dunn, 2018).

The urgency of evaluating earmarking tax effectiveness becomes increasingly relevant because smoking-related public health expenditure continues to impose substantial fiscal pressure on healthcare systems. Government intervention through taxation is therefore expected to reduce tobacco consumption while simultaneously generating financial resources capable of supporting preventive and curative health programs (World

Health Organization, 2021). Consequently, cigarette tax effectiveness should not be measured solely through revenue generation but also through the extent to which allocated resources genuinely contribute to healthcare financing and public welfare improvement (Cashin et al., 2017). Empirical findings in Indonesia demonstrate that cigarette tax has contributed significantly to regional revenue, although the level of contribution varies substantially among provinces and municipalities. Evidence from regional fiscal studies indicates that cigarette tax revenue may represent a stable source of fiscal income capable of strengthening regional financial resilience (Kaumpungan et al., 2021). Similar findings reveal that cigarette taxation has contributed substantially to Local Own-Source Revenue in economically strategic provinces, suggesting the fiscal significance of tobacco-related taxation in supporting regional autonomy (Prasetyo & Cahyono, 2022). In addition to contributing to regional fiscal revenue, tobacco taxation may also generate broader macroeconomic benefits through increased public expenditure and fiscal sustainability. Bella et al. (2024) explain that tobacco taxation in Indonesia contributes not only to government revenue generation but also to wider economic welfare through improved public spending capacity, particularly in health-related sectors.

However, fiscal contribution alone does not necessarily indicate effective governance because the allocation and utilization of earmarked resources remain uneven across regions. Studies reveal that implementation quality differs considerably depending on local administrative capability, institutional commitment, and financial accountability mechanisms (Wulan Sari & Hidayati, 2021). In numerous cases, allocated resources have not been fully directed toward healthcare priorities due to weak transparency and inconsistencies between budget planning and realization (Mandagi et al., 2019). From the researcher's standpoint, this phenomenon demonstrates that the effectiveness of earmarking tax cannot merely be evaluated through legal compliance or nominal financial allocation. Policy effectiveness must also be examined through the extent to which earmarked resources are translated into measurable improvements in healthcare financing and public service provision (Mahsun, 2016). Therefore, a critical assessment of cigarette tax implementation is necessary to determine whether policy outcomes align with the objectives formally established within regulatory frameworks (Undang-Undang Nomor 1 Tahun 2022).

Furthermore, prior empirical studies reveal that the implementation of earmarking tax policies in Indonesia has generated varying outcomes across regional governments.

Some regions demonstrate relatively successful integration of cigarette tax revenue into health financing programs, whereas others continue to experience institutional inefficiencies and budgetary misallocation that weaken policy effectiveness (Iskandar et al., 2019). This disparity indicates that policy success is influenced not only by fiscal provisions but also by the governance capacity of local institutions responsible for budget planning, implementation, and monitoring (Suhendra & Handayani, 2020). Several scholars have emphasized that cigarette taxation contains a dual fiscal orientation that combines budgetary and regulatory functions within one mechanism. The budgetary dimension concerns revenue generation to support government expenditure, while the regulatory dimension aims to discourage harmful consumption and strengthen preventive public health policies (Mardiasmo, 2016). Such a perspective highlights that the success of earmarking tax should be evaluated through multidimensional indicators that consider both fiscal contribution and social outcomes (Djajadiningrat, 2014). Research concerning cigarette tax implementation has also documented persistent institutional obstacles that reduce the effectiveness of earmarked expenditure. Weak transparency in fund allocation, limited accountability mechanisms, and inconsistent monitoring systems have been identified as significant challenges that reduce the efficiency of policy implementation (Mandagi et al., 2019). Consequently, many regional governments continue to face difficulties in ensuring that cigarette tax allocations directly support healthcare objectives in accordance with statutory regulations (Badan Pemeriksa Keuangan RI, 2022).

