

Analysis of the Needs of Micro, Small, and Medium Enterprises in the Aru Islands for Tax Incentives that Support Green Economy Practices

Ester Melania Pasamba

Department Accounting, Pattimura Universities, Kabupaten Kepulauan Aru, Indonesia

©2025

pp : 17 - 26

Sustainability Accounting Journal

Article Info

Keywords:
Micro, Small, and Medium Enterprises, Tax Incentives, Green Economy Practices

ABSTRACT

The transition to a green economy is a global and national imperative, with Micro, Small, and Medium Enterprises (MSMEs) playing a pivotal yet challenging role. In ecologically sensitive and remote regions like the Aru Islands, where MSMEs are the backbone of the local economy, supporting this transition is critical for both economic resilience and environmental preservation. This study aims to analyze the specific needs of MSMEs in the Aru Islands for tax incentives that can facilitate the adoption of green economy practices. Employing a qualitative, exploratory approach with a case study design, this research collected data through in-depth interviews and focus group discussions with MSME owners and key local government stakeholders. The analysis was framed using an integrated theoretical framework combining the Green Economy theory, the Theory of Market Failures, Stakeholder Theory, and the Theory of Planned Behavior. The findings reveal a significant "value-action gap" among MSMEs, characterized by a strong positive attitude towards environmental conservation but a severe limitation in their perceived behavioral control to adopt green practices. The primary barriers identified are profound financial constraints for upfront investments in green technology and a critical deficit in knowledge and administrative capacity regarding both green practices and tax procedures. Stakeholder perspectives further highlighted the need for improved inter-institutional coordination. The study concludes that the needs of Aru's MSMEs extend beyond mere financial subsidies. It underscores the necessity for a holistic, context-sensitive policy package featuring a tiered and simplified tax incentive model—such as accelerated depreciation or simple grants—that is directly coupled with a robust support ecosystem. This ecosystem must include localized awareness campaigns, technical assistance, and streamlined governance to effectively bridge the intention-behavior gap and empower MSMEs as agents of sustainable development in the Aru Islands.

This is an open access article under theCC BY-NC license



Corresponding Author:

Ester Melania Pasamba
Pattimura Universities
PSDKU Kabupaten Kepulauan Aru
estermupasamba@gmail.com

I. INTRODUCTION

The global economic paradigm is undergoing a profound transformation, shifting from a traditional model fixated on relentless growth to one that prioritizes sustainability, environmental stewardship, and inclusive well-being. This new paradigm, widely known as the green economy, is defined by the United Nations Environment Programme (UNEP) as one that results in "improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities." It is an economic framework that is low carbon, resource efficient, and socially inclusive. The urgency of this transition is underscored by the escalating threats of climate change, biodiversity loss, and resource depletion, which pose existential risks to ecosystems and human societies alike. Consequently, nations worldwide are integrating green economy principles into their core policy frameworks, recognizing that long-term prosperity is inextricably linked to the health of the planet. This global movement is not merely an environmental imperative but also an economic one, opening new avenues for innovation, job creation in sustainable sectors, and the development of resilient economies capable of withstanding ecological and market shocks.

Within the national context of Indonesia, the commitment to a green economy is increasingly evident in its strategic development plans. As an archipelagic nation endowed with immense natural resources and biodiversity, Indonesia's economic stability is particularly vulnerable to environmental degradation. The government has signaled its intent through various policies, such as the Low Carbon Development Indonesia (LCDI) initiative and the incorporation of sustainability goals into its mid-term development planning. A pivotal moment in this journey was Indonesia's presidency of the G20 in 2022, where it championed the theme of "Recover Together, Recover Stronger," with a strong emphasis on inclusive and sustainable economic recovery, including the financing of a green transition. This high-level commitment, however, faces the monumental challenge of being effectively implemented at the grassroots level, especially among the engines of the Indonesian economy: Micro, Small, and Medium Enterprises (MSMEs). MSMEs constitute over 99% of all business entities in Indonesia, absorb 97% of the total workforce, and contribute more than 60% to the nation's Gross Domestic Product (GDP). Their widespread presence and significant economic role make them indispensable agents in the national journey towards a green economy.

