

Multi-Business Policy Model for The Economic Development: A Case of Communities around Forests in Indonesia

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Abstract

This research attempts to investigate, assess and test the key factor influencing the economic growth of communities around forests in Indonesia. The study employed a mixed-methods approach, integrating both qualitative and quantitative techniques. Qualitative data was gathered through in-depth interviews with managers of Indonesian forest management firms, complemented by observations and documentation. The subsequent phases of data analysis involved data reduction, visualization, and verification. Quantitative data were gathered via a survey questionnaire completed by 100 managers of Indonesian forest management organizations, which were then analyzed using partial least squares (PLS). The research identified several qualitative factors that are necessary for the communities surrounding forests in Indonesia, including a multi-business policy and sustainable forest management. The quantitative research results prove that Multi Business Policy positively affects Economic Development of Community around Forests, Multi Business Policy positively affects Sustainable Forest Management, Sustainable Forest Management positively affects Economic Development of Community around Forests, and Sustainable Forest Management mediates the relationship between Multi Business Policy to Economic Development of Community around Forests. Policies and regulations regarding market certainty and sales of the results of multi-community businesses are needed which are guaranteed by the government.

Keywords: Multi Business Policy, Sustainable Forests Management, Economic Development, Communities Around Forests

INTRODUCTION

To develop a multi-business policy model for the economic development of communities around forests, it is essential to consider various strategies and initiatives that have been successful in enhancing economic benefits from forest resources. Several studies highlight the importance of diversification, collaboration, and innovation in forest-dependent communities to optimize economic gains (Schooling & Cumming, 2005). Implementing strategies such as the development of non-timber forest product (NTFP) multi-business forestry can significantly increase the value and benefits derived from forests, contributing to sustainable forest management and prosperous communities (Nurhadi, Riyadi, Rozikin, & Nuh, 2024; Safitri, Hardjanto, & Sundawati, 2024).

Integrating biodiversity conservation with economic development is crucial for the sustainable utilization of forest resources by local communities (Kant, 1996). The relevance of cooperative efforts in boosting economic prospects has been emphasized by the proposal of shared facilities models as efficient ways to promote growth in economically depressed forest communities. (Kozak & Hartridge, 2000). Community forest management has been identified as a key driver for economic and social development in local communities, offering opportunities for livelihood improvement and environmental (Liman & Ngah, 2015; Rozikin, Riyadi, & Mukminin, 2024).

Furthermore, the financial analysis of organic fertilizer businesses within community forestry groups demonstrates the potential for business activities that support forest ecology while enhancing community livelihoods (Hidayat, Maryani, Irawanti, Susanto, & Witono, 2020). Community-based forest management, when fully owned and managed by local communities, can generate significant economic returns, providing

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incentives for sustainable forest management practices (Blomley et al., 2008). To reignite public interest in forests, it is imperative to fortify community rights of access to forested regions and augment community capabilities for forestry-based sustainable enterprises (Hasanuddi, Hikma, Nirwan, & Latifah, 2022; Rozikin, Riyadi, & Achmadi, 2024).

Community forestry initiatives have shown promises in generating local income at lower costs compared to other forest management approaches, the financial advantages of community-based forest management should be highlighted (Bray et al., 2008). Additionally, community forest management strategies can contribute to rehabilitation, conservation, and livelihood sustainability, promoting just and equitable land and resource use rights for sustainable development (Foncha & Ewule, 2020). Payment policies for forest environmental services can also positively impact local livelihoods and forest protection efforts (Indah, Astutik, Riyadi, Zauhar, & Haryono, 2024; Le, 2021).

By maximizing the use of forest resources, sustainable forest management (SFM) can make forest regions more environmentally, socially, and economically sustainable. Forestry businesses are essential to the SFM's implementation. Nevertheless, prior SFM research has paid little attention to the difficulties faced by forest firms. To assess forestry companies' SFM performance from economic, social, and environmental perspectives, they employed the Triple Bottom Line (TBL) as a framework for theory. A case study of Chinese forest enterprises was then used to illustrate the effectiveness of the SFM performance assessment paradigm. The enterprises found that the environment was the most important element of SFM in forestry enterprises during the five-year period 2017-2021. Forestry businesses should take into account not only financial rewards but also the preservation of ecological systems in forests and the efficient use of forest assets in order to attain better SFM (Deng, Ye, Tong, & Zhang, 2023; Septiyanto, Riyadi, Saleh, MM, & DPA, 2024).

