

Prosperia: Journal of Economic Development, Accounting, and Global Markets
Vol 1 No 4 November 2026, Hal 56-68
ISSN: 3125-117x (Print) ISSN: 3125-1181 (Electronic)
Open Access: https://sovereignresearch.org/prosperia

The Role of Government in Addressing Market Failure Through Tax and Subsidy Policies

Zahwa Putri Aryani[1*], Sarpini[2]
[1-2] UIN Prof. K.H. Saifuddin Zuhri Purwokerto, Indonesia
email: 254110201095@mhs.uinsaizu.ac.id[1]

Article Info :
Received:
04-10-2026
Revised:
10-10-2026
Accepted:
27-10-2026

Abstract

Market failure arises when market prices do not fully reflect social costs and benefits, producing inefficient resource allocation. This study examined how government taxation and subsidy policies address market failure, particularly environmental externalities and implementation challenges relevant to Indonesia. A qualitative descriptive literature review examined selected scholarly publications through conceptual identification, thematic classification, and comparative synthesis. The analysis distinguished negative externalities, underprovided socially beneficial activities, fiscal instrument mechanisms, and institutional constraints. Findings indicated that corrective taxes can internalize external damages by increasing the private costs of harmful activities, while targeted subsidies can encourage socially beneficial investments and services. Carbon taxation and motor vehicle fuel levies illustrated environmental applications, whereas agricultural support and clean technology incentives demonstrated alternative subsidy mechanisms. Policy effectiveness depended on appropriate instrument calibration, beneficiary targeting, administrative capacity, fiscal feasibility, and consideration of distributional consequences. Taxes may impose disproportionate burdens on vulnerable households, while poorly targeted subsidies can generate additional distortions and budgetary costs. The review developed a five-stage conceptual evaluation framework covering market failure diagnosis, instrument selection, welfare assessment, institutional feasibility, and policy monitoring. Its contribution is comparative rather than empirical; future research should test policy outcomes using reliable observed behavioral, fiscal, distributional, and environmental outcome indicators.

Keywords: *Externalities, Government Intervention, Market Failure, Subsidies, Taxation.*

©2026 Authors.. This work is licensed under a Creative Commons Attribution-Non Commercial 4.0 International License.
(https://creativecommons.org/licenses/by-nc/4.0/)

INTRODUCTION

Government responses to market failure have become a central issue in economic policy because market prices do not always reflect the social costs and benefits of production and consumption. Environmental damage, inadequate provision of socially beneficial services, and concentrated market power can generate allocations that remain privately profitable while imposing losses on society. The distinction between correcting market failure and creating government failure is particularly relevant when interventions introduce administrative costs, distorted incentives, or unintended redistributive effects (Chang, 2022). The design of environmental taxation becomes more complex when economic activity produces interconnected external costs on multiple sides of a market (Abdul Baki et al., 2024). Uncertainty regarding future market conditions and changes in market structure further complicates the choice between price-based and quantity-based regulatory instruments (Di Corato & Maoz, 2023). Evidence from the cassava sector in South Lampung locates public policy and market distortions within the assessment of agricultural competitiveness, extending the relevance of market failure beyond pollution alone (Abriani et al., 2023). These developments establish the need to examine taxation and subsidies as interventions whose welfare consequences depend on the particular failure being addressed rather than on the existence of a fiscal measure itself.

Recent scholarship has approached corrective fiscal policy through environmental regulation, agricultural market support, and the valuation of social benefits that markets leave unpriced. Models comparing carbon taxation with clean-technology subsidies differentiate policy performance according to the economic conditions and constraints under which instruments are implemented (Wiskich, 2024). Experimental research on combined tax-and-subsidy packages investigates whether instrument design

can address resistance to Pigouvian taxation, placing policy acceptance alongside economic effectiveness (Andreassen et al., 2024). In agricultural markets, comparisons between minimum support prices and cost subsidies demonstrate that producer support and consumer welfare must be examined jointly rather than inferred from changes in farm revenue alone (Chintapalli & Tang, 2022). Ex-ante evaluation of sanitation interventions further illustrates the role of nonmarket externalities when measuring policy-related welfare effects (Gautam, 2023). The divergence across environmental and agricultural applications suggests that fiscal instruments must be assessed against the distinct external costs, behavioral responses, and beneficiary groups associated with each market. Across these approaches, a common analytical concern is the difference between changing private incentives and producing a demonstrable improvement in social welfare.

The selected literature addresses fiscal correction through analytical settings that differ substantially in their definitions of market failure, welfare indicators, and policy constraints. Research on emissions taxation considers double-sided environmental externalities, while leaving the applicability of its modeling assumptions to unrelated policy settings an open question (Abdul Baki et al., 2024). Uncertainty-based analyses examine externality control alongside endogenous market structure, suggesting that instrument suitability may change when the competitive environment responds to regulation (Di Corato & Maoz, 2023). Indonesian evidence on taxation and industrial competitiveness highlights fiscal burdens within the cocoa industry without independently providing a general comparison of environmental taxes and corrective subsidies (Murwendah & Desyani, 2023). Work on the fiscal costs of taxation and the renewable-energy transition similarly addresses a specific policy tension rather than establishing a common evaluative standard for distinct market failures (Arifafarina & Rosdiana, 2026). These different research settings leave a comparative limitation within the selected literature because the conditions supporting the choice of a tax, a subsidy, or a combined arrangement are not consistently assessed using equivalent criteria. The research gap concerns the integration of failure diagnosis, fiscal instrument mechanisms, welfare distribution, and implementation constraints rather than an absence of previous investigations into taxation and subsidy policies.