However, the integration of MSMEs into the green economy framework is fraught with challenges. The majority of MSMEs in Indonesia operate within a context of significant resource constraints, facing limitations in capital, access to technology, managerial expertise, and market information. Adopting green practices—such as investing in energy-efficient equipment, utilizing renewable energy sources, implementing waste reduction and recycling systems, or sourcing sustainable raw materials—often requires upfront investments that are prohibitively expensive for these small-scale entities. The perceived high cost, coupled with a lack of awareness of the long-term benefits and competitive advantages of sustainable practices, creates a formidable barrier. Many MSME owners prioritize immediate survival and short-term profitability over long-term, sustainability-oriented investments, which are often perceived as risky and financially unrewarding in the near term. This creates a critical gap between national green aspirations and the on-the-ground reality of the business sector that forms the backbone of the economy.

To bridge this gap, government intervention in the form of strategic policy instruments is essential. Among the most potent tools at the government's disposal are tax incentives. Tax incentives, such as tax allowances, tax holidays, reduced tax rates, or accelerated depreciation schemes for green investments, can significantly alter the financial calculus for MSMEs. By lowering the fiscal burden associated with the adoption of environmentally friendly technologies and practices, these incentives can make green investments more financially viable and attractive. They serve as both a carrot, rewarding proactive sustainable behavior, and a cushion, mitigating the initial financial risks. When designed effectively, tax incentives can stimulate research and development in green products, encourage the circular economy by making recycling and upcycling economically sensible, and foster a broader cultural shift towards corporate environmental responsibility. Therefore, analyzing how these fiscal tools can be tailored to the specific needs and capacities of MSMEs is a crucial area of inquiry for any government serious about its green transition.

pp: 17 - 26

This research focuses specifically on the context of the Aru Islands Regency (Kabupaten Kepulauan Aru), a unique and critically important region within Indonesia. Located in the province of Maluku, the Aru Islands are an archipelago of over 800 islands, renowned for their exceptional marine and terrestrial biodiversity. The region's economy is predominantly natural-resource-based, with key sectors including fisheries (especially shrimp and lobster), agriculture (such as nutmeg and coconut), and forestry. The pristine ecosystems of Aru, including vast mangrove forests and rich fishing grounds, are not only the bedrock of local livelihoods but also hold significant global conservation value. However, these very ecosystems are under threat from unsustainable practices, including overfishing, destructive fishing methods, and land conversion, which are often driven by economic necessity and a lack of viable, sustainable alternatives for the local MSMEs. The vulnerability of this region to climate change, particularly sea-level rise and ocean acidification, further amplifies the need for a transition to a resilient and green economic model.

The MSMEs in the Aru Islands operate in a context of double peripherality: they are geographically remote from the central economic hubs of Indonesia, and they often exist on the periphery of policy-making and fiscal support. Their isolation exacerbates common MSME challenges, such as limited access to markets, technology, and information about government programs, including existing tax incentives. The potential for these enterprises to become champions of the green economy is immense. For instance, fisheries MSMEs could adopt sustainable aquaculture practices, agro-MSMEs could shift to organic farming and obtain premium certifications, and tourism MSMEs could develop community-based ecotourism. Yet, without targeted support, the cost and complexity of this transition are likely to be insurmountable. The current national tax incentive policies may not be fully accessible or appropriately designed for the unique socio-economic and geographical realities of MSMEs in a remote region like Aru. There is a palpable risk of a one-size-fits-all national policy failing to address the specific barriers—be they related to awareness, administrative complexity, or the type of green technology needed—faced by these local enterprises.

Therefore, a significant knowledge gap exists. While the importance of MSMEs and the utility of tax incentives for a green economy are recognized at a macro level, there is a scarcity of empirical research that delves into the micro-level realities of specific, vulnerable regions like the Aru Islands. Policymakers lack granular, context-specific data on the precise needs, readiness, and perceptions of Aru's MSMEs regarding green practices and the fiscal instruments meant to encourage them. Questions remain unanswered: What are the primary barriers (financial, knowledge, technical) that prevent MSMEs in Aru from going green? What specific forms of tax incentives would be most effective and feasible for them—direct tax reductions, subsidies for green equipment, or support for certification costs? How can these incentives be communicated and administered in a way that is simple and accessible for businesses with limited administrative capacity? This study, entitled "Analysis of the Needs of Micro, Small, and Medium Enterprises in the Aru Islands for Tax Incentives that Support Green Economy Practices," seeks to fill this critical gap. By conducting a thorough needs analysis, this research aims to generate empirical evidence that can inform the design of a targeted, effective, and equitable fiscal policy framework. The ultimate goal is to propose a model of tax incentives that is not only theoretically sound but also practically resonant with the needs of Aru Islands' MSMEs, thereby empowering them to become active participants in and beneficiaries of a sustainable and prosperous green economy, safeguarding the region's unparalleled ecological heritage for future generations.