A key strategy for resolving competing demands on forests is integrated forest management. Forest managers' perceptions of the implementin of integrated forest management in five German states show a strong commitment and desire to implement an integrated approach to conserving nature through integrated forestry. However, there are some things that make it difficult to implement. Specifically, there is an imbalance between the needs of foresters and the resources - financial and human - available to them in terms of time, more accommodating timber targets, and other aspects (Maier & Winkel, 2017; Purboyo, Riyadi, Irawan, & Inkiriwang, 2024).

A comprehensive and effective multi-business regulatory policy for communities around forests in Indonesia should consider various aspects of forest management, community empowerment, and sustainable practices. Community-Based Forest Management (CBFM) can empower communities, mitigate forest conversion, and reduce environmental conflicts. Local communities are integral to the decision-making process for forest management. They have a right to a say in how their resources are used and must be involved in the decision-making process from the outset (Harbi et al., 2020). The Timber Legality Verification System is crucial to ensure sustainable production forest management and eradicate illegal logging and trade. By establishing standard guidelines and verification processes, the government can effectively regulate and monitor wood-related (Mulyani & Lisdiyono, 2021; B. Sl. Riyadi, 2024).

An effective Forest Governance and Network Management requires multi-stakeholder participation and network management to overcome the complexity of forest management. Local governments need to enforce policies that involve various stakeholders to ensure sustainable forestry practices (Roengtam, Agustiyara, & Nurmandi, 2023). Implementing social forestry policies is very important to regulate village forest management and encourage community involvement in forestry activities. These policies help balance economic, ecological, and social needs while improving societal (Chandra & Riyadi, 2024; Iriyani, Humam Hamid, Setyarso, & Basri, 2020).

Government intervention is necessary to mitigate environmental damage to communities in the vicinity of forests. By providing guidance, regulations and support, the government can guide communities towards sustainable practices (Utami, Nugroho, & Jayasinghe, 2021). Multi-business Forestry Policy aims to provide a variety of environmental products and services from forests, encouraging sustainability and economic benefits.

This policy narrative can guide the development of regulations that serve a variety of forestry-related (B. S. Riyadi, 2024; Suryanto et al., 2023).

Public service has a very positive impact on professional competence, particularly in relation to the performance accountability system. It is possible to group the ideas of service and leadership into several thematic groups that provide insightful information for improving procedures and regulations. User fulfilment has a statistically significant and positive effect on organizational performance. Workplace spirituality acts as a mediator between the effects of technology for information and creative work practices, while an innovative climate acts as a mediator between the two (Chandra & Riyadi, 2024; Priyambodo, Wijaya, Wike, Sujarwoto, & Riyadi, 2023a, 2023b; Purbiyantari, Zauhar, Suryadi, Hermawan, & Riyadi, 2023a, 2023b; Purboyo et al., 2024; B. S. Riyadi, 2024; Septiyanto et al., 2024; Sinulingga et al., 2023; Susilo, Astuti, Arifin, Mawardi, & Riyadi, 2023; Syahrudin, Wijaya, Suryono, & Riyadi, 2023; Tjahjono, Suryono, Riyanto, Amin, & Riyadi, 2023; Toruan, Gusti, & Riyadi, 2023).

Political disagreements, the misuse of power, and private objectives all have an impact on the degree of conflict of interest that frequently results in resolutions. In managing Indonesia's plentiful natural resources, the state must continue to exercise its authority (Hermanto & Riyadi, 2020; B. S. Riyadi, 2017, 2020b, 2020a; B. S. Riyadi, 2020; B. S. Riyadi, 2020; B. S. Riyadi, 2020). Furthermore, a research that investigates at state officials, the parliament, and political parties in Indonesia throughout the reform era discovered that white-collar crime has increased to dangerous levels and may eventually develop into state-organized crimes (Chandra & Riyadi, 2024; Purboyo et al., 2024; B. S. Riyadi, 2024; B. S. Riyadi, 2024).

The Business Permits for the Utilization of Timber Forest Products in Plantation Forests are issued by the Ministry of Forestry of the Republic of Indonesia, acting as the principal, to businesses acting as agents. Another party operates the usage permission this agent received via a cooperative agreement. The state's inability to effectively regulate plantation forests is demonstrated by the phenomena of the chain transfer of rights for plantation forest management to corporations. To curtail or halt the transfer of plantation forest management rights, regulations must be issued by the government (Sudarmalik, Kartodihardjo, Soedomo, & Adiwibowo, 2014).

