

OPTIMIZING GREEN FISCAL POLICY FOR CIRCULAR ECONOMY DEVELOPMENT IN INDONESIA An Islamic Economic Perspective

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Abstract

The transition toward a circular economy has become a key strategy for addressing environmental degradation, resource scarcity, and sustainable industrial development. In Indonesia, however, fiscal support for the circular economy remains fragmented and has not yet been established as a distinct budget line, limiting its role in accelerating industrial transformation. From the perspective of *Maqāṣid al-Sharī'ah*, green fiscal policy is expected to promote public welfare (*maṣlaḥah*) through sustainable resource management. This study examines APBN allocation in supporting the circular economy, identifies effective green fiscal policy instruments based on international evidence, and develops an APBN optimization framework aligned with the objectives of *Maqāṣid al-Sharī'ah*. The study employs a qualitative approach using a systematic literature review, comparative policy analysis, and qualitative content analysis. The findings indicate that performance-based environmental tax incentives, targeted green subsidies, and increased public investment in research, innovation, and recycling infrastructure are the key fiscal instruments for accelerating the transition toward a circular economy. Integrating these instruments into the APBN can strengthen industrial competitiveness, improve environmental sustainability, and support the realization of *Maqāṣid al-Sharī'ah* through sustainable economic development.

Keywords: Circular economy; Green fiscal policy; APBN; *Maqāṣid al-Sharī'ah*; Sustainable industrial development.

Abstrak

Transisi menuju ekonomi sirkular menjadi salah satu strategi penting dalam mengatasi degradasi lingkungan, kelangkaan sumber daya, dan mewujudkan pembangunan industri yang berkelanjutan. Namun, dukungan fiskal terhadap pengembangan ekonomi sirkular di Indonesia masih bersifat terfragmentasi sehingga belum mampu mempercepat transformasi sektor industri secara optimal. Dalam perspektif *Maqāṣid al-Sharī'ah*, kebijakan fiskal hijau diharapkan dapat mewujudkan kemaslahatan (*maṣlaḥah*) melalui pengelolaan sumber daya yang berkelanjutan. Penelitian ini bertujuan menganalisis alokasi Anggaran Pendapatan dan Belanja Negara (APBN) dalam mendukung transisi ekonomi sirkular, mengidentifikasi instrumen kebijakan fiskal yang efektif berdasarkan bukti internasional, serta menyusun kerangka optimalisasi APBN yang selaras dengan tujuan *Maqāṣid al-Sharī'ah*. Penelitian menggunakan pendekatan kualitatif melalui *systematic literature review*, analisis kebijakan komparatif, dan analisis isi kualitatif. Hasil penelitian menunjukkan bahwa insentif pajak lingkungan berbasis kinerja, subsidi hijau yang terarah, serta peningkatan belanja pemerintah untuk penelitian, inovasi, dan infrastruktur daur ulang merupakan instrumen fiskal utama dalam mempercepat transisi menuju ekonomi sirkular. Integrasi instrumen tersebut ke dalam APBN berpotensi memperkuat daya saing industri, meningkatkan keberlanjutan lingkungan, serta mendukung pencapaian tujuan *Maqāṣid al-Sharī'ah* melalui pembangunan ekonomi yang berkelanjutan.

Kata kunci: ekonomi sirkular; kebijakan fiskal hijau; APBN; *Maqāṣid al-Sharī'ah*; pembangunan industri berkelanjutan.

Introduction

The accelerating degradation of the environment and the depletion of natural resources have driven the global community to seek alternative economic paradigms that ensure long-term sustainability. The circular economy has emerged as a systemic response to the limitations of the linear economic model, which follows a “take–make–dispose” pattern. Unlike the linear approach, the circular economy is a restorative and regenerative model that emphasizes resource efficiency, waste minimization, and the regeneration of natural systems to keep the value of products, components, and materials in use for as long as possible.¹ Analyzing more than one hundred definitions, Kirchherr, Reike, and Hekkert find that most converge on the principles of reduce, reuse, and recycle,² while Geissdoerfer et al. distinguish the concept from sustainability more broadly through its emphasis on closing material loops.³ From an Islamic economic perspective, these principles are consistent with the objectives of *Maqāṣid al-Sharī'ah*, which emphasize the realization of public welfare (*maṣlaḥah*) and the prevention of harm (*mafsadah*). Sustainable resource management is therefore not only an economic imperative but also an ethical responsibility toward present and future generations.

As the largest economy in Southeast Asia, with a population exceeding 270 million, Indonesia faces a dual challenge: achieving inclusive economic growth while addressing escalating environmental problems, including plastic pollution, forest degradation, and rising carbon emissions. According to the Ministry of Environment and Forestry, Indonesia generates approximately 67.8 million tons of waste annually, of which only about 7.5 percent is recycled.⁴ This situation underscores both the country's vulnerability to environmental degradation and its considerable potential to transition toward a circular economy.⁵ A joint study by Bappenas and UNDP estimates that applying circular-economy principles across five priority sectors could add roughly IDR 593–638 trillion to gross domestic product and create 4.4 million green jobs by 2030.⁶ Within the framework of *Maqāṣid al-Sharī'ah*, environmental protection and the sustainable use of resources contribute to the preservation

¹Ellen MacArthur Foundation, *Towards the Circular Economy: Economic and Business Rationale for an Accelerated Transition* (Cowes, UK: Ellen MacArthur Foundation, 2013).

²Julian Kirchherr, Denise Reike, and Marko Hekkert, “Conceptualizing the Circular Economy: An Analysis of 114 Definitions,” *Resources, Conservation and Recycling* 127 (2017): 221–232, <https://doi.org/10.1016/j.resconrec.2017.09.005>.

³Martin Geissdoerfer et al., “The Circular Economy: A New Sustainability Paradigm?,” *Journal of Cleaner Production* 143 (2017): 757–768, <https://doi.org/10.1016/j.jclepro.2016.12.048>.