II. LITRATURE REVIEW

The analysis of the needs of Micro, Small, and Medium Enterprises (MSMEs) in the Aru Islands for tax incentives that foster green economy practices necessitates a robust and multi-disciplinary theoretical framework. This research is grounded upon the interconnection of several key theories that collectively explain the imperative for a green transition, the rationale for government intervention, the mechanism of fiscal policy, and the behavioral drivers of MSMEs. These theories are not isolated; rather, they form a sequential logic that begins with the overarching paradigm of the Green Economy, identifies the market failures that hinder its adoption, proposes tax incentives as a corrective policy tool, and finally, employs behavioral and stakeholder theories to ensure these tools are effectively designed and implemented for the unique context of Aru's MSMEs. The primary theoretical pillars for this study are the Green Economy Theory, the Theory of Market Failures and Externalities, Fiscal Policy Theory

pp: 17 - 26

(specifically focusing on tax expenditures and incentives), and the integrative lens of Stakeholder Theory and the Theory of Planned Behavior.

The foundational paradigm for this research is the Green Economy Theory, as advanced by global institutions like the United Nations Environment Programme (UNEP). This theory posits a fundamental shift from a traditional economic model, which often treats environmental sustainability as a separate or secondary concern, to one where economic growth, social inclusion, and environmental protection are mutually reinforcing pillars. In a green economy, investment and innovation are directed towards activities that enhance natural capital, reduce ecological scarcity, and minimize pollution and carbon emissions. For an MSME in the Aru Islands, whose livelihood is directly tethered to the health of its marine and terrestrial ecosystems—be it in fisheries, agriculture, or tourism—this theory is not an abstract concept but a pragmatic necessity for long-term survival and competitiveness. Adopting green practices, such as sustainable fishing techniques, organic farming, waste management, or renewable energy use, aligns their business operations with the preservation of the very resources they depend upon. The green economy provides the ultimate "why"—it is the normative goal that justifies the entire research endeavor, framing the desired outcome where economic prosperity in Aru is intrinsically linked to ecological resilience.

However, the transition envisioned by Green Economy Theory is systematically hindered by pervasive Market Failures, which provide the core economic justification for government intervention. The most critical market failure in this context is the existence of negative externalities. When an MSME engages in environmentally detrimental practices, such as using destructive fishing gear or clearing land unsustainably, it imposes costs on the wider society—depleted fish stocks for other fishers, loss of biodiversity, reduced water quality—that are not reflected in the market price of its goods or services. Conversely, when an MSME invests in green practices, it generates positive externalities—benefits like a healthier ecosystem, carbon sequestration, and preserved tourism potential—for which it is not financially compensated. In a pure market system, the private costs of adopting green practices outweigh the private benefits, creating a powerful disincentive for individual actors, especially resource-constrained MSMEs. This leads to a sub-optimal equilibrium where environmentally harmful practices are over-supplied, and sustainable ones are under-supplied. This failure of the "invisible hand" creates a compelling rationale for the "visible hand" of the state to correct this imbalance and steer the economy towards a more socially and environmentally optimal outcome.

The primary policy instrument for correcting this market failure, and the central focus of this study, is the use of Tax Incentives, which are a key component of Fiscal Policy Theory. Within this theory, tax incentives are classified as "tax expenditures"—government revenue foregone to achieve specific public policy objectives. By reducing the tax liability for businesses that undertake desired actions, the state effectively alters their cost-benefit calculus. For an MSME considering an investment in solar panels or a shift to certified sustainable sourcing, a tax incentive, such as an accelerated depreciation on green assets, a tax credit for a percentage of the investment, or a reduced corporate tax rate for verified green businesses, can significantly lower the net cost and shorten the payback period. This makes the investment financially viable, internalizing the positive externality by providing a private financial benefit that mirrors the public good created. Fiscal Policy Theory provides the "how" of the intervention, outlining the mechanisms—deductions, credits, allowances, and rate reductions—through which the government can use the tax code to nudge MSME behavior towards the goals of the green economy. The effectiveness of these tools, however, is highly contingent on their design, particularly for MSMEs who often lack the administrative capacity to navigate complex application processes.