The absence of a consistent comparative evaluation structure has practical implications because fiscal interventions selected primarily to change prices may also modify production decisions, public expenditure, and the distribution of economic burdens. Evidence comparing agricultural price support with cost subsidies reinforces the need to distinguish the consequences for producers from those experienced by consumers (Chintapalli & Tang, 2022). Welfare analysis of sanitation interventions demonstrates why benefits accruing to third parties should be incorporated into economic appraisal rather than restricting evaluation to private market participants (Gautam, 2023). Within Indonesia, analysis of the cocoa industry's tax burden identifies sectoral competitiveness as a relevant consideration when taxation policies are designed or evaluated (Murwendah & Desyani, 2023). Research concerning taxation costs and renewable-energy transition raises a related issue regarding the financial implications of fiscal measures for activities targeted by environmental policy (Arifafarina & Rosdiana, 2026). Incomplete assessments can also obscure whether the expected social benefits justify the administrative and fiscal resources required for implementation. Failure to differentiate these mechanisms may produce policy recommendations that overlook fiscal burdens, unequal welfare consequences, administrative limitations, or insufficient correspondence between the intervention and the underlying market failure.

The present study positions taxation and subsidy policies within a comparative conceptual framework organized around the nature of market failure, the economic transmission mechanisms of fiscal instruments, and their consequences for public welfare. The proposed analytical orientation distinguishes negative externalities, underprovided socially beneficial activities, and market conditions that interfere with efficient resource allocation as separate considerations in policy selection. The possibility of government failure requires the framework to incorporate implementation constraints and the risk that corrective intervention may introduce additional economic inefficiencies (Chang, 2022). Experimental research concerning combined tax-and-subsidy arrangements supports the inclusion of complementary policy instruments rather than assuming that taxation and subsidies must always operate independently (Andreassen et al., 2024). Comparative analysis of carbon taxes and clean subsidies provides a basis for examining differences in instrument suitability under alternative economic and regulatory conditions (Wiskich, 2024). Evidence concerning agricultural competitiveness under public policy and market distortions introduces a sectoral dimension that prevents environmental policy from

becoming the exclusive basis of the proposed synthesis (Abriani et al., 2023). The intended conceptual contribution is an integrated evaluation of policy appropriateness according to market-failure characteristics, incentive responses, distributive consequences, and governance conditions without presenting the framework as an independently validated causal model.

This study aims to examine the role of government in addressing market failure through taxation and subsidy policies by comparing the economic mechanisms, welfare implications, and implementation limitations of these instruments. The analysis first identifies the market conditions that may justify fiscal correction, distinguishing harmful externalities from activities whose social benefits exceed their private returns. It subsequently evaluates how taxation and subsidies influence economic incentives, producer and consumer welfare, and the allocation of public resources. A further objective is to examine the circumstances in which individual instruments or combined policies may be appropriate, considering market uncertainty and the possibility of government failure. The analysis differentiates theoretically expected policy effects from outcomes that can be empirically established, maintaining the evidentiary boundaries of a literature-based investigation. Through comparative conceptual synthesis of the selected literature, the research develops an analytical structure for assessing fiscal instrument suitability without claiming new empirical estimates of policy impacts. The expected contribution is a more consistent basis for interpreting government intervention, distinguishing corrective effectiveness from unintended welfare losses, and supporting transparent fiscal policy evaluation relevant to Indonesia and comparable economic settings.

RESEARCH METHODS

A qualitative descriptive approach based on a literature review was employed to examine government intervention in addressing market failure through taxation and subsidy policies. The research relied exclusively on secondary sources comprising published scholarly articles concerning market inefficiency, externalities, fiscal intervention, economic welfare, environmental taxation, and subsidy implementation, without collecting primary empirical data. The conceptual examination of government intervention considered the distinction between correcting market failures and introducing additional inefficiencies through inappropriate public policies (Chang, 2022). Literature addressing emissions taxation under interconnected environmental externalities provided a theoretical basis for examining the relationship between private economic decisions, social costs, and corrective fiscal instruments (Abdul Baki et al., 2024). Studies concerning government policies and agricultural competitiveness in Indonesia were incorporated to examine the relevance of market distortions and public intervention to sector-specific economic conditions (Abriani et al., 2023). Sources were selected according to their relevance to the research objectives, while the available methodological documentation did not establish a complete database search strategy, numerical screening record, or formal systematic-review protocol.

Literature examination was organized into three stages comprising conceptual identification, thematic classification, and comparative synthesis of arguments presented in the selected publications. The identification stage examined the definitions, underlying mechanisms, and welfare implications of market failure, while the classification stage organized relevant findings into negative externalities, positive externalities, corrective taxation, government subsidies, and implementation challenges. The comparative assessment considered taxation and subsidies as potentially complementary fiscal instruments, including policy arrangements combining corrective taxes with financial incentives (Andreassen et al., 2024). Differences in policy suitability were examined through scholarly analyses comparing carbon taxation and clean-energy subsidies under alternative economic and regulatory conditions (Wiskich, 2024). Implementation considerations were evaluated through literature addressing fiscal burdens, taxation costs, and the implications of public policy for renewable-energy development in Indonesia (Arifafarina & Rosdiana, 2026). Analytical conclusions were developed by comparing the consistency, differences, and limitations of published arguments, without claiming statistical estimation, independent empirical verification, or quantitative measurement of policy effects.

RESULTS AND DISCUSSION

Market Failure, Externalities, and the Economic Rationale for Government Intervention

Market failure arises when decentralized exchanges fail to incorporate all relevant social costs and benefits, leaving resources allocated differently from the outcome implied by collective welfare

maximization. The resulting divergence may occur despite functioning prices and voluntary transactions, since private incentives do not necessarily reproduce the conditions required for social efficiency. Chang (2022) distinguishes failures arising within markets from government failures associated with the design and implementation of corrective interventions. The distinction matters because identifying an inefficient market outcome does not independently establish that a particular public measure will improve welfare. Suwaibah (2026) discusses externalities, market dominance, information asymmetries, and difficulties in providing public goods as recurring grounds for government involvement. Fahmi and Riofita (2025) examine fiscal and redistributive instruments as policy responses to externalities and income inequality. A defensible rationale for intervention requires the identification of a particular distortion, its influence on economic decisions, and the social consequences expected from correcting it.