When it comes to community plantation forest schemes and community forest schemes, all individuals involved in the pre-licensing stage have equal access to information, facilitators, and government agencies through the permission holder. In contrast, community forests have more access to all members in terms of technology, institutional programs or activities, government power, expertise and information, and local markets in the post-licensing stage. The community itself manages access to these elements, with assistance from facilitators who link the community with outside parties with the power to regulate access, which is insufficiently supplied by social forestry regulations. Proficiency in networking is crucial for effectively enabling enhanced accessibility for community members, both internally and with external stakeholders. The degree of access and networking potential of a community, along with the suitability of its larger plans for the permit area, which will help with the provision of facilities and support services, will determine how much the community gains from the application of social forestry policies (Budi, Kartodihardjo, Nugroho, & Mardiana, 2021).

Communities around forestry areas throughout Indonesia still face social disparities in maintaining a decent standard of living. So far, there is no strategic policy in the form of regulations to empower the economy of forest communities throughout Indonesia. A Government Strategic Policy is needed to create multi-business regulations for communities around forests in Indonesia. Based on the previous research and the phenomena described above, these research questions can be raised: How is the Multi-Business Policy Model for Economic Development for Communities around Forests in Indonesia? What factors influence the Multi-Business Policy Model for Economic Development for Communities Around Forests In Indonesia?

LITERATURE REVIEW

Public Policy

Public policy is the result of collective decisions made by government agencies and departments; it is a collection of government actions and decisions that are either carried out or not carried out in a way that

benefits the community. Serving the interests of the community is its main goal, which is first shown by choosing the right course of official and useful government activity. Creating, assessing, and sharing information about the policy-making process using theoretical and applied approaches is the goal of public policy analysis. Five interconnected phases make up the policy analysis process, which when combined creates a sophisticated, non-linear thought cycle. It occurs within several intricate, unpredictable, primarily political policy procedures. Locus, focus and value are crucial concepts that are heavily emphasized in the public administration paradigm. The corporate and government sectors are the focal points of traditional bureaucracy. Its guiding concepts are reason, efficacy, economy, and efficiency. It also places a lot of emphasis on controlling and organizing with accountability. The basic principles of neo-bureaucracy include management, systems, decision-making processes based on behaviour, research and the decision-making of civil servants. It also backs logic, efficacy, efficiency, and economy. Fundamentally, the institutions want to understand bureaucratic behavior while making careful, incremental decisions. The organization's human relations priorities include increased job satisfaction, self-actualization, eliminating gaps, openness, and status stability. Additionally, the New Public Management (NPM) organizational architecture places a high value on democratization, participation, responsiveness, and delivering services that satisfy community needs. It also brings up issues of social justice and ethics. (Dunn, 2012; Frederickson, 1976).

Public policy is influenced by the extent of authority and accountability held by the government and other interested parties. Regulations and laws have an impact on the distribution of power. It is necessary to consider the national and stakeholder goals that alter the political and economic roles throughout the country. Governmental inefficiencies will lead to political, social, and financial issues. Collaboration is emphasized heavily in public policies as a means of resolving issues and achieving goals. Collaborative approaches focus on content and technique and are broad to effectively handle the issues. Nonhierarchical practices and involvement will become increasingly important in the future for collaborative public management techniques. These are key principles of New Public Management: Direct professional management, explicit goals and metrics, fostering rivalry within the public sector, desegregating it, and placing a greater emphasis on managerial strategies in the private sector, improved discipline, and cost-effective resource use are some of the factors that this initiative aims to address. (Hood, 1991; Ikeanyibe, Eze Ori, & Okoye, 2017; Kapucu, Yuldashev, & Bakiev, 2009).

It may be concluded that the creation of the Multi-Business Policy Model for Economic Development for Communities Around Forests is a component of public policy theory oriented in sociological and epistemological descriptions of numerous definitions of public policy theory for the objective of fine-tuning research.

Economic Development for Communities

Economic development of communities, particularly in the context of Community Economic Development (CED), is a multifaceted process that prioritizes social advancement alongside economic progress. CED models emphasize on local economic growth to alleviate poverty and enhance the welfare of disadvantaged community members (Rouf, 2016). This approach involves intentional efforts by community members to create employment opportunities and increase the incomes of residents (Crowe, 2006). Moreover, CED initiatives aim to empower marginalized communities, especially those affected by systemic inequalities, by fostering alternative democratic economic structures that promote prosperity and economic viability (Nembhard, 2004).