⁴Ministry of Environment and Forestry (KLHK), *National Waste Management Data 2022*, National Waste Management Information System (SIPSN) (Jakarta: KLHK, 2022), <https://sipsn.menlhk.go.id>.

⁵D. Irawan and A. C. Marita, “A Circular-Economy Approach as a Sustainable Development Strategy in Indonesia,” *E-Jurnal Sumberdaya dan Lingkungan* 13, no. 1 (2024): 117–130.

⁶Bappenas and UNDP, *The Economic, Social, and Environmental Benefits of a Circular Economy in Indonesia* (Jakarta: Ministry of National Development Planning/Bappenas, UNDP Indonesia, and Government of the Kingdom of Denmark, 2021).

of wealth (*ḥifẓ al-māl*), life (*ḥifẓ al-nafs*), and the public interest, thereby reinforcing the legitimacy of policies that encourage environmentally responsible economic activity.

The scale of this challenge is concentrated in a handful of sectors. Bappenas identifies five priority sectors for the circular transition such as food and beverage, textiles, wholesale and retail trade (with an emphasis on plastic packaging), construction, and electronics that together account for roughly a third of national output and employ tens of millions of workers.⁷ Because these sectors are also among the country's principal sources of industrial waste and emissions, the way public finance is directed toward them will largely determine whether Indonesia's growth becomes more resource-efficient or continues along a resource-intensive path. Therefore, the circular transition is not only an environmental agenda but also an industrial-policy question about how the state uses taxation, subsidies, and expenditure to reshape private incentives.⁸

This reframing is particularly consequential for an emerging economy such as Indonesia, where fiscal space is limited, informality is widespread, and the burden of a poorly designed transition could fall disproportionately on small producers and low-income households. Absent careful calibration, environmental levies risk being perceived as mere revenue measures rather than instruments of genuine reform, eroding the public trust on which voluntary compliance depends; conversely, tax reliefs and subsidies that are transparent, time-bound, and tied to verifiable environmental performance can build a durable constituency for the transition among firms and consumers alike. The design of the budget, in other words, shapes not only the pace of the circular transition but also its perceived legitimacy. A credible strategy must therefore weigh not only aggregate efficiency but also the distribution of costs and benefit resonates strongly with the objectives of the Shari'ah.

Despite growing policy commitments, the adoption of circular-economy practices in Indonesia's industrial sector continues to face substantial structural barriers. Bappenas identifies limited fiscal incentives, the absence of a coherent regulatory framework, and inadequate technological capacity for industrial waste processing as the primary constraints.⁹ Moreover, APBN allocations supporting the circular-economy transition remain fragmented and lack an integrated strategic framework, reflecting a gap between policy aspirations and the practical implementation of fiscal measures.

⁷Bappenas and UNDP, *Benefits of a Circular Economy in Indonesia*.

⁸B. Jones, "Driving a Green Economy through Public Finance and Fiscal Policy Reform," *Journal of International Commerce, Economics and Policy* 2, no. 3 (2011): 367–386, <https://doi.org/10.1142/S1793993311000336>.

⁹Bappenas, *National Roadmap and Action Plan for the Circular Economy in Indonesia 2025–2045* (Jakarta: Ministry of National Development Planning/National Development Planning Agency, 2024).

Fiscal policy particularly through taxation, subsidies, and public expenditure has considerable potential to encourage industries to adopt circular production and consumption practices. The environmental-economics literature has long recognized that market failures arising from environmental externalities can be corrected through well-designed fiscal instruments.¹⁰ Building on this foundation can accelerate the transition to a green economy,¹¹ which the state plays a central role in coordinating the financing of green transitions,¹² and that green tax regulation and fiscal-policy mixes are positively associated with green-economy performance across the G20.¹³ In the Indonesian context, Khoirunurrofik et al. emphasize the importance of green fiscal policy for a just and equitable energy transition.¹⁴

The normative framework adopted in this study draws on the classical theory of *Maqāṣid al-Sharīʿah* as systematized by Abū Ishāq al-Shāṭibī, who arranged the objectives of the law into a hierarchy of necessities (*darūriyyāt*), needs (*hājiyyāt*), and embellishments (*taḥsīniyyāt*).¹⁵ Within this scheme, the five essential interests which include religion, life, intellect, lineage, and wealth. Muhammad al-Ṭāhir Ibn ʿĀshūr later broadened this vision by emphasizing that the overarching purpose of the Sharīʿah is the cultivation of an ordered, prosperous, and just society, extending *maqāṣid* reasoning from individual acts of worship to the governance of public affairs.¹⁶ Contemporary scholars have built on these foundations to argue that the *maqāṣid* provide a substantive theory of development: M. Umer Chapra frames human well-being as the realization of *maṣlaḥah* across material, social, and environmental dimensions,¹⁷ while Jasser Auda recasts the *maqāṣid* as an open and

¹⁰Arthur C. Pigou, *The Economics of Welfare* (London: Macmillan, 1920); Nicholas Stern, *The Economics of Climate Change: The Stern Review* (Cambridge: Cambridge University Press, 2007), <https://doi.org/10.1017/CBO9780511817434>.

¹¹Jones, “Driving a Green Economy”; H. B. Dulal, R. Dulal, and P. K. Yadav, “Delivering Green Economy in Asia: The Role of Fiscal Instruments,” *Futures* 73 (2015): 55–74; Stefan Speck, “Environmental Fiscal Reform and Transition to a Green Economy: A Political Economy Analysis” (paper presented at the International Conference on Public Policy, Milan, Italy, July 1–4, 2015).

¹²David Bailey, “Re-thinking the Fiscal and Monetary Political Economy of the Green State,” *New Political Economy* (2020), <https://doi.org/10.1080/13563467.2018.1526267>.