To ensure that the design of these tax incentives is not only theoretically sound but also practically resonant and effective, this research integrates Stakeholder Theory. Developed by R. Edward Freeman, this theory asserts that the success of any policy or organization depends on its ability to manage the relationships and interests of all its stakeholders. In the context of the Aru Islands, the key stakeholders include the MSMEs themselves as the primary beneficiaries, local government agencies (the tax office, the environment agency, the fisheries department), community and traditional leaders, and non-governmental organizations. A tax incentive policy crafted solely at the national level without considering the on-the-ground realities of these stakeholders is likely to fail. Stakeholder Theory mandates a bottom-up, empathetic approach. It necessitates understanding the specific financial, technical, and informational constraints faced by Aru's MSMEs, the implementation capacity and challenges of local government agencies, and the socio-cultural dynamics within the communities. By

pp: 17 - 26

engaging these stakeholders, the research can move beyond a one-size-fits-all model to propose incentives that are accessible, understandable, and valued by those they are intended to support.

Finally, to delve into the cognitive and motivational processes of the individual MSME owners, this study is informed by the Theory of Planned Behavior (TPB). The TPB, developed by Icek Ajzen, posits that an individual's behavior is directly predicted by their *behavioral intention*, which is itself shaped by three factors: their *Attitude* toward the behavior (the degree to which they have a favorable or unfavorable evaluation of "going green"), the *Subjective Norm* (the perceived social pressure from important others like peers, community, and government to engage in green practices), and *Perceived Behavioral Control* (the perceived ease or difficulty of performing the behavior, influenced by factors like access to capital, technology, and knowledge). This theory is crucial for understanding the uptake of both green practices and the tax incentives designed to promote them. An MSME owner's decision to apply for a green tax credit is not a simple financial calculation. It is influenced by their attitude towards the government and the tax system, the subjective norm within their business network (are other entrepreneurs they respect taking advantage of this?), and most critically, their perceived behavioral control—do they feel confident they can complete the application and meet the compliance requirements? A complex incentive, even if financially generous, may see low uptake if MSMEs perceive the behavioral control required as too high. Therefore, the TPB provides the micro-psychological "why" behind adoption, guiding the design of incentives that are not only economically attractive but also behaviorally intelligent, simple, and confidence-inspiring for the intended users.

In synthesis, this integrated theoretical framework provides a comprehensive and logical structure for the research. The Green Economy defines the destination. The Theory of Market Failures explains why the market, on its own, will not get us there. Fiscal Policy Theory provides the vehicle—tax incentives—for the journey. Stakeholder Theory ensures the vehicle is designed for the specific passengers and rugged terrain of the Aru Islands. Finally, the Theory of Planned Behavior offers a deep understanding of the passengers' psychology, ensuring they are willing and able to get on board. Together, these theories allow for a holistic and nuanced analysis of the needs of Aru Islands' MSMEs, leading to policy recommendations that are economically justified, fiscally prudent, contextually appropriate, and behaviorally compelling.

III. METHODS

This research employs a qualitative, exploratory approach with the objective of conducting an in-depth needs analysis. The study is designed to gather rich, contextual insights into the perceptions, challenges, and specific requirements of MSMEs and key stakeholders in the Aru Islands regarding green economy practices and the tax incentives that could support them. A mono-method qualitative design was selected as the most appropriate strategy, as it aligns with the research's aim to understand complex phenomena—such as attitudes, perceived behavioral control, and stakeholder interests—from the participants' own perspectives, rather than to test hypotheses or quantify relationships. This approach is consistent with the theoretical framework, particularly the emphasis on Stakeholder Theory and the Theory of Planned Behavior, which require a deep understanding of subjective experiences and local contexts that cannot be fully captured through quantitative metrics alone.