The variation in policy outcomes further reflects differences in fiscal capacity across regions, which often shape the ability of local governments to maximize tax revenue and administer earmarked funds effectively. Regions with stronger administrative systems and more advanced fiscal governance tend to demonstrate more effective utilization of earmarked cigarette tax funds than regions with weaker institutional arrangements (Kaumpungan et al., 2021). Such disparities indicate that policy effectiveness depends substantially on managerial competence and administrative commitment rather than regulatory existence alone (Prihadini & Marlin, 2023). Previous studies have consistently acknowledged the substantial fiscal contribution of cigarette taxation to regional development financing. Evidence suggests that cigarette tax contributes meaningfully to Local Own-Source Revenue and therefore supports the broader objective of strengthening regional fiscal autonomy (Prasetyo & Cahyono, 2022). Nevertheless, contribution alone does not necessarily guarantee policy success because ineffective budget allocation may

weaken the expected social outcomes associated with healthcare financing (Wulan Sari & Hidayati, 2021).

In addition, scholars have reported that earmarked cigarette tax policies remain partially implemented because regional budget realization frequently deviates from the original planning framework. In several cases, earmarked funds have not been allocated optimally to health services, thereby creating a mismatch between fiscal intentions and policy realization (Fadilah & Susanti, 2023). Such findings indicate that institutional weaknesses continue to undermine the effectiveness of earmarked taxation despite the existence of legal obligations governing financial allocation (Mandagi et al., 2019). At the same time, theoretical discussions concerning public finance emphasize that taxation systems are expected to serve broader societal objectives beyond fiscal extraction. Tax policies should simultaneously strengthen governance quality, improve social welfare, and address market externalities caused by socially harmful activities (Stiglitz & Rosengard, 2015). Cigarette taxation therefore represents a relevant policy instrument because it seeks to balance public revenue generation with social protection through healthcare financing mechanisms (Nabila et al., 2025). From a public policy perspective, policy effectiveness is generally defined by the extent to which policy objectives are achieved through implementation outcomes. A policy may be considered effective when allocated resources, institutional procedures, and implementation mechanisms collectively produce expected societal benefits (Mahsun, 2016). Within the context of earmarked cigarette taxation, effectiveness should therefore be interpreted as the successful allocation and utilization of tax revenue toward healthcare objectives that directly benefit public welfare (Dunn, 2018).

Although previous studies have discussed cigarette tax contribution and earmarking tax implementation, empirical inconsistencies remain visible in the literature. Certain studies emphasize the positive fiscal role of cigarette taxation in strengthening regional revenue and financing healthcare services, while others reveal that policy implementation continues to suffer from weak accountability, uneven transparency, and ineffective budget realization (Iskandar et al., 2019). Likewise, several studies argue that cigarette tax effectively supports healthcare financing, whereas other findings indicate that policy implementation remains fragmented and dependent on regional institutional quality (Kaumpungan et al., 2021). Existing studies also tend to focus on specific regional cases, thereby limiting broader understanding regarding the structural patterns that shape earmarking tax effectiveness at the national level. Most empirical investigations remain

localized and context-specific, causing difficulties in identifying recurring institutional problems and governance disparities across different regional settings (Wulan Sari & Hidayati, 2021). Consequently, there remains limited comprehensive synthesis concerning how cigarette earmarking tax policies function collectively within Indonesia's broader fiscal governance system (Prihadini & Marlin, 2023).

Similar concerns are highlighted by Nurzeha (2024), who reports that regional implementation of earmarking tax policies on tobacco excise remains challenged by weak monitoring mechanisms, inconsistencies in budget allocation, and uneven institutional capacity across provinces. These conditions indicate that regulatory compliance alone is insufficient to guarantee policy effectiveness. This condition constitutes a significant research gap, particularly regarding the absence of integrative findings capable of synthesizing regional evidence into a broader analytical understanding. Previous studies predominantly emphasize isolated implementation outcomes rather than systematically identifying recurring policy challenges and institutional weaknesses across regions (Kitchenham, 2004). Therefore, a more comprehensive literature-based investigation is required to generate stronger conceptual understanding concerning the effectiveness of earmarked cigarette taxation in financing healthcare programs (Tranfield et al., 2003).