¹³D. Murat and B. İnam, “Relationship between Fiscal Policies and Green Economy: An Application for G20 Countries,” in *Global Challenges for the Environment and Climate Change* (Hershey, PA: IGI Global, 2024); Elena Perepechkina, Satsita Khasanova, and Maryam Ortskhanova, “Tax Regulation and the Transition to a Green Economy: Integrating Sustainable Development into Fiscal Policy,” *Reliability: Theory & Applications* 19, no. Special Issue 6 (2024): 1208–1215, <https://doi.org/10.24412/1932-2321-2024-681-1208-1215>.

¹⁴Khoirunurrofik et al., “Financing the Green and Just Energy Transition: Green Fiscal Policy for a Just and Fair Transition to a Green Economy,” in *Fiscal Policy to Support the Green and Just Energy Transition*, ed. Fauziah Zen, Fukunari Kimura, and Alloysius Joko Purwanto, ERIA Research Project Report FY2024 No. 28 (Jakarta: ERIA, 2025), 20–67.

¹⁵Abū Ishāq al-Shāṭibī, *al-Muwāfaqāt fī Uṣūl al-Sharīʿah*, ed. Abū ʿUbaydah Mashhūr ibn Ḥasan Āl Salmān (al-Khubar: Dār Ibn ʿAffān, 1997).

¹⁶Muhammad al-Ṭāhir Ibn ʿĀshūr, *Treatise on Maqāṣid al-Sharīʿah*, trans. Mohamed El-Tahir El-Mesawi (Herndon, VA: International Institute of Islamic Thought, 2006).

¹⁷M. Umer Chapra, *The Islamic Vision of Development in the Light of the Maqāṣid al-Sharīʿah* (Herndon, VA: International Institute of Islamic Thought, 2008).

interdependent problems such as environmental sustainability.¹⁸ Applied to fiscal policy, this literature suggests that the state's stewardship of public resources is itself an act of *ḥifẓ al-māl*, and that protecting the natural systems on which life and livelihoods depend falls squarely within the protective purposes of the law.¹⁹ These insights motivate the present study's central claim: that optimizing the national budget for the circular economy is not merely an economic calculation but a means of advancing the higher objectives of the Sharī'ah.

These economic arguments acquire an additional normative dimension when read through *Maqāṣid al-Sharī'ah*. The objectives of the Sharī'ah classically comprise the preservation of religion (*ḥifẓ al-dīn*), life (*ḥifẓ al-naḥs*), intellect (*ḥifẓ al-'aql*), lineage (*ḥifẓ al-nasl*), and wealth (*ḥifẓ al-māl*). Three dimensions are especially relevant to environmental fiscal policy. First, *ḥifẓ al-māl* requires the efficient stewardship of public wealth and resources and the avoidance of waste (*isrāf* and *tabdhīr*), which aligns with the resource-efficiency logic of the circular economy. Second, *ḥifẓ al-naḥs* emphasizes protecting human health and life from the harms of pollution. Third, *ḥifẓ al-nasl* extends responsibility across generations, framing environmental sustainability as an inter-generational trust. Within this framework, green fiscal policy becomes an instrument for realizing *maṣlaḥah* and preventing *mafsadah*; on the basis of *sadd al-dharī'ah* (blocking the means to harm), the state has a normative basis to disincentivize environmentally damaging activity and to reward sustainable production.

Internationally, the circular economy has gained significant policy momentum. Through the European Green Deal and the Circular Economy Action Plan, the European Union has set ambitious targets for transforming industrial production and consumption; China has integrated circular-economy principles into its Fourteenth Five-Year Plan (2021–2025); and several Southeast Asian countries have begun implementing waste-management regulations and Extended Producer Responsibility (EPR) schemes as institutional foundations for the transition.²⁰ Although these initiatives originate in conventional policy frameworks, their emphasis on resource efficiency, environmental protection, and sustainable development reflects values compatible with the realization of *Maqāṣid al-Sharī'ah*.

¹⁸Jasser Auda, *Maqasid al-Shariah as Philosophy of Islamic Law: A Systems Approach* (London: International Institute of Islamic Thought, 2008).

¹⁹Asyraf Wajdi Dusuki and Abdulazeem Abozaid, "A Critical Appraisal on the Challenges of Realizing Maqasid al-Shariah in Islamic Banking and Finance," *IIUM Journal of Economics and Management* 15, no. 2 (2007): 143–165.

²⁰OECD, *Global Outlook on Financing for Sustainable Development 2021* (Paris: OECD Publishing, 2021); United Nations Environment Programme (UNEP), *Global Resources Outlook 2021: Accelerating Change* (Nairobi: UNEP, 2021).

Existing studies, however, have largely emphasized the technical and regulatory aspects of the circular economy, or have analyzed green fiscal policy through a purely conventional lens, giving limited attention to APBN optimization as a strategic instrument for industrial transition in Indonesia. Studies that explicitly connect fiscal-budget optimization with the normative framework of *Maqāṣid al-Sharī'ah* remain especially scarce. The novelty of this study lies in bridging these two bodies of scholarship: it develops an integrated, normative-operational framework that links three complementary green fiscal instruments to specific APBN channels and to the objectives of *Maqāṣid al-Sharī'ah*. To the best of the author's knowledge, this is the first study to translate the *Maqāṣid* framework into an operational blueprint for optimizing Indonesia's national budget in support of the circular economy, thereby offering both an ethical foundation consistent with the values of a Muslim-majority society and a policy-actionable structure.

Accordingly, this study addresses three research questions. First, how does the current APBN allocation support the circular-economy transition in Indonesia's industrial sector from the perspective of *Maqāṣid al-Sharī'ah*? Second, which fiscal-policy instruments are most effective in accelerating circular-economy adoption based on international evidence and *Maqāṣid al-Sharī'ah*? Third, how can APBN optimization accelerate Indonesia's circular-economy transition in line with the objectives of *Maqāṣid al-Sharī'ah*? In turn, the study pursues three objectives: to analyze APBN allocation for the circular economy from a *Maqāṣid* perspective, to identify effective fiscal instruments based on international evidence, and to develop a *Maqāṣid*-aligned framework for optimizing the APBN in advancing the circular economy.