The economic development strategies of communities often focus on integrating the economic and noneconomic factors to achieve holistic development outcomes (Shaffer, Deller, & Marcouiller, 2006). Different approaches to CED can be categorized based on their emphases on promoting economic growth, structural changes, or community relationships, each with its unique history and implications for community development (Boothroyd & Davis, 1993). Successful actions of collective economic development are often associated with community-based patterns of interactions and organization, highlighting the importance of entrepreneurial social infrastructure in driving economic progress at the local level (Flora, Sharp, Flora, & Newlon, 1997).

In rural economic development, the roles of communities in fostering economic growth is the central theme in development economics (Kurosaki, 2006). Intraregional, interregional and international cooperation among communities show positive impacts on economic development by enhancing capital concentration, business activity, resource utilization, and participation in global economic processes (Laiko, Yalpa, & Chechovich, 2020). Furthermore, the incorporation of community's economic development goals within broader development strategies is crucial for enhancing local socio-economic welfare and promoting sustainable growth (Hibbard & Lurie, 2012).

Economic development of communities through the lens of Community Economic Development involves a concerted effort to balance economic activities with social development goals. By prioritizing the needs of the community and empowering local residents, CED models strive to create sustainable economic opportunities, alleviate poverty, and enhance the overall welfare of community members. Refining the research by describing various concepts of economic development theory from an epistemological and sociological perspective that the Multi-Business Policy Model for Economic Development for Communities Around Forests is a part of economic development theory.

Multi-Business Policy

Multi-Business Policy for economic development in communities involves a comprehensive approach that addresses various interconnected aspects to foster growth and prosperity. It encompasses initiatives aimed at improving the local business environment, promoting community partnerships, and aligning national policies with local practices to support businesses (Issa, 2022; Oakley & Tsao, 2007; Rogerson, 2010). Such policies should involve all stakeholders, including residents, local businesses, and government entities, to ensure a collective effort towards economic development (Meyer, 2014).

Enhancing the business environment is the primary goal of effective multi-enterprise policies. This environment is critical to small businesses' success and ought to be a key component of neighborhood-focused economic initiatives. (Neumann, Schmidt, & Trettin, 2011). These policies often aim to meet the needs of marginalized communities and promote economic empowerment. Moreover, institutionalizing local economic development practices is essential for enhancing decentralization and fostering local economic growth (Akudugu, 2018).

It is essential to take into account different policy levels when discussing multi-business policies, such as macro-level policies like micro-level policies and economic stability like those that concentrate on financing, technology transfer, and training (Mcquaid, 2002). Tax incentives and support mechanisms can also influence urban economic growth and development by attracting industries and encouraging intensive land use (Beckett-Camarata, 2003). Furthermore, for successful local economic growth, tactics including central financing, harmonizing development plans, and having efficient land tenure systems are advised (Agbevide, 2018).

Furthermore, Multi-Business Policy should align with the goals of long-term corporate productivity via efficient economic leadership and governance (Nwagu, 2020). Linking sustainable agriculture with community-controlled economic development can promote environmentally sound, economically viable, and socially just food systems (Campbell, 1997; Carnes & Karsten, 2003). Community-driven and holistic evaluation frameworks can contribute to revitalization of the neighborhood and improve their quality of life (Fraser, Kick, & Williams, 2002).

Multi-Business Policy for economic development in communities requires a holistic and collaborative approach that involves various stakeholders, addresses local business environment, and aligns national policies with local practices to foster sustainable growth and prosperity. Based on the explanation above, a hypothesis can be formulated that: multi-business policies positively affect economic development of community (H1) and multi-business policies positively affect Sustainable Forrest Management (H2)

Sustainable Forrest Management

The goal of sustainable forest management (SFM), a complete strategy, is to balance social, environmental, and economic concerns in order to preserve the efficiency and sustainability of forests. It integrates a variety of strategies and approaches to conserve biodiversity, protect the ecological integrity of forests and meet the needs of present and future generations. (Morgenstern, 2007). SFM typically includes forest certification, quality management, and the identification and management of forests with high conservation values (Salimova, Biryukova, & Vukovich, 2018). Forest certification is essential in SFM as it establishes predefined standards that forests must meet to be considered as sustainably managed forest. Additionally, participatory forest management is highlighted as a strategy that can facilitate sustainable forest development (Hien & Ly, 2020).