Negative externalities arise when the marginal private cost of production or consumption excludes damages imposed on individuals who are not directly involved in the corresponding market transaction. Under these conditions, firms and consumers may undertake socially harmful activities beyond the level that would prevail if the full marginal social cost were reflected in market prices. Abdul Baki et al. (2024) examine emissions taxation under double-sided environmental externalities, demonstrating the analytical importance of accounting for interconnected sources of environmental harm when designing corrective policies. Indonesian research on carbon taxation and energy policy establishes a relevant setting for examining the relationship between environmental externalities, economic incentives, and sustainable development objectives (Hartono et al., 2023). Comparative scholarship concerning carbon taxation in Sweden and Finland provides an additional institutional reference for assessing environmental fiscal policies, although regulatory arrangements cannot be transferred directly without considering national economic conditions (Barus & Wijaya, 2021). The principal allocative concern is whether private production and consumption decisions adequately reflect the environmental costs generated by additional economic activity rather than whether the relevant transactions produce immediate financial gains.

Positive externalities present a different incentive problem because part of the benefit generated by an activity is received by individuals or institutions that do not directly finance its provision. When private returns exclude these additional benefits, market participants may supply the activity below the level that would maximize social welfare, even where voluntary transactions remain competitive. Gautam (2023) evaluates sanitation interventions through a welfare framework incorporating externalities, illustrating the analytical relevance of benefits extending beyond immediate service users and providers. Preventive healthcare, environmental restoration, and knowledge development present comparable theoretical considerations when the resulting benefits reach individuals who do not directly contribute to production costs. Fahmi and Riofita (2025) discuss subsidies for socially beneficial activities as one possible response to differences between private incentives and public benefits. Financial support nevertheless requires evidence of a relevant underprovision problem, since the social desirability of an activity does not independently justify unlimited governmental expenditure. Comparative research concerning fixed and variable cost subsidies across different organizational structures also establishes the relevance of recipient characteristics and subsidy design to the evaluation of economic welfare (Jegers et al., 2024).

Externalities do not exhaust the sources of inefficient market allocation because concentrated market power, informational limitations, and public-good characteristics can also prevent the realization of economically beneficial outcomes. When dominant market participants restrict output or influence transaction prices, observed exchanges may generate private gains while leaving potentially beneficial transactions unrealized. Chang (2022) identifies market imperfections as considerations for government intervention while emphasizing that corrective objectives must be distinguished from the possibility of government failure. Suwaibah (2026) associates information asymmetries and limitations in public-good provision with broader difficulties affecting market performance and governmental responses. The distributional consequences of these imperfections introduce further complications when the welfare of economically disadvantaged groups is excluded from policy assessment, an issue relevant to tax design under inequality-sensitive social objectives (Støstad & Cowell, 2024). Corrective instruments must be selected according to the underlying mechanism of inefficiency because taxation and subsidies alone cannot necessarily eliminate market dominance, informational disadvantages, or institutional barriers to competition.

The justification for public intervention remains incomplete until the expected social benefits of correction are assessed against implementation costs, compliance burdens, and potential changes in market incentives. Chang (2022) distinguishes legitimate corrective objectives from government failure, emphasizing the possibility that intervention may introduce additional economic distortions. Research on fiscal sustainability in Indonesia places public policy capacity and the management of fiscal commitments among the considerations affecting the feasibility of long-term governmental action (Adrison, 2024). Tax rates that inadequately reflect the targeted external damage may impose unnecessary burdens or insufficiently discourage harmful activities, while poorly targeted subsidies can consume public resources without correcting the intended incentive gap. Di Corato and Maoz (2023) examine externality control under uncertainty and endogenous market structure, indicating that the comparative suitability of regulatory instruments depends on market responses and the conditions under which decisions are made. Administrative capacity also determines whether public authorities can identify affected participants, observe relevant activities, enforce policy requirements, and evaluate behavioral adjustments following implementation. The economic rationale for government action consequently requires comparing the welfare losses associated with the identified market failure against the costs and risks introduced by the proposed corrective mechanism.

Evidence from Indonesian agricultural markets illustrates why general descriptions of market failure are insufficient for identifying the appropriate form of governmental intervention. Abriani et al. (2023) examine government policy and market-failure-related divergence in cassava competitiveness in South Lampung, locating policy assessment within a defined commodity and production setting. Rindayati et al. (2025) employ a policy analysis matrix to evaluate production-center policy in Bali cattle farming in Southeast Sulawesi, providing a separate application of economic policy analysis to agricultural production. Zega and Hakim (2024) investigate rice self-sufficiency and farmer welfare using a dynamic panel data approach, extending the analytical concern beyond production expansion to the economic circumstances of agricultural producers. Differences in commodity characteristics, analytical methods, and policy objectives restrict direct comparisons of these studies without equivalent measures of social costs, producer welfare, and fiscal expenditure. Their combined relevance lies in demonstrating that policy assessment must connect the identified market condition with producer responses, institutional arrangements, and the welfare criteria used to evaluate public intervention.

Fiscal intervention raises distributive questions because policies that modify marginal economic incentives may impose costs on groups different from those responsible for generating the original market failure. Støstad and Cowell (2024) examine inequality as an externality in tax design, establishing the relevance of distributional considerations to the evaluation of corrective fiscal instruments. Hahn et al. (2026) investigate the welfare implications of climate-related policies, reinforcing the analytical importance of evaluating economic benefits and costs rather than relying exclusively on environmental policy objectives. Fiscal sustainability considerations in Indonesia introduce an additional constraint because recurring subsidies, taxation administration, and public expenditure commitments depend on the government's capacity to manage available resources (Adrison, 2024). Corrective taxes may influence consumer prices and production costs, whereas subsidies can benefit selected recipients while requiring financing from public budgets. A comprehensive welfare assessment must consequently distinguish direct market responses from indirect policy incidence, financing costs, and the distribution of economic benefits among households, firms, and other affected participants. Evaluation based solely on statutory tax rates or allocated subsidy amounts cannot establish whether a policy improves social welfare relative to the market conditions it was intended to correct.