METHOD

This study employed a qualitative, library-based (*library research*) design to examine the role of fiscal policy in supporting the transition toward a circular economy in Indonesia's industrial sector. The design combined a structured comparative literature review with qualitative content analysis. The data were secondary, drawn from indexed journal articles, books, government publications, and reports issued by international organizations, including the OECD, the World Bank, UNEP, the European Commission, Indonesia's Ministry of Finance (Kemenkeu), and the National Development Planning Agency (Bappenas).

The literature-selection process followed four stages, summarized in Figure 1. In the identification stage, searches were conducted in Scopus, ScienceDirect, and Google Scholar, together with the institutional repositories of Kemenkeu and Bappenas, using combinations of the keywords “*green fiscal policy*,” “*circular economy*,” “*environmental tax*,” “*green subsidy*,” “*APBN*,” and “*Maqāṣid al-Sharī'ah*.” Inclusion criteria comprised publications from 2013 to 2025 that addressed fiscal instruments for the circular-economy or green-

economy transition; literature lacking a fiscal dimension or not thematically relevant was excluded. The selected literature was then analyzed in three steps: (1) identifying key concepts and fiscal-policy instruments related to the circular economy; (2) comparing cross-country policy experiences and best practices; and (3) synthesizing the findings into a conceptual framework for optimizing the APBN in alignment with *Maqāṣid al-Sharī'ah*. Analytical validity was maintained through source triangulation between academic literature and official policy documents as shown below:

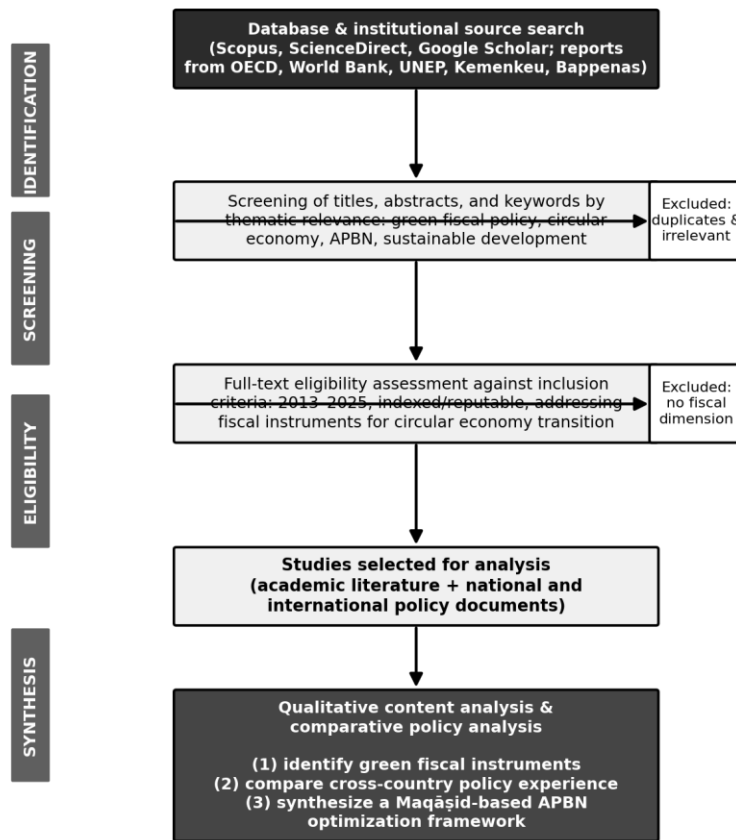


Figure 1. Literature Identification, Screening, and Analysis Flow
Source: Author (2026)

RESULTS

APBN Allocation for the Circular-Economy Transition

Analysis of fiscal-policy documents shows that APBN support for the circular economy remains embedded within broader climate and environmental budgets and has not yet been established as a stand-alone budget function or line. The Ministry of Finance tags climate-related spending through the Climate Budget Tagging (CBT) mechanism, using

thematic codes for mitigation and adaptation.²¹ According to the Fiscal Policy Agency, realized climate-action spending over 2016–2023 reached approximately IDR 610.12 trillion, averaging about IDR 76.3 trillion per year or equivalent to only about 3.2 percent of the APBN and meeting roughly 12.3 percent of climate-financing needs through 2030.²² More recent data confirm the same pattern: average climate spending over 2018–2024 was about IDR 73.5 trillion per year, or roughly 3 percent of the APBN, meeting only about 12.9 percent of national climate-finance needs.²³

These figures reveal three important characteristics. First, the fiscal share devoted to the environmental agenda remains relatively small and is dominated by adaptation spending rather than transformative investment for a circular industrial sector.²⁴ Second, a very large financing gap persists: the funding required to meet emission-reduction targets is estimated at roughly IDR 4,002 trillion, so the APBN alone is insufficient.²⁵ Third, the absence of a dedicated circular-economy tag leaves fiscal support fragmented and difficult to evaluate. These findings answer the first research question: current APBN allocations are not yet systematically directed toward accelerating the industrial circular-economy transition.

Effective Fiscal Instruments Based on International Evidence

A comparative review of cross-country experience identifies three groups of green fiscal instruments that are consistently effective: environmental taxation, green subsidies, and public spending or investment for innovation. A summary of the evidence is presented in Table 1.

Table 1. Comparative Literature Matrix on Green Fiscal Policy

No	Sector (Country)	Green Fiscal Instrument	Source
1	Manufacturing & industrial innovation (China)	Green subsidies; effluent charges	Liu et al. 2025
2	Waste management & circular economy (EU)	Environmental taxes	Imran et al. 2024
3	Corporate/manufacturing (cross-country)	Green tax (ESG performance)	Sun et al. 2024
4	Energy (G7)	Environmental taxes; policy stringency; R&D support	Degirmenci et al. 2025
5	Hydrogen & clean energy (Germany)	Public investment; industrial policy	Quitrow et al. 2024
6	Regional green development (China)	Environmental expenditure; regulatory support	Tu, Liang, and Fu 2024

²¹Ministry of Finance of the Republic of Indonesia (Kemenkeu), “Indonesia Is Fully Committed to Addressing Climate Change,” Media Keuangan, 2025, <https://mediakeuangan.kemenkeu.go.id>.