This research introduces a significant **novelty** by systematically synthesizing empirical findings related to earmarking tax implementation through a Systematic Literature Review (SLR) approach. Unlike previous studies that predominantly concentrate on single regions or case-specific administrative conditions, this research attempts to identify broader implementation patterns, recurring institutional barriers, and structural determinants shaping policy effectiveness in Indonesia (Moher et al., 2009). Such a perspective enables a more comprehensive understanding of cigarette taxation effectiveness from both fiscal and public health dimensions (Kitchenham, 2004). Another dimension of novelty lies in the effort to critically integrate fiscal theory, taxation theory, and public policy effectiveness within one analytical framework. This study not only examines cigarette tax as a source of regional income but also interprets it as a governance mechanism intended to support health financing through earmarked allocation systems (Mardiasmo, 2016). Consequently, the study offers a broader interpretive framework capable of connecting fiscal contribution, institutional governance, and healthcare financing effectiveness within one integrated discussion (Cashin et al., 2017).

The theoretical foundation of this study is primarily built upon taxation theory, fiscal decentralization theory, policy effectiveness theory, and public health financing perspectives. Taxation theory emphasizes that taxes perform budgetary and regulatory functions aimed at generating revenue and directing public behavior simultaneously (Djajadiningrat, 2014). Fiscal decentralization theory explains that local governments require sufficient fiscal resources to strengthen public service provision and improve regional autonomy (Halim, 2014). Meanwhile, effectiveness theory emphasizes that policy success depends on the achievement of intended objectives through proper implementation mechanisms and governance quality (Mahsun, 2016). Based on the foregoing discussion, the researcher argues that the effectiveness of cigarette earmarking tax in Indonesia should be critically reassessed because normative policy arrangements do not necessarily translate into optimal operational outcomes. Institutional governance, accountability systems, financial supervision, and political commitment remain essential variables shaping policy realization across regional governments (Badan Pemeriksa Keuangan RI, 2022). Accordingly, this study focuses on analyzing the effectiveness of earmarking tax policy on cigarette taxation in supporting healthcare financing in Indonesia through a systematic synthesis of previous literature. The study seeks to examine the contribution of cigarette taxation to regional fiscal capacity, evaluate the effectiveness of earmarked allocation in healthcare financing, and identify structural factors influencing policy implementation across different regional contexts (Undang-Undang Nomor 1 Tahun 2022). Through this approach, the research is expected to provide a stronger evidence-based understanding capable of informing regional fiscal governance, improving earmarking mechanisms, and strengthening health financing policy in Indonesia (World Health Organization, 2021).

METHODS

This study employed a qualitative approach using the Systematic Literature Review (SLR) method to examine the effectiveness of the cigarette tax earmarking policy in supporting health financing in Indonesia. The qualitative approach was selected because the study emphasized interpretation, understanding, and synthesis of previous empirical findings related to cigarette tax policies and the allocation of earmarked tax revenues. The SLR method was adopted due to its capability to provide a systematic, transparent, and

academically rigorous procedure for identifying, evaluating, and synthesizing prior studies relevant to the research focus. Furthermore, this method enabled the researchers to obtain a comprehensive understanding of policy implementation patterns, the effectiveness of cigarette tax allocation, and various factors influencing both the success and challenges of policy implementation across regions in Indonesia.

The research design was descriptive-analytical in nature. The study was designed to describe and analyze empirical findings regarding the contribution of cigarette tax revenues to Regional Original Revenue (*Pendapatan Asli Daerah* or PAD), the implementation of earmarking tax policies, and the effectiveness of cigarette tax utilization in financing public health programs. The descriptive dimension was intended to portray the phenomenon and implementation conditions of the policy based on previous studies, while the analytical dimension aimed to identify relationships, patterns, gaps, and factors influencing policy effectiveness. The research indicators were developed based on theoretical concepts presented in the literature review. Indicators of policy effectiveness included the achievement of policy objectives, accuracy of fund allocation, transparency of budget management, accountability in program implementation, and effectiveness of cigarette tax revenue realization. Meanwhile, indicators of cigarette tax contribution covered the magnitude of contribution to PAD, the stability of regional revenue, and the optimization of cigarette tax revenue-sharing management. These indicators were derived from theories of policy effectiveness, regional tax contribution concepts, and the dual functions of taxation as *budgetair* and *regulerend* instruments as discussed by Mardiasmo (2016), Ispriyarso (2018), and other prior studies serving as the analytical foundation of this research.