In the context of SFM, forest management practices aim to achieve sustainable yields, where the goal is to maintain the yield from forests at a relatively constant level over time (Djafar, Widayanti, Saidi, Muin, & Ratnawati, 2023). This involves considering multiple utilizations of forests, including social, economic, and environmental factors, to ensure that the management decisions are holistic and sustainable (Tittler, Messier, & Burton, 2001). Furthermore, the preservation of biodiversity and the incorporation of traditional forest-related knowledge are recognized as essential components of SFM (Piras, Venturi, Corrieri, Santoro, & Agnoletti, 2021).

Globally supporting sustainable forest management is greatly aided by the Forest Stewardship Council's (FSC) initiative for forest certification (Lombardo & Maetzke, 2019; Malovrh et al., 2019). The conservation of forest resources and ecosystems is facilitated by certification programs, which assist guarantee that forests are managed in line with sustainable forestry principles. (Lagan, Mannan, & Matsubayashi, 2007). In an attempt to increase the sustainability of forest management techniques, a wide range of stakeholders are also involved in the decision-making process, such as local people and indigenous groups (Adusei & Dunyah, 2016; Islam, Siwar, Ismail, & Chamhuri, 2010).

Sustainable Forest Management is a multifaceted idea that necessitates the incorporation of sustainable practices, certification standards, biodiversity conservation, and stakeholder engagement to ensure the responsible and long-term management of forest resources. Based on the explanation above, a hypothesis can be made that: Sustainable Forrest Management affect economic development of community (H3) and Sustainable Forrest Management mediates the relationship between multi business policies on economic development of community (H4)

METHODS

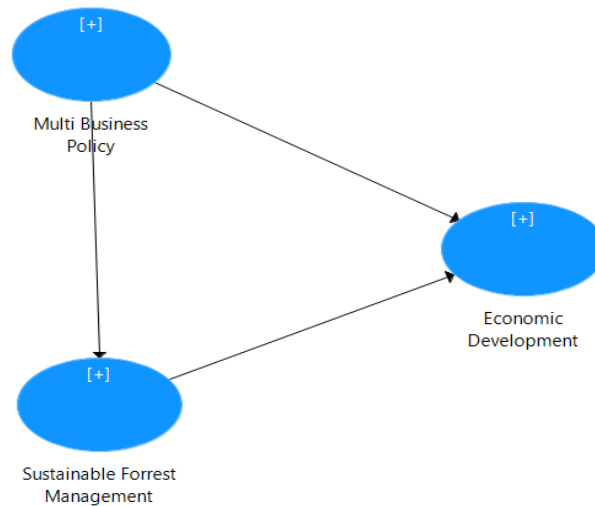
This study employed a mixed methodology. The qualitative descriptive method was used to extract meanings and themes from the study. The proposed research model's research hypotheses were to be tested using a quantitative approach.

The overall research aims, which include understanding and describing people's phenomena, events, beliefs, perceptions, social activities, and attitudes, guided the qualitative approach adopted. When analyzing research issues more thoroughly than a theory or concept can convey, qualitative research is appropriate. Using written records or words, this method creates descriptive data by observing the behavior of the objects and research subjects. (Creswell, 2013). Interviews were used as the data gathering method in this qualitative approach. Documentation that was pertinent was gathered from a variety of sources, including library and online resources. The data analysis process involved three stages: data reduction, visualization, and validation using the interactive model as a guide. Data visualization was used to show the data, data reduction was used to separate out the important data, and data verification was used to draw conclusions about the main themes of the findings (Miles & Huberman, 1994). The validity and reliability of the qualitative approach was attained by adopting triangulation analysis to produce valid and reliable data, including credibility, transferability, verifiability and confirmability. (Creswell, 2009).