²²Fiscal Policy Agency (BKF), Ministry of Finance of the Republic of Indonesia, “Realized Climate-Action Spending under the APBN, 2016–2023, Reached IDR 610.12 Trillion,” 2025, <https://www.antaranews.com>.

²³Ministry of Finance of the Republic of Indonesia (Kemenkeu), “APBN Climate Spending Averages IDR 73.5 Trillion per Year, Meeting Only 12.9 Percent of Needs,” 2026, <https://www.cnnindonesia.com>.

²⁴Katadata, “Climate Budget in the APBN,” Green Katadata, 2024, <https://green.katadata.co.id>.

²⁵Kemenkeu, “Indonesia Is Fully Committed”.

7	Green macrofinancial regimes (US, China, EU)	Green public spending; industrial policy	Gabor and Braun 2025
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Source: Author (2026)

The evidence indicates that environmental taxation promotes more sustainable waste-management systems and strengthens recycling incentives,²⁶ while also improving corporate environmental, social, and governance (ESG) performance through energy efficiency.²⁷ Differentiated green subsidies and pollution charges encourage firms to invest in cleaner production technologies.²⁸ Public investment and industrial policy, in turn, are decisive in sectors with high investment costs, as illustrated by Germany's hydrogen strategy²⁹ and by Gabor and Braun's argument for a “*Big Green State*” that coordinates investment through public spending and strategic planning.³⁰ Taken together, the evidence shows that no single instrument is sufficient; effectiveness arises from combining instruments.³¹

A Maqāṣid al-Sharī‘ah–Based APBN Optimization Framework

Building on this comparison, the study develops an APBN optimization framework that rests on three complementary fiscal instruments and links them explicitly to the objectives of *Maqāṣid al-Sharī‘ah* (Figure 2). The three are: (1) performance-based environmental tax incentives for industries that adopt circular production systems and recycled materials; (2) targeted green subsidies to lower investment barriers for environmentally friendly technologies, particularly among manufacturing firms and micro, small, and medium enterprises (MSMEs); and (3) expanded public spending on research, innovation, and recycling infrastructure to strengthen domestic technological capacity and long-term industrial competitiveness.

²⁶M. Imran et al., “Evolving Waste Management: The Impact of Environmental Technology, Taxes, and Carbon Emissions on Incineration in EU Countries,” *Journal of Environmental Management* 364 (2024): 121440, <https://doi.org/10.1016/j.jenvman.2024.121440>.

²⁷Y. Sun et al., “Unlocking Environmental, Social, and Governance (ESG) Performance through Energy Efficiency and Green Tax: SEM-ANN Approach,” *Energy Strategy Reviews* 53 (2024): 101408, <https://doi.org/10.1016/j.esr.2024.101408>.

²⁸J. Liu et al., “Exploratory or Exploitative Green Innovation? The Role of Different Green Fiscal Policies in Motivating Innovation,” *Technovation* 143 (2025): 103207, <https://doi.org/10.1016/j.technovation.2025.103207>.

²⁹R. Quitzow, A. Nunez, and A. Marian, “Positioning Germany in an International Hydrogen Economy: A Policy Review,” *Energy Strategy Reviews* 53 (2024): 101361, <https://doi.org/10.1016/j.esr.2024.101361>.

³⁰Daniela Gabor and Benjamin Braun, “Green Macrofinancial Regimes,” *Review of International Political Economy* 32, no. 3 (2025): 542–568, <https://doi.org/10.1080/09692290.2025.2453504>.

³¹T. Degirmenci et al., “The Role of Energy Intensity, Green Energy Transition, and Environmental Policy Stringency on Environmental Sustainability in G7 Countries,” *Clean Technologies and Environmental Policy* 27 (2025): 2981–2993, <https://doi.org/10.1007/s10098-024-02968-y>; C. Tu, Y. Liang, and Y. Fu, “How Does the Environmental Attention of Local Governments Affect Regional Green Development? Empirical Evidence from Local Governments in China,” *Humanities & Social Sciences Communications* 11 (2024): 371, <https://doi.org/10.1057/s41599-024-02887-9>.