The participants in this study were not individual respondents but rather scientific articles and academic documents relevant to the research topic. Accordingly, the unit of analysis consisted of scholarly literature discussing cigarette tax policies, earmarking tax mechanisms, health financing, and the contribution of cigarette taxes to PAD. The sampling technique applied was purposive sampling, in which data sources were intentionally selected according to predetermined criteria aligned with the research objectives. This technique was considered appropriate because not all academic articles possessed sufficient relevance and quality for the study. The inclusion criteria comprised: (1) scientific articles published between 2010 and 2025, (2) nationally or internationally indexed journals, (3) studies discussing cigarette tax and earmarking tax policies, and (4) articles providing adequate information for qualitative analysis. Conversely, studies

unrelated to the research focus, unavailable in full text, or lacking academic credibility were excluded from the analysis process. Based on these criteria, a total of 15 scientific articles were selected and utilized as the primary data sources in this research.

The research instruments consisted of documentation sheets and literature identification forms designed to systematically categorize research data. These instruments were used to record article identities, research methods employed in prior studies, research focuses, findings, and major conclusions related to the effectiveness of cigarette tax policies and earmarking tax implementation. Data collection was conducted through documentation studies by reviewing scientific literature from academic databases such as Google Scholar, SINTA, and Garuda. Literature searches were performed using primary keywords including "earmarking tax," "cigarette tax," "health financing," and "tax earmarking." The retrieved articles were subsequently screened based on thematic relevance, source quality, and consistency with the research objectives. To enhance data validity, this study employed the PRISMA (*Preferred Reporting Items for Systematic Reviews and Meta-Analyses*) framework in the literature selection process. The framework consisted of four stages: identification, screening, eligibility assessment, and inclusion. During the identification stage, all potentially relevant articles were collected using the selected keywords. The screening stage eliminated studies irrelevant to the research focus. The eligibility stage assessed the suitability and academic quality of the remaining studies. Finally, the inclusion stage determined which articles fulfilled all criteria and were appropriate for the final analysis.

Unlike quantitative studies, this research did not employ statistical validity and reliability testing because the primary data sources consisted of documents and scholarly articles. Nevertheless, data validity was maintained through the use of credible sources, the selection of relevant scientific studies, and the application of systematic literature selection procedures. In addition, source triangulation was conducted by comparing findings from multiple previous studies to produce more objective and comprehensive conclusions. The data analysis technique employed descriptive qualitative analysis. The collected data were analyzed through several stages, namely data reduction, data presentation, and conclusion drawing. The data reduction stage involved categorizing research findings into major themes such as the contribution of cigarette taxes to PAD, the implementation of earmarking tax policies, the effectiveness of health financing, transparency in fund management, and challenges in policy implementation. The data presentation stage

involved organizing findings into descriptive narratives and literature summary tables to facilitate interpretation. Finally, the conclusion-drawing stage involved comparing findings across studies, identifying common patterns, detecting implementation gaps, and constructing a comprehensive synthesis of the findings. This analytical approach enabled the researchers to understand the relationship between regional fiscal policy, the effectiveness of cigarette tax fund management, and its implications for public health financing in Indonesia.

The study was conducted in 2025, with the data collection and analysis process carried out through several stages of research activities. These stages included literature searching, article selection based on inclusion and exclusion criteria, data categorization, analysis of prior studies, and the preparation of the final research synthesis. The entire research process was conducted systematically to ensure consistency between the research objectives, methodological approach, and analytical outcomes. Through the application of the Systematic Literature Review approach, this study is expected to provide a more comprehensive understanding of the effectiveness of cigarette tax earmarking policies in Indonesia, particularly in supporting health financing and strengthening Regional Original Revenue (PAD).