The quantitative method anticipated the interaction between factors and evaluated a research model that integrated three variables. There were 3 latent variables under the study: Multi-Business Policy, Sustainable Forrest Management, and Economic Development of Community around Forests. The following is the

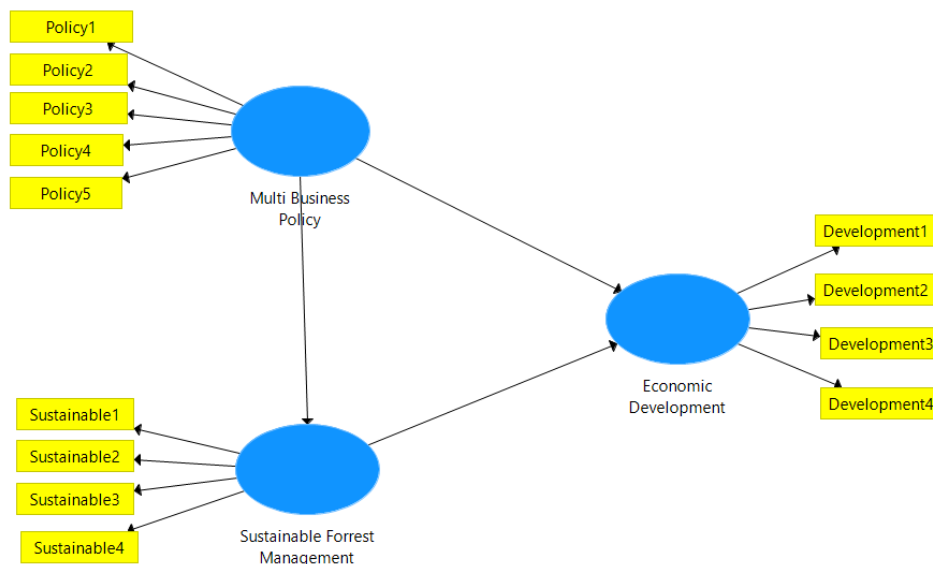
predicted relationship between the variables: Multi-Business Policy positively affects Economic Development of Community around Forests (H1), Multi-Business Policy positively affects Sustainable Forest Management (H2), Sustainable Forest Management positively affects Economic Development of Community around Forests (H3), Sustainable Forest Management mediates the relationship between Multi Business Policy to Economic Development of Community around Forests (H4). Figure 1 below is an illustration of the conceptual model.

Figure 1. Conceptual Model



Every variable is measured using indicators; four indicators are used for sustainable forest management, five indicate multi-company policies, and four indicate the economic development of forest communities. A research model was developed based on the formulation of hypotheses and the measurement of all variables using indicators, as shown in Figure 2 below.

Figure 2. Research Model



Simple questionnaires that were created based on the predefined metrics for each variable were used to gather data. A Likert scale of five points was used, with 1 (strongly disagree) to 5 (strongly agree). The survey was sent out electronically to 500 Indonesian Forest Management Companies, and 100 qualified answers were received, yielding the anticipated 20% response rate for this study.

The characteristics of the variables and respondents were described using descriptive statistics, and partial least square (PLS) smartPLS was utilized for data analysis. Variance-based structural equation modeling was used to perform inductive statistics (SEM). The analysis makes use of the partial least squares model, which comprises three relationships: (1) the measurement model, which is the outer model that describes the relationship between latent variables and their indicators; (2) the structural model, which is the inner model that describes the relationship between latent variables; and (3) the weight relationship, which assesses the latent variables that need to be estimated. (Ringle, Wende, & Will, 2015).

Validity is the accuracy with which an instrument can measure a construct in a reliable and precise way. Construct validity analyses are assessed using both discriminant and convergent validity. Reliability, which is the internal consistency of the indicators of a construct, indicates the degree to which each sign is suggestive of a shared latent factor. Reliability calculations employ Cronbach's alpha and composite reliability (Ringle et al., 2015).

If every indication is considered legitimate, the variables are considered trustworthy, and the predictive significance of the model is satisfied by its goodness of fit, then a hypothesis test can be carried out. The approval criteria are t-statistic > 1.96 and p-value < 0.05 if the hypothesis test is carried out with a probability or alpha value of 5% and the t-statistic value is 1.96. The direct and indirect effects can then be compared to assess the function of mediator variables, also known as intervening variables, with the mediation test determining which effect is more significant.

RESULTS AND DISCUSSION

Based on the qualitative analysis of the interview and documentation, the findings can be identified as follows. Multi-business policies for Indonesian forest communities must include the elements of community empowerment, sustainable forest management practices, verification of timber legality, and effective governance structures. By integrating these aspects into the policy framework, the government can encourage environmental sustainability, community welfare and economic development in forest areas. Adopting a multi-business policy model that integrates diversification, collaboration, biodiversity conservation, and community empowerment, is possible to enhance economic development in communities around forests while promoting sustainable forest management practices.