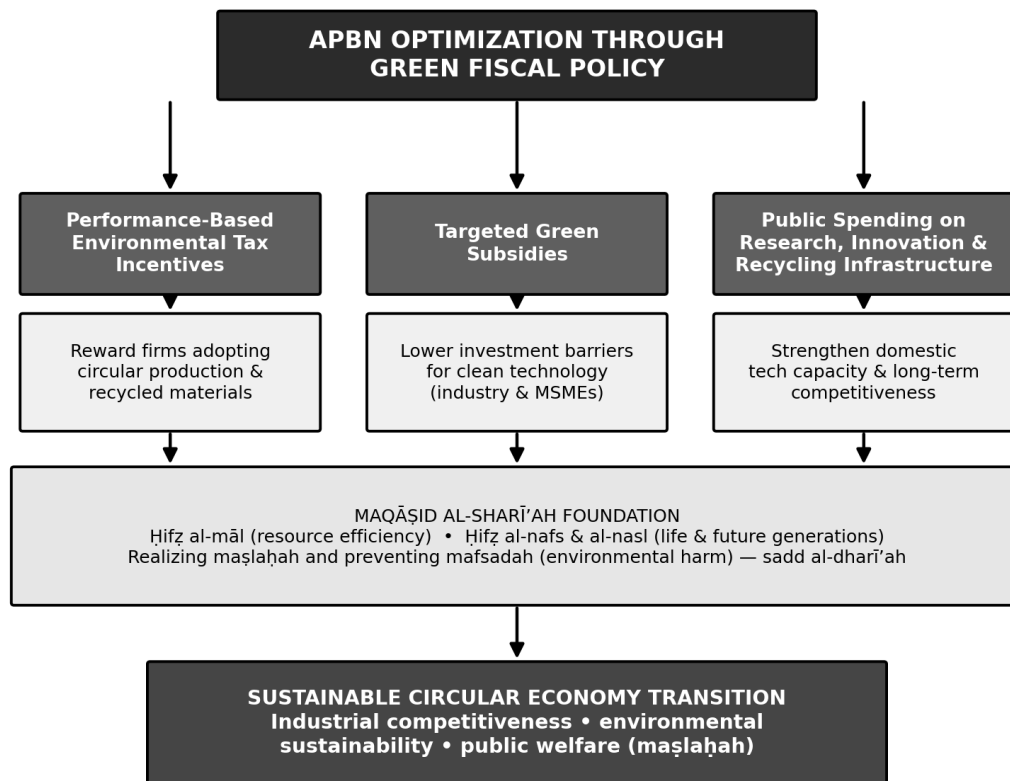


Figure 2. Conceptual Framework for APBN Optimization for the Circular Economy from a Maqāṣid al-Sharī'ah Perspective

Source: Author (2026)

Table 2 below summarize a comprehensive mapping of fiscal policy instruments, their corresponding APBN implementation channels, and their alignment with the dimensions of Maqāṣid al-Sharī'ah as an analytical framework for assessing support for the circular economy transition.

Table 2. Mapping of Fiscal Instruments, APBN Channels, and Maqāṣid al-Sharī'ah Dimensions

Fiscal Instrument	Mechanism	APBN Channel	Maqāṣid Dimension
Performance-based environmental tax incentives	Rewards firms adopting circular production & recycled materials	Tax incentives/reliefs (tax expenditure)	<i>Ḥifẓ al-māl</i> ; <i>maṣlaḥah</i>
Targeted green subsidies	Lower investment barriers for clean technology (industry & MSMEs)	Subsidy & transfer spending	<i>Ḥifẓ al-māl & al-nafs</i> ; <i>preventing mafsadah</i>

Fiscal Instrument	Mechanism	APBN Channel	Maqāṣid Dimension
Public spending on research, innovation & recycling infrastructure	Strengthen domestic tech capacity & long-term competitiveness	Capital & ministry/agency spending (incl. CBT themes)	<i>Ḥifẓ al-nasl; inter-generational maṣlaḥah</i>

Source: Author (2026)

DISCUSSION

The findings confirm that green fiscal policy is among the most effective instruments for accelerating industrial transformation toward a circular economy. The cross-country comparison shows that governments increasingly rely on environmental taxation, green subsidies, public investment, and innovation funding to correct environmental externalities while promoting sustainable industrial competitiveness.³² This pattern is consistent with Pigou's environmental-economics theory: fiscal intervention is required to internalize externalities and to reduce the financial risk of adopting green technologies, particularly in industries with high investment costs.³³ Evidence from China, the European Union, Germany, and the G7 reinforces the argument that the effectiveness of fiscal policy extends well beyond macroeconomic stabilization.³⁴

For Indonesia, the finding that APBN allocations reach only about 3 percent and meet only around 13 percent of climate-financing needs indicates that the circular-economy transition remains constrained by limited incentives and technological capacity.³⁵ Although the government has committed to the Circular Economy Roadmap and National Action Plan 2025–2045, fiscal support is not yet integrated: fiscal incentives, environmental taxation, industrial-innovation funding, and green public procurement have not been consolidated into a single, comprehensive policy framework. APBN optimization should therefore prioritize the three complementary instruments operating simultaneously, since the international evidence consistently shows that no single instrument is sufficient.³⁶

What distinguishes this framework from conventional economic analysis is its explicit connection to *Maqāṣid al-Sharī'ah*. First, performance-based environmental tax incentives express *ḥifẓ al-māl*: by granting relief to firms that close material loops, the state promotes resource efficiency and prevents waste (*isrāf*) while safeguarding revenue without

³²Degirmenci et al., “The Role of Energy Intensity”.

³³Pigou, *The Economics of Welfare*.

³⁴Liu et al., “Exploratory or Exploitative Green Innovation?”; Imran et al., “Evolving Waste Management”; Quitzow, Nunez, and Marian, “Positioning Germany”.

³⁵BKF Kemenkeu, “Realized Climate-Action Spending”; Kemenkeu, “APBN Climate Spending”.

³⁶Gabor and Braun, “Green Macrofinancial Regimes”.

penalizing beneficial productive activity. Second, targeted green subsidies link *ḥifẓ al-māl* with *ḥifẓ al-nafs*: lowering barriers to clean-technology investment is not only economically efficient but also protects public health from pollution—a form of preventing *mafsadah*. Third, public spending on research, innovation, and recycling infrastructure relates most closely to *ḥifẓ al-nasl*, because today's investment secures environmental carrying capacity and economic capability for future generations. The three instruments are thus not merely technical tools but means of realizing a comprehensive *maṣlahah*.

Situating these instruments within the classical hierarchy of the *maqāṣid* clarifies their normative weight. In al-Shāṭibī's schema, measures that merely refine or beautify communal life belong to the level of embellishments (*taḥsīniyyāt*), whereas those that avert grave and widespread harm rise to the level of necessities (*darūriyyāt*).³⁷ Environmental protection was historically treated as a complementary good, but the accelerating threats of pollution, resource depletion, and climate change have elevated it toward the level of necessity, because the degradation of ecological systems now directly imperils life (*ḥifẓ al-nafs*), lineage (*ḥifẓ al-nasl*), and wealth (*ḥifẓ al-māl*).³⁸ This prioritization has concrete implications for budget optimization: where fiscal space is constrained, allocations that prevent irreversible harm.³⁹ The *maqāṣid* framework thus supplies not only an ethical vocabulary but also a criterion for ranking competing fiscal claims—one that Indonesia's Climate Budget Tagging system, currently organized around technical mitigation and adaptation codes, does not yet make explicit, even though such prioritization lies at the heart of a genuinely *maqāṣid*-oriented allocation of scarce public resources.