The reviewed economic arguments support differentiated fiscal responses to market failure rather than the application of uniform instruments across unrelated economic problems. Wiskich (2024) compares carbon taxation with clean subsidies and demonstrates the relevance of policy conditions when evaluating alternative approaches to an environmentally oriented economic transition. Externality-control models incorporating uncertainty and endogenous market structures similarly indicate that the suitability of regulatory mechanisms depends on the competitive environment and anticipated market adjustments (Di Corato & Maoz, 2023). Experimental research concerning combined taxation and subsidies further considers policy acceptance as a relevant factor in the practical implementation of corrective fiscal arrangements (Andreassen et al., 2024). Corrective taxation is conceptually appropriate for discouraging activities whose marginal private costs fall below marginal

social costs, whereas targeted subsidies may support activities whose private returns understate their social benefits. The selection and justification of either instrument require an explicit assessment of the identified distortion, anticipated market responses, distributional consequences, administrative feasibility, and the possibility of creating additional inefficiencies through government intervention.

Corrective Taxation, Government Subsidies, and Their Implications for Economic Welfare

Corrective taxation addresses negative externalities by modifying the private costs of economic activities whose consequences extend beyond the individuals and firms directly participating in market transactions. The economic justification for this instrument arises when the marginal social cost of an activity exceeds its marginal private cost, creating incentives for production or consumption above the socially efficient level. Pigouvian taxation seeks to narrow this divergence by incorporating otherwise unpriced external damages into the financial decisions of market participants, an approach discussed in relation to environmental taxation in Indonesia (Selvi et al., 2020). The design of emission-related taxation becomes more complicated when pollution generates interconnected externalities that cannot be adequately represented through a single source of environmental damage (Abdul Baki et al., 2024). Carbon taxation consequently operates through a price-based incentive intended to influence production methods, energy consumption, and investment decisions rather than through direct administrative determination of output quantities. Research on carbon taxation and energy policy in Indonesia identifies environmental fiscal intervention as a relevant component of sustainable development policy, although the consequences depend on the underlying economic and energy-system conditions (Hartono et al., 2023). The effectiveness of corrective taxation must be assessed through its relationship with marginal external damages, behavioral responsiveness, administrative costs, and the distribution of economic burdens rather than through tax revenue generation alone.

Environmental taxation illustrates the practical difficulties of translating the theoretical objective of internalizing external costs into an enforceable fiscal instrument. Comparative analysis of carbon taxation in Sweden and Finland provides a reference for examining how environmental taxes have been incorporated into national policy arrangements and how those experiences may inform Indonesian regulatory development (Barus & Wijaya, 2021). Motor vehicle fuel taxation presents a related application because fuel consumption is associated with environmental effects that may not be fully reflected in the prices paid by vehicle users (Kurniawati, 2018). The environmental significance of such taxation depends on whether the fiscal charge is sufficiently connected to the harmful activity and whether consumers and producers respond to the resulting price changes. Research concerning challenges in carbon-tax implementation identifies policy preparation, institutional conditions, and the consequences for affected economic participants as considerations requiring attention when adapting international experience to Indonesia (Salsabila, 2023). Differences in income, consumption patterns, production structures, and administrative capacity restrict the direct transferability of international fiscal arrangements, requiring taxation objectives to be evaluated against domestic economic conditions.

The calibration of corrective taxes becomes particularly demanding when environmental damages, technological responses, and market structures change over time. Models of emissions taxation under double-sided environmental externalities demonstrate that the relationship between environmental damages and corrective incentives may involve multiple interacting economic effects (Abdul Baki et al., 2024). Research examining externality control under uncertainty and endogenous market structure further establishes the analytical importance of market responses when comparing price-based and quantity-based interventions (Di Corato & Maoz, 2023). An environmental tax may influence current production costs while simultaneously modifying incentives for technological adoption, investment allocation, and future production decisions. Dynamic modeling of carbon taxation and decarbonization subsidies provides a theoretical basis for examining the choice of fiscal instruments when policy decisions and technological transitions unfold over successive periods (Li et al., 2024). Indonesian research concerning proposed carbon taxation in the coal industry also identifies corporate default risk as a relevant consideration when assessing the financial consequences of environmental fiscal policy (Usman et al., 2025). These analytical differences indicate that the effectiveness of a corrective tax depends on the interaction between the externality being addressed, the adjustment capacity of regulated firms, and the time horizon over which policy consequences are evaluated.

Taxation can produce consequences beyond the correction of externalities because fiscal charges influence production costs, investment decisions, trade competitiveness, and consumer

expenditure. Research on the Indonesian cocoa industry examines the relationship between taxation burdens and industrial competitiveness, demonstrating the relevance of sector-specific economic conditions when assessing fiscal policy (Murwendah & Desyani, 2023). The potential removal of value-added tax exemptions on marine and fishery imports has also been examined through an ex-ante computable general equilibrium approach, providing an example of how tax-policy changes can be evaluated across interconnected economic activities (Gultom & Nugroho, 2026). These studies concern different taxation objectives and cannot automatically be interpreted as evidence of corrective taxation, since a fiscal instrument must be linked to an identifiable externality before its corrective function can be established. Research on taxation costs and renewable-energy transition in Indonesia raises an additional concern regarding the relationship between fiscal burdens and economic activities associated with environmental policy objectives (Arifafarina & Rosdiana, 2026). Table 1 compares the economic mechanisms and principal evaluation requirements of taxation and subsidy instruments according to the market problems they are intended to address.

Table 1. Comparative Mechanisms of Taxation and Subsidy Policies in Correcting Market Failures

Fiscal Instrument	Market Concern	Economic Mechanism	Main Evaluation Consideration
Carbon tax	Negative environmental externalities	Increases the private cost of emitting activities	Emission reduction, tax incidence, and competitiveness
Motor vehicle fuel tax	Environmental costs associated with fuel consumption	Raises the cost of fuel-intensive consumption	Price responsiveness and distributional burden
Production or input subsidy	Insufficient production incentives where a relevant market failure exists	Reduces eligible production costs	Additional output, beneficiary targeting, and fiscal cost
Clean-technology subsidy	Underinvestment in socially beneficial technologies	Supports investment and technology adoption	Additionality, effectiveness, and budgetary sustainability
Tax and subsidy combination	Concurrent environmental and distributional concerns	Combines corrective price signals with targeted financial support	Welfare distribution, policy coordination, and implementation costs