RESULTS

Systematic Literature Review (SLR) Results

Based on the Systematic Literature Review (SLR) conducted in this study, several scientific articles related to cigarette tax, earmarking tax, and healthcare financing in Indonesia were systematically identified and analyzed. The literature selection process followed the PRISMA framework to ensure a transparent and systematic review procedure.

As illustrated in Figure 1, a total of 50 articles were initially identified through database searching and additional relevant sources. After the screening and eligibility assessment stages, 15 articles met the inclusion criteria and were selected for the final analysis.

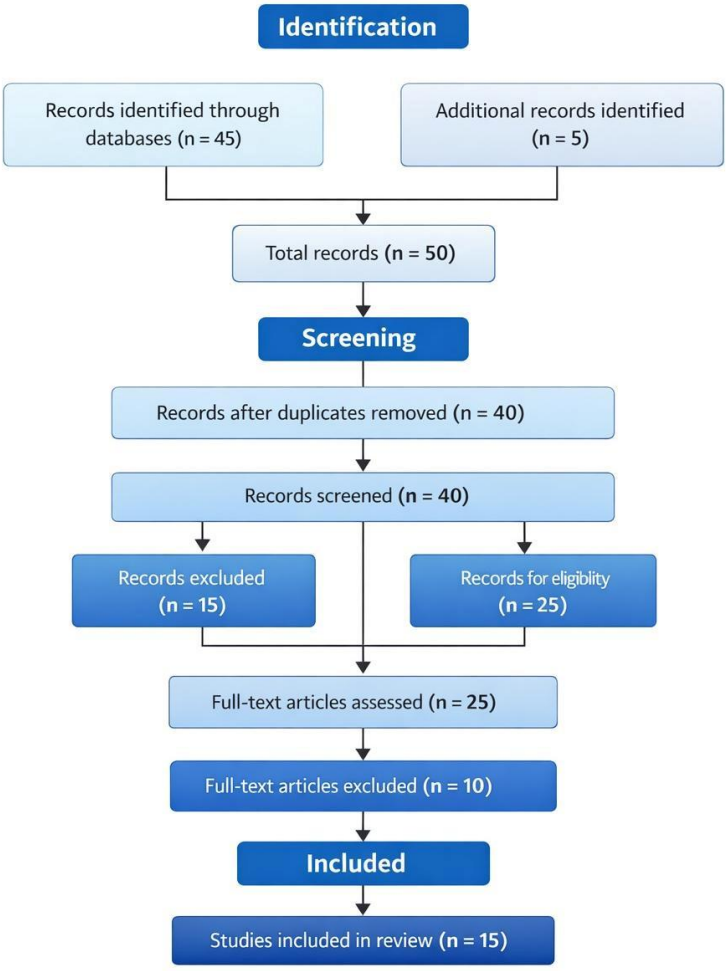

Figure 1. PRISMA Flow Diagram of Literature Selection Process

Figure 1. PRISMA Flow Diagram of Literature Selection Process shows the stages of the literature selection process, starting from identification, screening, eligibility assessment, and ending with the final inclusion stage based on the predetermined research criteria. To provide a more systematic overview of the characteristics of the analyzed studies, a summary of the reviewed literature is presented in Table 1.