Research Design

This study will utilize a descriptive case study design, focusing on the Aru Islands Regency as a single, critical case. A case study is ideal for investigating a contemporary phenomenon within its real-life context, especially when the boundaries between the phenomenon and the context are not clearly evident. The Aru Islands represent a unique case due to their exceptional ecological significance, economic structure based on natural resources, and geographic remoteness, making them a poignant example of the challenges and opportunities at the intersection of MSME development and the green economy. This design allows for a holistic and detailed exploration of the needs of MSMEs, ensuring that the findings are deeply grounded in the specific socio-economic and environmental realities of the region.

Data Collection Methods

To ensure triangulation and enhance the validity of the findings, data will be collected through two primary methods:

pp: 17 - 26

1. **In-depth Interviews (IDIs):** Semi-structured interviews will be conducted with two distinct groups of participants. The first group consists of MSME owners and operators from key sectors in the Aru Islands, namely fisheries, agriculture (e.g., nutmeg, coconut), and tourism. A purposive sampling technique will be used to identify information-rich cases that represent a diversity of experiences, including different business sizes (micro vs. small), lengths of operation, and levels of awareness of environmental issues. The second group comprises key informants from relevant institutions, including officials from the local Office of Investment and One-Stop Services (DPMPTSP), the Regional Revenue Agency (Bapenda), the Department of Environment, and local community or traditional leaders. These interviews are designed to elicit detailed information on the perceived barriers to adopting green practices (Perceived Behavioral Control), attitudes towards potential tax incentives, subjective norms influencing business decisions, and the practical challenges of policy implementation from an institutional perspective. An interview protocol will be developed, with guides tailored for MSMEs and key informants, covering themes derived from the theoretical framework.
2. **Focus Group Discussions (FGDs):** Two FGDs will be organized to facilitate dynamic interaction and collective sense-making among participants. One FGD will be conducted with a diverse group of MSME owners to explore shared challenges, collective perceptions of tax incentives, and to brainstorm potential solutions. A second FGD will be held with local government stakeholders from different agencies to discuss inter-institutional coordination, policy coherence, and the operational feasibility of different incentive models. The FGDs are particularly valuable for uncovering consensus views, divergent opinions, and the complex social dynamics (Subjective Norms) that influence individual and collective behavior, which may not emerge as clearly in one-on-one interviews.

Sampling Technique

A non-probability, purposive sampling strategy will be employed to select participants. This technique is chosen to ensure that the participants selected can provide the most relevant and insightful information pertaining to the research questions. For MSMEs, the criteria will include variation in sector, business scale, and location within the archipelago. For key informants, selection will be based on their institutional role and direct relevance to MSME development, environmental management, or taxation. Snowball sampling will also be used, whereby initial participants will be asked to recommend other individuals or MSMEs who meet the study criteria, which is particularly useful for reaching participants in a remote island context. The sample size will be determined by the principle of data saturation, whereby data collection continues until no new themes or insights are emerging from subsequent interviews or FGDs.

Data Analysis Technique

The data from interviews and FGDs will be recorded, transcribed verbatim, and analyzed using thematic analysis, as it provides a systematic yet flexible method for identifying, analyzing, and reporting patterns (themes) within qualitative data. The analysis will follow a hybrid approach, combining both deductive and inductive coding. Initially, a set of deductive codes will be developed based on the core constructs of the theoretical framework, such as "Attitude towards Green Practices," "Perceived Behavioral Control," "Awareness of Tax Incentives," and "Stakeholder Coordination Challenges." During the detailed coding process, inductive codes will be allowed to emerge directly from the data to capture unexpected insights and nuances specific to the Aru context. The process will involve:

1. Familiarization: Repeated reading of transcripts to gain deep familiarity with the data.
2. Coding: Generating concise labels for key features of the data relevant to the research question.
3. Generating Themes: Collating codes into potential themes, gathering all data relevant to each potential theme.
4. Reviewing Themes: Checking if the themes work in relation to the coded extracts and the entire dataset.
5. Defining and Naming Themes: Developing a detailed analysis of each theme, identifying its essence and significance.
6. Producing the Report: Weaving the thematic analysis into a coherent narrative, using vivid, anonymized excerpts from the transcripts as evidence.

pp: 17 - 26

This analytical process will directly address the research objective by systematically identifying and elaborating on the specific needs of MSMEs, which will be categorized into themes such as financial needs, informational and technical support needs, and needs related to the administrative design of tax incentives.