The classification presented in Table 1 indicates that taxation and subsidies operate through different incentive mechanisms and cannot be evaluated through identical fiscal performance indicators. Corrective taxation primarily changes the private cost of activities associated with external damages, whereas subsidies reduce selected costs or strengthen incentives for activities whose social benefits exceed their private returns. Comparative modeling of carbon taxation and clean subsidies demonstrates that the relative suitability of these instruments depends on the policy conditions and economic constraints under examination (Wiskich, 2024). The distinction also applies to agricultural markets, where minimum support prices and production cost subsidies can produce different consequences for farmers and consumers despite pursuing related support objectives (Chintapalli & Tang, 2022). Dynamic analysis of carbon taxes and decarbonization subsidies further indicates that combined instruments may require coordination across investment decisions and policy periods rather than independent determination of fiscal rates (Li et al., 2024). Tax receipts should therefore be distinguished from corrective welfare gains, just as increased subsidy expenditure should not be treated as sufficient evidence of socially beneficial production. The comparative framework identifies instrument suitability through the correspondence between the targeted market failure, expected behavioral responses, distributional consequences, and public expenditure requirements.

Subsidies are economically relevant when market participants receive insufficient private compensation for activities that generate additional benefits for society. Public support can reduce the financial barriers associated with socially beneficial investment, service provision, or technological adoption, although the existence of a desirable activity does not independently demonstrate the presence of a positive externality. Gautam (2023) evaluates sanitation interventions through a welfare framework that incorporates external effects, illustrating why benefits received outside direct market transactions matter for public expenditure decisions. Subsidy arrangements in agricultural wholesale markets have also been modeled under yield uncertainty, indicating the importance of production conditions when assessing financial support mechanisms (Dan et al., 2023). Comparative research on minimum support prices and cost subsidies demonstrates that the welfare implications of producer assistance depend on the chosen instrument and its consequences for both farmers and consumers (Chintapalli & Tang, 2022). An economically justified subsidy must consequently be assessed according to the additional activity it encourages, the social benefits attributable to that activity, and the fiscal resources required to achieve the intended adjustment.

The distributional consequences of subsidy policies depend on how financial assistance changes production costs, market prices, quantities supplied, and the allocation of economic benefits. Research comparing fixed and variable cost subsidies across profit-oriented, nonprofit, and mixed markets demonstrates that institutional characteristics can influence the welfare effects of alternative subsidy arrangements (Jegers et al., 2024). Agricultural policy analysis incorporating input and output subsidies examines farmer welfare, income disparities, and consumer surplus, establishing the relevance of evaluating distributional consequences alongside production incentives (Tang et al., 2024). Firm-level decisions within supply chains may also respond differently to government support when consumer surplus is incorporated into the relevant analytical model (Xiao et al., 2024). The relationship between intervention and aggregate welfare is further illustrated by Indonesian dairy-policy research examining how mandatory fresh-milk absorption arrangements affect the economic interests of different stakeholders (Agustia et al., 2026). Although mandatory absorption is not equivalent to a fiscal subsidy, its welfare implications demonstrate why support-oriented interventions cannot be judged exclusively through changes in producer benefits. Subsidies may increase economically desirable activity under appropriate conditions, but poorly calibrated assistance can encourage production beyond socially efficient levels or transfer public resources without generating commensurate additional welfare.

The potential combination of corrective taxes and targeted subsidies introduces a further policy choice concerning the coordination of incentives, financing arrangements, and social protection objectives. Experimental research on policy packaging investigates whether combining taxation and subsidies can address public resistance to Pigouvian taxes, identifying acceptance as a consideration alongside the theoretical efficiency of corrective instruments (Andreassen et al., 2024). Comparative evaluation of fiscal responses to energy-price crises provides an additional basis for examining how alternative instruments may differ in their economic consequences when governments face significant price disturbances (Duparc-Portier & Figus, 2024). Research on fossil-fuel subsidy removal considers economic welfare and environmental quality under alternative policy arrangements, indicating that the withdrawal of existing support must also be evaluated through its broader consequences (Okorie & Wesseh, 2024). A coordinated fiscal arrangement may retain incentives to reduce harmful activities while providing targeted assistance for adjustment costs or socially beneficial investments, provided that the respective interventions address identifiable policy objectives. The appropriateness of such arrangements remains conditional on fiscal capacity, beneficiary selection, administrative feasibility, and the extent to which the resulting welfare improvements exceed the economic costs of implementation.

Fiscal Policy Implementation, Distributional Equity, and an Integrated Framework for Market Failure Correction

The implementation of corrective fiscal policies requires governments to determine intervention levels that correspond to identifiable market distortions without introducing disproportionate economic burdens. Tax rates that underestimate external damages may fail to modify harmful production and consumption decisions, whereas excessive taxation can generate adjustment costs that extend beyond the intended policy objectives. Salsabila (2023) discusses the implementation

challenges of carbon taxation and the relevance of policy preparation, tax-rate design, and economic conditions to the adoption of environmental fiscal instruments. The possibility of government failure further complicates intervention because public authorities may introduce inefficiencies through inappropriate regulation, administrative limitations, or misaligned policy incentives (Chang, 2022). Indonesian literature concerning market failure and governmental intervention identifies institutional coordination and implementation capacity as relevant considerations for maintaining economic stability (Suwaibah, 2026). These difficulties indicate that effective fiscal correction requires reliable information concerning external damages, beneficiary characteristics, behavioral responses, and the costs of policy administration. The justification for public intervention must consequently distinguish the economic problem requiring correction from the institutional capacity available to implement and evaluate the proposed measure.

Distributional equity introduces a separate evaluative requirement because corrective policies can affect households and firms differently even when their aggregate welfare consequences are favorable. Støstad and Cowell (2024) examine inequality as an externality in tax design, identifying distributional considerations as relevant components of evaluating socially desirable fiscal arrangements. Welfare analysis of climate-related policies similarly demonstrates the importance of comparing policy costs and benefits rather than assessing intervention exclusively through the achievement of environmental objectives (Hahn et al., 2026). Comparative research on governmental responses to energy-price crises provides an additional basis for examining the welfare implications of alternative fiscal measures under economically disruptive conditions (Duparc-Portier & Figus, 2024). Environmental taxes may increase expenditure among energy-dependent households, while broadly distributed subsidies can direct public resources toward recipients whose consumption or production decisions would remain unchanged without assistance. The assessment of distributive consequences must therefore identify the groups bearing policy costs, the beneficiaries receiving fiscal support, and the relationship between these outcomes and the underlying objectives of market correction.