Table 1. Summary of Systematic Literature Review Findings

No	Writer	Year	Research methods	Research Focus	Key Findings
1.	Iskandar, FV, Nangoi, G., & Runtu, T.	2019	Descriptive qualitative	Cigarette tax earmarking	Supporting health financing, but implementation is not yet optimal
2.	Ispriyarso	2018	Normative juridical	Function of cigarette tax	Taxes have budgetary and regulatory functions
3.	Kampungan, SC, Tinangon, J., & Pinatik, S.	2021	Descriptive	DBH cigarette tax	Contributing to PAD, but utilization is not yet optimal

No	Writer	Year	Research methods	Research Focus	Key Findings
4.	Mandagi, FMA, Tinangon, J., & Pangerapan, S.	2019	Descriptive qualitative	Implementation of earmarking tax	Obstacles to transparency and accountability
5.	Wulan Sari, A., & Hidayati, M.	2021	Descriptive quantitative	Effectiveness of cigarette tax	Effectiveness varies between regions
6.	Prihadini, D., & Marlin, L.	2023	Descriptive qualitative	Regional tax contribution	Increase if management is optimal
7.	Nabila, AP, Aulia, D., & Khairunnisa, L.	2025	Qualitative	The concept of earmarking tax	Fiscal instruments for health
8.	Mardiasmo	2016	Theoretical	Taxation Concept	Tax functions: budgetair & regularend
9.	World Health Organization	2021	Global Report	Tobacco & health taxes	Cigarette taxes effectively reduce consumption and support health financing.
10.	Chaloupka, F.J., Yurekli, A., & Fong, G.T	2012	Empirical studies	Taxes as tobacco control	Tax increases have been shown to significantly reduce cigarette consumption.
11.	Cashin, C., Sparkes, S., & Bloom, D.	2017	Policy studies	Earmarking for health	Earmarking is effective if supported by strong governance.

source: Compiled by the researcher (2026)

Table 1 presents a summary of the findings from the selected literature reviewed in this study. Based on Table 1, it can be observed that most previous studies employed a descriptive qualitative approach, primarily focusing on the implementation of cigarette tax policies at the regional level. In addition, several conceptual and international studies were also identified, which strengthen the analysis regarding the effectiveness of cigarette tax as a fiscal instrument in supporting healthcare financing. The findings of the literature review indicate that most previous studies concentrated on two major issues, namely the contribution of cigarette tax to Regional Original Revenue (*Pendapatan Asli Daerah* / PAD) and the effectiveness of the *earmarking tax* policy in financing healthcare services. Furthermore, several studies also emphasized governance-related aspects, such as transparency, accountability, and supervision in the management of cigarette tax funds. Overall, the literature review demonstrates a relatively consistent pattern indicating that cigarette tax has significant potential as a source of regional revenue. However, the utilization of funds through the *earmarking tax* mechanism has not yet been fully optimized, resulting in a gap between policy objectives and their implementation in practice.

DISCUSSION

The findings of the Systematic Literature Review (SLR) indicate that cigarette tax earmarking policy in Indonesia occupies a strategic position within regional fiscal systems and public health financing. Conceptually, the earmarking tax policy was designed to ensure that a proportion of cigarette tax revenue is specifically allocated to healthcare expenditure and tobacco control initiatives. Nevertheless, the implementation of this policy remains constrained by structural, administrative, and institutional challenges, resulting in suboptimal policy outcomes.

The analysis demonstrates that cigarette tax contributes positively to Regional Original Revenue (Pendapatan Asli Daerah/PAD), although the level of contribution varies considerably across regions. Such variation suggests that regional fiscal capacity, taxation administration, and budget management capability significantly influence the optimization of cigarette tax revenue. These findings imply that cigarette tax functions not merely as a source of local government revenue, but also as a fiscal instrument capable of strengthening regional fiscal autonomy. From a taxation theory perspective, this finding is consistent with the budgetary function of taxation described by Mardiasmo (2016), which positions taxation as a mechanism for financing governmental operations and regional development.

However, the regulatory function of cigarette taxation has not yet been fully optimized. The regulerend function emphasizes taxation as a mechanism for influencing public behavior, particularly in reducing cigarette consumption. Ispriyarso (2018) argued that cigarette tax possesses a dual character because it simultaneously serves as a revenue-generating instrument and a public health control mechanism. Nonetheless, the literature reviewed in this study demonstrates that regional governments still prioritize fiscal revenue over health-oriented objectives. Consequently, the earmarking policy tends to function more as a fiscal instrument than as a comprehensive public health strategy.