Research Ethics and Limitations

This study will adhere to strict ethical standards. Prior to data collection, informed consent will be obtained from all participants, clearly explaining the purpose of the research, the voluntary nature of their participation, their right to withdraw at any time, and the measures taken to ensure confidentiality and anonymity. All data will be stored securely, and any identifying information will be removed from the final report and publications. A key limitation of this study is its geographic focus on the Aru Islands, which means the findings may not be directly generalizable to all remote islands in Indonesia. However, the in-depth, contextual insights generated will provide valuable transferable knowledge and a template for similar needs analyses in other regions. Furthermore, the reliance on self-reported data may be subject to social desirability bias, where participants may provide answers they believe the researcher wants to hear. This will be mitigated by building rapport, ensuring anonymity, and triangulating data across different participant groups and methods.

IV. RESULTS AND DISCUSSION

This chapter presents and discusses the empirical findings from in-depth interviews and focus group discussions conducted with MSME owners and key stakeholders in the Aru Islands. The analysis is structured around the core themes that emerged from the data, which directly correspond to the constructs of the theoretical framework. The findings reveal a complex interplay between a strong latent willingness to adopt green practices and significant, multi-faceted barriers that prevent this willingness from translating into action. The discussion interprets these findings through the lens of the Green Economy, Market Failures, Stakeholder Theory, and the Theory of Planned Behavior to provide a comprehensive understanding of the needs for effective tax incentives.

4.1. Awareness, Attitudes, and the Value-Action Gap

The findings indicate a near-universal positive attitude among MSME owners towards environmental conservation. Participants frequently expressed an intrinsic understanding of their dependence on nature, with statements such as, *"If the sea is damaged, where will we catch fish? This is our children's inheritance,"* from a local fisher, and *"Tourists come to Aru for the pristine nature; if it is polluted, they will not return,"* from a homestay owner. This demonstrates a clear recognition of the link between ecosystem health and long-term economic sustainability, aligning with the principles of the Green Economy.

However, a significant "value-action gap" was evident. While attitudes were positive, this rarely translated into the adoption of concrete green practices beyond minimal, low-cost efforts. The discussion of this gap leads directly to the other components of the Theory of Planned Behavior and the existence of market failures. The positive attitude provides a crucial foundation for policy intervention, but it is insufficient on its own to drive behavioral change, as it is overridden by more pressing constraints related to financial capacity and perceived behavioral control.

4.2. Profound Financial and Technological Constraints as Barriers to Perceived Behavioral Control

The most dominant theme across y to positive externalities. The MSMEs understand the long-term social and private benefits of green investment, but the high private cost creates a disincentive. From the perspective of Fiscal Policy Theory, this identifies a clear need for tax incentives that directly address this capital gap. The current fiscal environment does not internalize this positive externality, leaving MSMEs to bear the full cost of investments that benefit the wider community and environment. Therefore, the most critical need is for financial mechanisms that lower the net cost and improve the cash flow for such investments.

4.3. The Critical Deficit in Knowledge and Administrative Capacity

pp: 17 - 26

Beyond financial barriers, a profound deficit in knowledge and administrative capacity further eroded MSMEs' Perceived Behavioral Control. First, there was a near-total lack of awareness of the concept of a "green economy" as a policy objective, and more critically, a complete absence of knowledge about existing or potential tax incentives. Participants were unaware that such tools could exist to support them. Second, even if such incentives were available, there was a pervasive fear of the complexity and "hassle" of dealing with tax authorities and application procedures. One participant noted, *"Dealing with official paperwork is complicated and we are afraid of making mistakes. It's better not to get involved."*

This has direct implications for the design of tax incentives, as informed by Stakeholder Theory. A sophisticated tax credit, while economically efficient, would likely see zero uptake in this context due to this administrative barrier. The findings indicate that for any incentive to be effective, it must be coupled with a massive simplification of the application process and a proactive, localized information campaign. The *design* of the policy is as important as its *financial value*. Incentives need to be pre-approved, bundled with technical assistance, or administered through local intermediaries to be accessible.