Environmental fiscal policy in Indonesia illustrates the interaction between corrective incentives, economic adjustment, and the institutional conditions surrounding energy transition. Research examining carbon taxation, energy policy, and sustainable development in Indonesia identifies the connection between environmental fiscal instruments and broader economic development objectives (Hartono et al., 2023). International analysis of fossil-fuel subsidy removal considers changes in economic welfare and environmental quality under alternative policy arrangements, demonstrating the relevance of evaluating reform beyond the immediate reduction of public expenditure (Okorie & Wesseh, 2024). Indonesian research concerning taxation costs and renewable-energy transition further identifies the potential tension between fiscal burdens and the financial requirements associated with low-carbon economic development (Arifafarina & Rosdiana, 2026). Carbon taxation can modify the relative costs of emissions-intensive activities, while subsidies directed toward cleaner technologies can reduce selected investment barriers and encourage changes in production systems. These mechanisms remain subject to differences in technological availability, capital requirements, energy dependence, and the capacity of firms and households to respond to fiscal incentives. Policy effectiveness consequently depends on whether the combination of corrective taxation and targeted financial support produces defensible environmental and economic benefits without generating disproportionate adjustment costs.

Institutional feasibility determines whether theoretically appropriate fiscal instruments can be translated into consistent and accountable public policies. Adrison (2024) examines fiscal sustainability in Indonesia, providing a relevant basis for considering the budgetary implications of taxation, subsidies, and recurring expenditure commitments. Research on proposed carbon taxation in the Indonesian coal industry identifies corporate default risk as an additional consideration when assessing the financial consequences of environmental fiscal measures (Usman et al., 2025). Institutional coordination, bureaucratic efficiency, and the consistency of governmental responsibilities also influence the effectiveness of market interventions, particularly when corrective policies involve multiple administrative authorities (Suwaibah, 2026). Weak monitoring arrangements can limit the identification of intended beneficiaries, obscure the allocation of fiscal resources, and prevent policymakers from distinguishing genuine market adjustments from unintended implementation effects. Table 2 presents an integrated conceptual framework for evaluating market-failure correction through

sequential assessment of intervention justification, instrument suitability, welfare implications, institutional feasibility, and policy monitoring.

Table 2. Integrated Fiscal Policy Evaluation Framework for Addressing Market Failure

Evaluation Stage	Analytical Focus	Required Evidence	Policy Assessment Criterion
Market failure diagnosis	Identify externalities, underprovision, or market distortions	Evidence of social costs, social benefits, or inefficient allocation	Intervention addresses a demonstrable market failure
Instrument selection	Compare corrective taxes, subsidies, and combined policies	Incentive mechanisms and expected behavioral responses	Instrument corresponds to the identified failure
Welfare and equity assessment	Examine effects on consumers, producers, and vulnerable groups	Distributional effects and expected welfare changes	Social benefits and burdens are explicitly evaluated
Fiscal and institutional feasibility	Assess implementation costs and governmental capacity	Budget requirements, administrative arrangements, and oversight	Policy is fiscally defensible and institutionally feasible
Monitoring and adjustment	Evaluate whether policy objectives are achieved	Implementation records and relevant outcome indicators	Policy can be reviewed and revised against observed outcomes

The framework presented in Table 2 establishes five complementary evaluation stages intended to connect the economic justification for intervention with its anticipated welfare consequences and implementation requirements. Market-failure diagnosis constitutes the initial stage because taxation or subsidy allocation cannot be classified as corrective without identifying the external cost, external benefit, or allocative distortion motivating public action. Research examining policy intervention and cassava competitiveness in South Lampung provides a sector-specific example of the importance of relating governmental measures to existing market conditions (Abriani et al., 2023). Instrument selection subsequently requires evaluating how alternative fiscal arrangements influence production decisions, consumption patterns, and the distribution of economic benefits among affected participants. Ex-ante analysis of value-added tax exemption removal on marine and fishery imports demonstrates the relevance of examining intersectoral economic responses when assessing changes in fiscal policy (Gultom & Nugroho, 2026). The final stages address fiscal feasibility, institutional accountability, and monitoring arrangements because corrective objectives do not eliminate the possibility that governmental action generates additional inefficiencies (Chang, 2022). The proposed framework should be interpreted as a conceptual evaluation structure rather than a validated policy-ranking model, since the literature synthesis did not estimate numerical weights, decision thresholds, or causal relationships among its components.

Indonesian agricultural policy studies provide differentiated examples of how production characteristics, market organization, and policy objectives influence the assessment of governmental intervention. Abriani et al. (2023) examine government policy and market-failure-related divergence in cassava competitiveness, indicating the relevance of commodity-specific economic conditions when interpreting policy outcomes. Rindayati et al. (2025) employ a policy analysis matrix to investigate production-center policy in Bali cattle farming, illustrating a separate approach to evaluating agricultural production incentives. Research concerning Indonesian dairy policies assesses the welfare implications of intervention for different stakeholders, reinforcing the need to distinguish producer benefits from broader market welfare (Agustia et al., 2026). Zega and Hakim (2024) investigate rice self-sufficiency and farmer welfare using dynamic panel analysis, introducing another policy setting in which production objectives and economic welfare require related but distinct assessments. Differences in their analytical methods, commodities, and policy instruments prevent direct numerical comparison, but their combined relevance supports the framework's requirement that fiscal intervention be evaluated against sector-specific evidence rather than generalized assumptions about producer support.