The study further reveals that the implementation of earmarking tax policies is frequently characterized by inaccurate budget allocation. Several studies reported that cigarette tax revenues are not always directed toward healthcare programs directly related to tobacco control objectives. In some regions, the funds are allocated for broader governmental expenditures unrelated to health promotion or disease prevention. This condition reflects a significant gap between the normative design of the policy and its

practical implementation at the regional level. Theoretically, the earmarking concept requires a direct linkage between the source of revenue and the intended expenditure objective so that public benefits can be maximized (Cashin et al., 2017). However, the findings suggest that regional budget allocation mechanisms have not fully adhered to this principle.

Another important finding concerns the issue of transparency and accountability. Mandagi et al. (2019) identified weak supervision over cigarette tax allocation as a major obstacle affecting policy effectiveness. In many cases, monitoring and evaluation systems remain fragmented and insufficiently integrated. As a result, regional governments face difficulties in ensuring that earmarked funds are utilized specifically for healthcare purposes. These findings indicate that fiscal policy effectiveness is determined not only by regulatory substance but also by the quality of regional governance systems. In other words, successful policy implementation depends heavily on institutional capacity and governmental commitment to the principles of good governance.

Compared with previous studies, the findings of this research largely support earlier conclusions regarding the suboptimal implementation of earmarking tax policies in Indonesia. Iskandar et al. (2019) concluded that earmarking tax contributes positively to public healthcare financing, particularly in preventive and promotive healthcare programs. This study reinforces that argument by demonstrating that the policy framework is conceptually aligned with public health objectives. However, this research extends previous discussions by revealing that implementation barriers are not solely technical or administrative, but also institutional and political in nature. Consequently, this study offers a more comprehensive understanding of the multidimensional factors influencing earmarking tax effectiveness.

The findings are also consistent with Kaumpungan et al. (2021), who argued that cigarette tax revenue-sharing contributes to regional income generation, although its utilization remains far from optimal. In this study, such limitations are reflected in the mismatch between intended budget allocation and actual expenditure realization. Furthermore, the study reveals that ineffective implementation is associated not only with limited funding but also with weak interagency coordination within regional governments. Consequently, healthcare programs expected to benefit from earmarked funds often fail to

achieve optimal outcomes. This situation highlights the importance of policy integration across planning, budgeting, implementation, and supervisory mechanisms.

When compared with international evidence, this study identifies both similarities and differences in cigarette tax policy implementation. The World Health Organization (2021) emphasized that tobacco taxation is among the most effective policy instruments for reducing smoking prevalence while simultaneously strengthening health financing systems. Similarly, Chaloupka et al. (2012) demonstrated that tobacco tax increases significantly reduce cigarette consumption across multiple countries. These international findings indicate that Indonesia's cigarette tax policy is conceptually aligned with global tobacco control strategies. However, the major distinction lies in policy implementation quality. Countries with stronger fiscal governance systems generally demonstrate more consistent and accountable earmarking practices, whereas Indonesia continues to face challenges associated with weak supervision and uneven regional administrative capacity.

From a theoretical perspective, this study contributes to the development of regional taxation and public health fiscal policy literature, particularly regarding the relationship between the budgetary and regulatory functions of cigarette taxation. The findings suggest that the success of cigarette tax policy should not be measured solely by revenue generation, but also by the extent to which tax revenues effectively support public health objectives. Therefore, this research reinforces the argument that regional fiscal policies should be evaluated multidimensionally, encompassing economic, social, and public health dimensions. Moreover, the study confirms that the earmarking tax concept requires strong fiscal governance structures in order to function effectively as a public policy instrument.

Practically, the findings carry important implications for policymakers and regional governments. Regional authorities should improve transparency and accountability in cigarette tax fund management through more integrated monitoring and evaluation systems. Strengthening supervisory mechanisms is essential to ensure that earmarked funds are genuinely directed toward healthcare programs consistent with policy objectives. In addition, governments should develop earmarking tracking systems that enable more effective monitoring of budget allocation and expenditure realization. Capacity building for regional fiscal administrators is equally important to enhance policy implementation quality.