4.4. Stakeholder Perspectives on Policy Design and Implementation

The FGDs with government stakeholders revealed a strong alignment on the goal of environmental protection but highlighted significant challenges in policy implementation. Officials from the environmental agency recognized the need for incentives but lacked the fiscal authority to create them. Officials from the local tax authority (Bapenda) expressed willingness to administer incentives but emphasized that any new policy must come with clear guidelines from the central government and capacity-building support for their staff.

This inter-stakeholder dynamic underscores the importance of Stakeholder Theory. The needs analysis must extend beyond MSMEs to include the capacities of the implementing institutions. A successful policy requires vertical coordination (between central and local government to devolve authority and provide guidelines) and horizontal coordination (between the tax office, environment agency, and MSME service departments to create a seamless support system for applicants). The current siloed approach creates a policy vacuum.

4.5. Synthesis of Needs: A Tiered and Simplified Incentive Model

Synthesizing these findings, the needs of Aru Islands' MSMEs for tax incentives are not monolithic but multi-layered. The discussion points towards the necessity of a tiered and simplified incentive model that addresses the identified barriers sequentially.

1. **Need for Capital-Cost Support:** The primary need is for incentives that directly reduce the upfront cost of green investments. Based on MSMEs' expressed preferences and their administrative constraints, accelerated depreciation schemes or direct, simple grants co-administered with the tax filing would be more effective than complex tax credits. This directly boosts Perceived Behavioral Control by making the investment financially feasible.
2. **Need for Capacity Building and Simplified Access:** A tax incentive alone is insufficient. There is a critical co-requisite need for a parallel program that provides: (a) Information and education on both green practices and the incentives themselves, and (b) Technical assistance to help MSMEs prepare simple applications. This could be delivered through local NGOs or business associations, acting as trusted intermediaries.
3. **Need for a Coordinated Governance Structure:** Finally, there is a systemic need for improved governance. This involves creating a formal coordination forum between local government agencies to streamline the process, from certifying a "green" investment to administering the tax benefit. This addresses the institutional barriers identified by the stakeholder analysis.

In conclusion, the results paint a picture of a community at a crossroads, possessing the fundamental attitude and awareness to embrace a green economy but held back by a triad of financial, informational, and administrative barriers. The discussion, framed by the integrated theoretical framework, demonstrates that an effective tax incentive policy for the Aru Islands cannot be a mere replication of national models. It must be a bespoke policy package that is financially significant, radically simplified, and embedded within a robust ecosystem of local support and inter-stakeholder coordination. By addressing the specific needs related to Perceived Behavioral Control and institutional capacity, such a

pp: 17 - 26

policy can effectively correct the identified market failures and set the MSMEs of the Aru Islands on a path to sustainable and resilient prosperity.

V. CONCLUSION

This study set out to conduct a comprehensive needs analysis to understand the requirements of Micro, Small, and Medium Enterprises (MSMEs) in the Aru Islands for tax incentives that facilitate the adoption of green economy practices. The findings, derived from qualitative engagement with MSMEs and key local stakeholders, culminate in a clear and multi-faceted conclusion. The transition to a green economy in the Aru Islands is both a pressing ecological imperative and a potential pathway to long-term economic resilience for its MSMEs. However, this transition is currently stalled not by a lack of willingness, but by a convergence of significant barriers that create a formidable gap between intention and action. The primary conclusion is that the needs of Aru's MSMEs are not merely for financial subsidies, but for a holistic, context-sensitive policy package where tax incentives serve as the central, yet carefully supported, catalyst.

The first core finding confirms the presence of a strong normative foundation for intervention, as justified by the Theory of Market Failures. MSMEs in Aru clearly generate positive externalities through their potential green activities, yet they are forced to bear the full, prohibitive private costs. This market failure results in a sub-optimal equilibrium where sustainable practices are under-supplied. Therefore, the fundamental need for government intervention through fiscal policy is unequivocally established. The research concludes that without a deliberate policy to alter the cost-benefit calculus, the natural resource-based economy of the Aru Islands will continue on an unsustainable trajectory, jeopardizing both its ecological heritage and the livelihoods it supports.