Translating this framework into policy nonetheless requires attention to sequencing and to the risks that accompany each instrument. Environmental taxes, if imposed abruptly, can raise production costs and displace activity toward less-regulated jurisdictions, a form of leakage that would generate new *mafsadah* rather than prevent it;⁴⁰ targeted subsidies, conversely, can distort competition or entrench rent-seeking if they are not time-bound and performance-linked.⁴¹ The principle of distributive justice (*ʿadālah*) requires that the fiscal burden of the transition not fall disproportionately on micro, small, and medium enterprises or on low-income consumers, whose limited capacity to absorb higher costs could otherwise widen inequality and undermine the very *maṣlahah* the policy seeks to secure.⁴²

Effective implementation run by the institutions must align tax expenditures, subsidy programs, and capital spending under a common circular-economy objective rather than

³⁷ al-Shāṭibī, *al-Muwāfaqāt*.

³⁸ Auda, *Maqasid al-Shariah as Philosophy of Islamic Law*.

³⁹ Chapra, *The Islamic Vision of Development*.

⁴⁰ Imran et al., “Evolving Waste Management”.

⁴¹ Liu et al., “Exploratory or Exploitative Green Innovation?”.

⁴² Dusuki and Abozaid, “Challenges of Realizing Maqasid al-Shariah”.

pursuing them in isolation.⁴³ Finally, given the scale of the financing gap, the APBN can realistically serve only as a catalyst that de-risks private investment and crowds in green finance, rather than as the sole source of funding.⁴⁴ To sum up, the study suggests that the government consider a dedicated circular-economy budget tag as an extension of Climate Budget Tagging, strengthen the synergy among tax incentives, subsidies, and innovation spending, and mobilize the private sector given the limited capacity of the APBN. This is consistent with the view that public spending functions as a catalyst rather than a final solution for financing the green transition.⁴⁵

CONCLUSION

This study concludes that the successful implementation of a circular economy requires fiscal policy to evolve beyond its macroeconomic-stabilization role toward an integrated industrial strategy capable of directing investment, stimulating innovation, correcting environmental externalities, and strengthening sustainable industrial competitiveness. Indonesia's APBN allocation for the environmental agenda remains relatively small (about 3 percent) and fragmented, with the circular economy not yet constituting a distinct budget line. Based on international evidence, three fiscal instruments namely performance-based environmental tax incentives, targeted green subsidies, and public spending on research, innovation, and recycling infrastructure, prove effective and should operate simultaneously. The APBN optimization framework that links these instruments to *Maqāṣid al-Sharī'ah* (ḥifẓ al-māl, ḥifẓ al-naḥs, and ḥifẓ al-nasl) constitutes the principal contribution of this study to Indonesia's circular-economy policy literature and offers a conceptual foundation for aligning APBN optimization with long-term sustainable industrial development.

This study is subject to limitations. It is qualitative and library-based and does not empirically test the impact of fiscal instruments; the absence of a dedicated circular-economy budget tag also limits the precision of allocation estimates. Future research should quantitatively examine the effectiveness of each instrument on indicators of industrial circularity, develop a circular-economy budget-tagging scheme, and further operationalize *Maqāṣid al-Sharī'ah* indicators for evaluating green fiscal policy.

⁴³Bappenas, *National Roadmap and Action Plan*.

⁴⁴Bailey, "Re-thinking the Fiscal and Monetary Political Economy".

⁴⁵Bailey, "Re-thinking the Fiscal and Monetary Political Economy"; Kemenkeu, "APBN Climate Spending".

BIBLIOGRAPHY

- Auda, Jasser. *Maqasid al-Shariah as Philosophy of Islamic Law: A Systems Approach*. London: International Institute of Islamic Thought, 2008.
- Bailey, David. "Re-thinking the Fiscal and Monetary Political Economy of the Green State." *New Political Economy*, 2020. <https://doi.org/10.1080/13563467.2018.1526267>.
- Bappenas. *National Roadmap and Action Plan for the Circular Economy in Indonesia 2025–2045*. Jakarta: Ministry of National Development Planning/National Development Planning Agency, 2024.
- Bappenas, and UNDP. *The Economic, Social, and Environmental Benefits of a Circular Economy in Indonesia*. Jakarta: Ministry of National Development Planning/Bappenas, UNDP Indonesia, and Government of the Kingdom of Denmark, 2021.
- BKF Kemenkeu. "Realized Climate-Action Spending under the APBN, 2016–2023, Reached IDR 610.12 Trillion." Fiscal Policy Agency, Ministry of Finance of the Republic of Indonesia, 2025. <https://www.antaranews.com>.
- Chapra, M. Umer. *The Islamic Vision of Development in the Light of the Maqāṣid al-Sharī'ah*. Herndon, VA: International Institute of Islamic Thought, 2008.
- Degirmenci, T., E. Sofuoglu, M. Aydin, and T. S. Adebayo. "The Role of Energy Intensity, Green Energy Transition, and Environmental Policy Stringency on Environmental Sustainability in G7 Countries." *Clean Technologies and Environmental Policy* 27 (2025): 2981–2993. <https://doi.org/10.1007/s10098-024-02968-y>.
- Dulal, H. B., R. Dulal, and P. K. Yadav. "Delivering Green Economy in Asia: The Role of Fiscal Instruments." *Futures* 73 (2015): 55–74.
- Dusuki, Asyraf Wajdi, and Abdulazeem Abozaid. "A Critical Appraisal on the Challenges of Realizing Maqasid al-Shariah in Islamic Banking and Finance." *IJUM Journal of Economics and Management* 15, no. 2 (2007): 143–165.
- Ellen MacArthur Foundation. *Towards the Circular Economy: Economic and Business Rationale for an Accelerated Transition*. Cowes, UK: Ellen MacArthur Foundation, 2013.
- Gabor, Daniela, and Benjamin Braun. "Green Macrofinancial Regimes." *Review of International Political Economy* 32, no. 3 (2025): 542–568. <https://doi.org/10.1080/09692290.2025.2453504>.
- Geissdoerfer, Martin, Paulo Savaget, Nancy M. P. Bocken, and Erik Jan Hultink. "The Circular Economy: A New Sustainability Paradigm?" *Journal of Cleaner Production* 143 (2017): 757–768. <https://doi.org/10.1016/j.jclepro.2016.12.048>.
- Ibn 'Āshūr, Muhammad al-Ṭāhir. *Treatise on Maqāṣid al-Sharī'ah*. Translated by Mohamed El-Tahir El-Mesawi. Herndon, VA: International Institute of Islamic Thought, 2006.
- Imran, M., Z. Jijian, A. Sharif, and C. Magazzino. "Evolving Waste Management: The Impact of Environmental Technology, Taxes, and Carbon Emissions on Incineration in EU Countries." *Journal of Environmental Management* 364 (2024): 121440. <https://doi.org/10.1016/j.jenvman.2024.121440>.
- Irawan, D., and A. C. Marita. "A Circular-Economy Approach as a Sustainable Development Strategy in Indonesia." *E-Jurnal Sumberdaya dan Lingkungan* 13, no. 1 (2024): 117–130.
- Jones, B. "Driving a Green Economy through Public Finance and Fiscal Policy Reform." *Journal of International Commerce, Economics and Policy* 2, no. 3 (2011): 367–386. <https://doi.org/10.1142/S1793993311000336>.