The principal conceptual contribution of the literature synthesis is the integration of market-failure diagnosis, fiscal instrument selection, welfare distribution, and implementation accountability within a common analytical sequence. Existing research has examined these relationships through distinct policy problems, leaving a need for a comparative structure that clarifies the conditions under which taxation, subsidies, or combined fiscal arrangements may be economically defensible. Dynamic modeling of carbon taxation and decarbonization subsidies demonstrates the relevance of considering intertemporal policy choices and technological adjustment when comparing fiscal instruments (Li et al., 2024). Research concerning externality control under uncertainty and endogenous market structure further establishes that regulatory suitability can depend on changes in the competitive environment following intervention (Di Corato & Maoz, 2023). Economic analysis of government subsidies in supply chains incorporating consumer surplus also provides a basis for examining how fiscal support interacts with firm decisions and welfare considerations (Xiao et al., 2024). The proposed framework connects these analytical concerns without treating findings obtained under different economic assumptions as directly comparable empirical estimates. Its contribution remains a structured conceptual synthesis that distinguishes the intended corrective function of fiscal policy from the behavioral, distributional, and institutional conditions required for that function to produce an improvement in social welfare.

The findings remain limited by the qualitative literature-based design, which did not involve original market observations, primary data collection, or independent statistical estimation of fiscal policy effects. The available methodological documentation also did not establish a reproducible systematic-search protocol, comprehensive screening records, or quantitative quality scores for the publications examined. Gautam (2023) demonstrates the relevance of ex-ante welfare evaluation for interventions involving externalities, indicating a methodological direction for research requiring explicit assessment of social benefits and costs. Welfare evaluation of climate-related policies further illustrates the importance of quantifying policy consequences when sufficient economic evidence is available (Hahn et al., 2026). Indonesian analysis employing a computable general equilibrium model to examine changes in value-added tax exemptions provides an additional reference for investigating interconnected economic responses to fiscal measures (Gultom & Nugroho, 2026). Future research should examine observable external damages, fiscal expenditures, behavioral responses, distributional effects, and implementation outcomes to evaluate the applicability of the proposed framework and determine whether corrective taxation and subsidy arrangements generate measurable improvements in economic efficiency and social welfare.

CONCLUSION

Market failure arises when prices do not fully reflect social costs and benefits, resulting in inefficient resource allocation or inequitable outcomes. Government intervention through taxes and subsidies can help correct these conditions, provided that the selected instruments correspond to identifiable market distortions and generate social benefits that justify their implementation costs. Corrective taxes, including carbon taxes and levies related to fuel consumption, can incorporate external costs into economic decisions and discourage activities that impose environmental and social losses. Subsidies can encourage the provision of socially beneficial goods and services, support cleaner technologies, and improve access for economically vulnerable groups. The comparative synthesis established that the welfare implications of both instruments depend on market characteristics, behavioral responses, fiscal expenditure, and the distribution of economic benefits and burdens. The resulting conceptual framework integrated market-failure diagnosis, fiscal instrument selection, welfare and equity assessment, institutional feasibility, and policy monitoring as complementary requirements for evaluating corrective government intervention.

The effectiveness of taxation and subsidy policies remains dependent on appropriate calibration, accurate beneficiary targeting, fiscal sustainability, and transparent institutional implementation. Taxes introduced without adequate consideration of purchasing power may impose disproportionate burdens on lower-income households and small enterprises, whereas poorly targeted subsidies can increase public expenditure and create additional market distortions. Governments should assess potential economic and distributional consequences before modifying fiscal instruments, establish eligibility criteria based on current and verifiable information, and ensure transparent reporting of tax revenues, subsidy allocations, and relevant environmental outcomes. Coordinated taxation and

subsidy arrangements may address negative externalities while supporting socially beneficial activities, although their suitability must be determined by the characteristics of the market failure rather than a general preference for intervention. The qualitative literature-based design limits the findings to conceptual and comparative interpretations without providing independent empirical estimates of policy effectiveness. Future research should examine observable fiscal receipts, behavioral adjustments, beneficiary distributions, environmental indicators, and implementation costs to evaluate whether specific tax and subsidy policies generate measurable improvements in economic efficiency, social equity, and environmental sustainability.

REFERENCES

Abdul Baki, G., Benchekroun, H., & Marrouch, W. (2024). Emissions taxes under double-sided environmental externalities. *Economics Letters, 242*, Article 111884. https://doi.org/10.1016/j.econlet.2024.111884

Abriani, D. M., Lestari, D. A. H., & Haryono, D. (2023). The effect of goverment policy and market failure on divergence of cassava competitiveness in South Lampung. *Jurnal Manajemen dan Agribisnis, 20*(1), 130–141. https://doi.org/10.17358/jma.20.1.130

Adrison, V. (2024). Fiscal sustainability in Indonesia: Policies and progress. *Asian Economic Policy Review*, *19*(2), 224-247. https://doi.org/10.1111/aepr.12468

Agustia, D., Fitri, A., Andriyanty, R., Suryadi, D., Maifianti, K. S., & Sirait, S. (2026). Dampak kebijakan persusuan di Indonesia terhadap kesejahteraan stakeholder. *Mimbar Agribisnis, 12*(1). https://doi.org/10.25157/ma.v12i1.22465

Andreassen, G. L., Kallbekken, S., & Rosendahl, K. E. (2024). Can policy packaging help overcome Pigouvian tax aversion? A lab experiment on combining taxes and subsidies. *Journal of Environmental Economics and Management, 127*, Article 103010. https://doi.org/10.1016/j.jeem.2024.103010

Arifafarina, R., & Rosdiana, H. (2026). Examining the fiscal paradox in the cost of taxation and its impact on renewable energy transition in Indonesia. *Business Review and Case Studies, 7*(1), 65. https://doi.org/10.17358/brcs.7.1.65

Barus, E. B., & Wijaya, S. (2021). Penerapan pajak karbon di Swedia dan Finlandia serta perbandingannya dengan Indonesia. *Jurnal Pajak Indonesia, 5*(2), 256–279. https://doi.org/10.31092/jpi.v5i2.1653

Chang, C. H. (2022). Examining the Role of Government Intervention in Market Failure and Government Failure. *Journal of Applied Business & Economics*, *24*(5). https://doi.org/10.33423/jabe.v24i5.5550

Chintapalli, P., & Tang, C. S. (2022). Crop minimum support price versus cost subsidy: Farmer and consumer welfare. *Production and Operations Management, 31*(4), 1753–1769. https://doi.org/10.1111/poms.13642