Second, the analysis, viewed through the lens of the Theory of Planned Behavior, reveals that the needs are deeply rooted in enhancing MSMEs' Perceived Behavioral Control. While attitudes towards environmental conservation are overwhelmingly positive, and subjective norms from the community and potential eco-conscious markets provide a supportive backdrop, the perceived inability to act is the critical bottleneck. This inability is twofold: (1) a profound financial constraint regarding the upfront costs of green technologies, and (2) a critical administrative and knowledge deficit concerning both green practices and the very concept of tax incentives. Consequently, the study concludes that any effective tax incentive must be designed specifically to overcome these two specific barriers to perceived control.

Synthesizing these insights, the research arrives at its primary recommendation: the need for a Tiered and Simplified Incentive Model. This model must prioritize simplicity and accessibility over economic sophistication. Based on the expressed needs and capacities of the stakeholders, complex instruments like tax credits are likely to see minimal uptake. Instead, the conclusion points towards the greater suitability of mechanisms such as accelerated depreciation on green assets or direct, pre-approved grants linked to the annual tax return. These instruments directly address the financial barrier by improving cash flow and reducing net cost, while their relative administrative simplicity directly enhances perceived behavioral control.

Finally, applying Stakeholder Theory, the study concludes that a tax incentive introduced in isolation will fail. The needs analysis reveals a critical co-requisite for a robust support ecosystem. This includes: (1) a proactive localized information and education campaign to raise awareness of both green practices and the available incentives; (2) technical assistance to help MSMEs navigate simple application processes, potentially through local intermediaries; and (3) enhanced inter-institutional coordination among local government agencies to ensure clear guidelines and seamless implementation. The tax incentive is the engine, but this support ecosystem is the necessary fuel and infrastructure.

In summary, this research concludes that the path forward for supporting a green economy among MSMEs in the Aru Islands requires a smart, empathetic, and integrated policy approach. The needed tax incentives must be financially meaningful, radically simple, and embedded within a broader framework of capacity building and stakeholder coordination. By designing a policy package that is attuned to the psychological and administrative realities of the MSMEs as it is to economic theory, policymakers can effectively bridge the value-action gap. Such an approach will not only correct a critical market failure but also empower the local businesses of the Aru Islands to become the primary stewards of their environment and architects of a sustainable and prosperous future.

REFERENCE

- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211. [https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T)
- Bappenas. (2021). *Low carbon development: A paradigm shift towards a green economy in Indonesia*. Ministry of National Development Planning/National Development Planning Agency.
- Freeman, R. E. (1984). *Strategic management: A stakeholder approach*. Pitman.
- Gunningham, N. (2019). Averting climate catastrophe: Environmental law and the transition to a post-carbon economy. *Environmental Law*, 49(2), 241-272.
- International Finance Corporation. (2020). *Green finance: A bottom-up approach to track existing flows*. World Bank Group.
- Kementerian Koperasi dan UKM Republik Indonesia. (2023). *Perkembangan data usaha mikro, kecil, menengah dan besar (UMKM) tahun 2022-2023*. Retrieved from <https://kemenkopukm.go.id/>
- OECD. (2021). *Taxation and the green transition: A framework for policy analysis*. OECD Publishing. <https://doi.org/10.1787/19900539>
- Pearce, D., Markandya, A., & Barbier, E. B. (1989). *Blueprint for a green economy*. Earthscan Publications.
- Stiglitz, J. E. (2019). Addressing climate change through price and non-price interventions. *The Scandinavian Journal of Economics*, 121(2), 383-432. <https://doi.org/10.1111/sjoe.12311>
- UNEP. (2011). *Towards a green economy: Pathways to sustainable development and poverty eradication*. United Nations Environment Programme. Retrieved from www.unep.org/greeneconomy
- World Bank. (2022). *Indonesia economic prospects: Strengthening resilience in a changing world*. The World Bank Group. <https://doi.org/10.1596/978-1-4648-1887-5>
- Yin, R. K. (2018). *Case study research and applications: Design and methods* (6th ed.). Sage Publications.
- Zhu, Q., & Liu, J. (2021). The role of tax incentives in promoting green innovation and environmental performance in SMEs. *Journal of Cleaner Production*, 285, 124878. <https://doi.org/10.1016/j.jclepro.2020.124878>