- Katadata. "Climate Budget in the APBN." Green Katadata, 2024. <https://green.katadata.co.id>.
- Kemenkeu. "APBN Climate Spending Averages IDR 73.5 Trillion per Year, Meeting Only 12.9 Percent of Needs." Ministry of Finance of the Republic of Indonesia, 2026. <https://www.cnnindonesia.com>.
- Kemenkeu. "Indonesia Is Fully Committed to Addressing Climate Change." Media Keuangan, Ministry of Finance of the Republic of Indonesia, 2025. <https://mediakeuangan.kemenkeu.go.id>.
- Khoirunurrofik, Fauziah Zen, Yusuf Sofiyandi, Yusuf Reza Kurniawan, Calista Endrina Dewi, and Fachry Abdul. "Financing the Green and Just Energy Transition: Green Fiscal Policy for a Just and Fair Transition to a Green Economy." In *Fiscal Policy to Support the Green and Just Energy Transition*, edited by Fauziah Zen, Fukunari Kimura, and Alloysius Joko Purwanto, 20–67. ERIA Research Project Report FY2024 No. 28. Jakarta: ERIA, 2025.
- Kirchherr, Julian, Denise Reike, and Marko Hekkert. "Conceptualizing the Circular Economy: An Analysis of 114 Definitions." *Resources, Conservation and Recycling* 127 (2017): 221–232. <https://doi.org/10.1016/j.resconrec.2017.09.005>.
- KLHK. *National Waste Management Data 2022*. National Waste Management Information System (SIPSN). Jakarta: Ministry of Environment and Forestry, 2022. <https://sipsn.menlhk.go.id>.
- Liu, J., F. Long, L. Chen, L. Li, L. Zheng, and Z. Mi. "Exploratory or Exploitative Green Innovation? The Role of Different Green Fiscal Policies in Motivating Innovation." *Technovation* 143 (2025): 103207. <https://doi.org/10.1016/j.technovation.2025.103207>.
- Murat, D., and B. İnam. "Relationship between Fiscal Policies and Green Economy: An Application for G20 Countries." In *Global Challenges for the Environment and Climate Change*. Hershey, PA: IGI Global, 2024.
- OECD. *Global Outlook on Financing for Sustainable Development 2021*. Paris: OECD Publishing, 2021.
- Perepechkina, Elena, Satsita Khasanova, and Maryam Ortskhanova. "Tax Regulation and the Transition to a Green Economy: Integrating Sustainable Development into Fiscal Policy." *Reliability: Theory & Applications* 19, no. Special Issue 6 (2024): 1208–1215. <https://doi.org/10.24412/1932-2321-2024-681-1208-1215>.
- Pigou, Arthur C. *The Economics of Welfare*. London: Macmillan, 1920.
- Quitow, R., A. Nunez, and A. Marian. "Positioning Germany in an International Hydrogen Economy: A Policy Review." *Energy Strategy Reviews* 53 (2024): 101361. <https://doi.org/10.1016/j.esr.2024.101361>.
- al-Shāṭibī, Abū Ishāq. *al-Muwāfaqāt fī Uṣūl al-Sharī'ah*. Edited by Abū 'Ubaydah Mashhūr ibn Ḥasan Āl Salmān. Al-Khubar: Dār Ibn 'Affān, 1997.
- Speck, Stefan. "Environmental Fiscal Reform and Transition to a Green Economy: A Political Economy Analysis." Paper presented at the International Conference on Public Policy, Milan, Italy, July 1–4, 2015.
- Stern, Nicholas. *The Economics of Climate Change: The Stern Review*. Cambridge: Cambridge University Press, 2007. <https://doi.org/10.1017/CBO9780511817434>.
- Sun, Y., M. M. Rahman, X. Xinyan, A. B. Siddik, and M. E. Islam. "Unlocking Environmental, Social, and Governance (ESG) Performance through Energy Efficiency and Green Tax: SEM-ANN Approach." *Energy Strategy Reviews* 53 (2024): 101408. <https://doi.org/10.1016/j.esr.2024.101408>.
- Tu, C., Y. Liang, and Y. Fu. "How Does the Environmental Attention of Local Governments Affect Regional Green Development? Empirical Evidence from Local Governments in China." *Humanities & Social Sciences Communications* 11 (2024): 371. <https://doi.org/10.1057/s41599-024-02887-9>.
- United Nations Environment Programme (UNEP). *Global Resources Outlook 2021: Accelerating Change*. Nairobi: UNEP, 2021.