Dan, B., Lei, T., Zhang, X., Liu, M., & Ma, S. (2023). Modeling of the subsidy policy in fresh produce wholesale markets under yield uncertainty. *Economic Modelling, 126*, Article 106413. https://doi.org/10.1016/j.econmod.2023.106413

Di Corato, L., & Maoz, Y. D. (2023). Externality control and endogenous market structure under uncertainty: The price vs. quantity dilemma. *Journal of Economic Dynamics and Control, 150*, Article 104640. https://doi.org/10.1016/j.jedc.2023.104640

Duparc-Portier, G., & Figus, G. (2024). How should governments respond to energy price crises? A horse-race between fiscal policies. *Energy Economics, 130*, Article 107284. https://doi.org/10.1016/j.eneco.2023.107284

Fahmi, F. S. D., & Riofita, H. (2025). Kebijakan ekonomi publik intervensi pemerintah terhadap eksternalitas dan ketimpangan pendapatan. *Jurnal Publikasi Sistem Informasi dan Manajemen Bisnis, 4*(2), 143–153. https://doi.org/10.55606/jupsim.v4i2.4052

Gautam, S. (2023). Quantifying welfare effects in the presence of externalities: An ex-ante evaluation of sanitation interventions. *Journal of Development Economics, 164*, Article 103083. https://doi.org/10.1016/j.jdeveco.2023.103083

Gultom, Y. A., & Nugroho, A. S. (2026). The effect of revocation of value added tax exemption on marine and fishery imports: CGE model ex-ante analysis. *Journal of Indonesian Economy and Business, 41*(1), 164–194. https://doi.org/10.22146/jieb.v41i1.12550

Hahn, R. W., Hendren, N., Metcalfe, R. D., & Sprung-Keyser, B. (2026). A welfare analysis of policies impacting climate change. *American Economic Review, 116*(7), 2368–2421. https://doi.org/10.1257/aer.20250166

Hartono, D., Indriyani, W., Iryani, B. S., Komarulzaman, A., Nugroho, A., & Kurniawan, R. (2023). Carbon tax, energy policy, and sustainable development in Indonesia. *Sustainable Development, 31*(4), 2332–2346. https://doi.org/10.1002/sd.2511

Jegers, M., Buts, C., & Van Puyvelde, S. (2024). Welfare effects of variable and fixed cost subsidies in profit, non-profit and mixed markets. *Managerial and Decision Economics, 45*(6), 4138–4156. https://doi.org/10.1002/mde.4238

Kurniawati, L. (2018). Pajak bahan bakar kendaraan bermotor sebagai environmental tax. *Jurnal Pajak Indonesia, 1*(2), 57–66. https://doi.org/10.31092/jpi.v1i2.192

Li, Y., Su, X., & Bai, M. (2024). A stochastic dynamic programming model for the optimal policy mix of the carbon tax and decarbonization subsidy. *Journal of Environmental Management, 353*, Article 120242. https://doi.org/10.1016/j.jenvman.2024.120242

Murwendah, & Desyani, W. (2023). High tax burden reduces competitiveness: A study of the cocoa industry in Indonesia. *Journal of Indonesian Economy and Business, 38*(3), 211–228. https://doi.org/10.22146/jieb.v38i3.4408

Okorie, D. I., & Wesseh, P. K., Jr. (2024). Fossil fuel subsidy removal, economic welfare, and environmental quality under alternative policy schemes. *Journal of Cleaner Production, 450*, Article 141991. https://doi.org/10.1016/j.jclepro.2024.141991

Rindayati, W., Gerhana, & Priyarsono, D. S. (2025). The impact of production center policy on Bali cattle farming in Southeast Sulawesi, Indonesia: A policy analysis matrix approach. *Tropical Animal Science Journal, 48*(4), 374–384. https://doi.org/10.5398/tasj.2025.48.4.374

Salsabila, D. (2023). Tantangan penerapan pajak karbon di beberapa negara: Kisah sukses untuk implementasi di Indonesia. *Jurnal Keuangan Negara dan Kebijakan Publik, 3*(1), 27–33. https://doi.org/10.31092/jaa.v3i1.1720

Selvi, S., Rahmi, N., & Rachmatulloh, I. (2020). Urgensi penerapan pajak karbon di Indonesia. *Jurnal Reformasi Administrasi, 7*(1), 29–34. https://doi.org/10.31334/reformasi.v7i1.845

Støstad, M. N., & Cowell, F. (2024). Inequality as an externality: Consequences for tax design. *Journal of Public Economics, 235*, Article 105139. https://doi.org/10.1016/j.jpubeco.2024.105139

Suwaibah, S. (2026). Dinamika kegagalan pasar dan peranan pemerintah dalam menopang stabilitas ekonomi nasional. *Diversity: Jurnal Ilmiah Pascasarjana, 6*(1). https://doi.org/10.32832/diversityjournal.v6i1.22465

Tang, C. S., Wang, Y., & Zhao, M. (2024). The impact of input and output farm subsidies on farmer welfare, income disparity, and consumer surplus. *Management Science, 70*(5), 3144–3161. https://doi.org/10.1287/mnsc.2023.4850

Usman, Z., Achsani, N. A., & Mulyati, H. (2025). Assessing the impact of carbon taxation plan of coal companies default risk in Indonesia. *Business Review and Case Studies, 6*(1), 40. https://doi.org/10.17358/brcs.6.1.40

Wiskich, A. (2024). A carbon tax versus clean subsidies: Optimal and suboptimal policies for the clean transition. *Energy Economics, 132*, Article 107410. https://doi.org/10.1016/j.eneco.2024.107410

Xiao, Y., Zhang, X., & Wu, X. (2024). Firm decisions and government subsidies in a supply chain with consumer surplus consideration. *Naval Research Logistics, 71*(8), 1113–1132. https://doi.org/10.1002/nav.22207

Zega, Y., & Hakim, D. B. (2024). The effect of rice self-sufficiency on farmers' welfare in Indonesia: A dynamic panel data approach. *Jurnal Ekonomi dan Kebijakan Pembangunan, 13*(2), 133–153. https://doi.org/10.29244/jekp.13.2.2024.133-153