These findings indicate that strengthening regional fiscal governance constitutes a fundamental prerequisite for optimizing cigarette tax policy effectiveness in Indonesia.

Methodologically, this study demonstrates the usefulness of the Systematic Literature Review (SLR) approach in evaluating public policy implementation across diverse regional contexts. The SLR method enables researchers to identify recurring patterns, inconsistencies, and research gaps systematically. Consequently, the approach provides a comprehensive understanding of cigarette tax policy implementation in Indonesia. Nevertheless, this methodology also has limitations because it relies heavily on the availability and quality of existing literature. Therefore, future empirical studies employing field-based approaches remain necessary to strengthen the validity and contextual depth of the findings presented in this research.

This study also acknowledges several limitations. First, the analysis relies exclusively on secondary data derived from previous academic publications, which vary in methodological approaches, regional contexts, and analytical focus. Such diversity limits the generalizability of findings across all regions in Indonesia. Second, the absence of primary data collection restricts the study's ability to directly capture real-time implementation dynamics at the local level. Third, the review analyzed only fifteen articles, meaning that some potentially relevant studies may not have been included in the review process. Despite these limitations, the research still provides a comprehensive overview of the effectiveness of cigarette tax earmarking policy in Indonesia.

Overall, the findings indicate that cigarette tax earmarking policy in Indonesia can be categorized as partially effective. Normatively, the policy possesses a clear legal foundation and explicit objectives in supporting public healthcare financing. However, its practical implementation remains constrained by weaknesses in fiscal governance, supervision, transparency, and accountability. Therefore, strengthening regional fiscal governance systems is essential for improving policy effectiveness in the future. This study ultimately demonstrates that the success of cigarette tax policy depends not only on regulatory design, but also on implementation quality and governmental commitment to carrying out the policy consistently and responsibly.

CONCLUSION

Based on the findings of this study using the *Systematic Literature Review* (SLR) approach, it can be concluded that the cigarette tax *earmarking tax* policy in Indonesia plays a significant role in supporting healthcare financing while simultaneously strengthening regional own-source revenue (*Pendapatan Asli Daerah* / PAD). The study reveals that cigarette tax revenue contributes to local government income through the revenue-sharing mechanism, making it an important fiscal instrument for supporting public services, particularly in the health sector. Furthermore, the findings indicate that the *earmarking tax* policy has been normatively designed in accordance with existing regulations and carries a clear objective of mitigating the negative impacts of cigarette consumption through the financing of promotive, preventive, and curative health programs. Nevertheless, the implementation of the policy has not yet achieved optimal effectiveness due to low revenue realization, weak supervision, inaccurate budget allocation, and limited transparency and accountability in regional financial management.

The study successfully addresses the research objectives by demonstrating that cigarette tax contributes considerably to regional revenue; however, its effectiveness in supporting healthcare financing remains partial and inconsistent across regions. This condition reflects a substantial gap between policy formulation and practical implementation. From a theoretical perspective, the study reinforces the concept that taxation serves not only a *budgetary function* as a source of government revenue but also a *regulatory function* aimed at influencing social behavior and protecting public health. Practically, this research contributes by identifying structural and governance-related obstacles that hinder the effective implementation of the cigarette tax *earmarking* policy in Indonesia.

The implications of this study suggest that the success of the cigarette tax policy depends not merely on the amount of tax revenue collected, but also on the quality of regional financial governance, the commitment of local governments, and the effectiveness of monitoring and evaluation systems. Therefore, local governments need to strengthen transparency, accountability, and monitoring mechanisms in managing cigarette tax funds to ensure that allocations are more targeted and capable of generating tangible improvements in healthcare services. In addition, the integration between the *earmarking tax* policy and performance-based budgeting systems should be enhanced to improve the

efficiency and measurable impact of public spending. Future studies are recommended to employ empirical or quantitative approaches within specific regional contexts in order to examine more comprehensively the relationship between cigarette tax revenue, policy effectiveness, and regional healthcare service quality.

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