Indonesia needs to focus on forest management, community empowerment, and sustainable practices to mitigate environmental conflicts and forest conversion. Community-Based Forest Management (CBFM) can empower communities, while the Timber Legality Verification System ensures sustainable production and eliminates illegal logging and trade. Effective forest governance and network management requires multi-stakeholder participation and enforcement of policies. Implementing social forestry policies helps balance economic, ecological, and social needs while improving societal welfare. To stop communities who live near forests from causing adverse environmental effects, the government must step in. Multi-Business Forestry Policy aims to provide environmental products and services from forests, encouraging sustainability and economic benefits. The Ministry of Forestry grants utilization permits to entrepreneurs, but the transfer of rights of forest management to companies highlights the need for regulations. Greater access to resources and networking opportunities for the community surrounding forests is contingent upon the suitability of more comprehensive plans for the permit area.

The following describes the hypotheses that were tested with the use of the smartPLS application, based on the quantitative results of the data analysis survey. The population in this research was managers of forest management companies in Indonesia. The samples consisted of 100 managers of forest management companies who were purposefully selected. The research's respondent profile is displayed in Table 1. According to the data, 40% of respondents are women and 60% of respondents are men. In addition, half the respondents are in the age range of 21–35, while the other half are in the 36–50 age range. Furthermore, half of the participants have been employed for five years, while the remaining half have been employed for ten years.

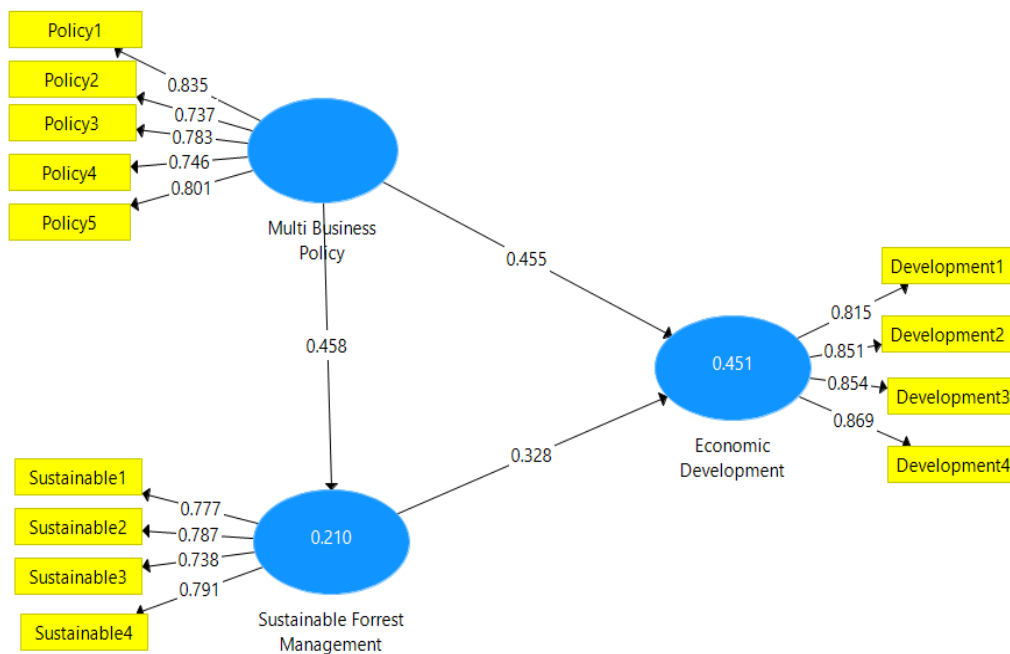
Table 1. Respondents Profile

Description	Percentage	Percentage
Manager of Forest Company	Men = 60%	Women = 40%
Age	21-35 = 50%	36-50 = 50%
Length of Work	5 Years = 50%	10 Years = 50%

Based on Figure 3, the Average Variance Extracted (AVE), which should be at least 0.5, and the outer loading of all indicators that were judged valid with a coefficient more than 0.70 can be used to evaluate the convergent validity. (Ringle et al., 2015).

The economic development of communities surrounding forests has an R-squared value of 0.451, as shown in Figure 3. This means that 45.1% of the variance can be explained by the dependent variables under study, which are sustainable forest management and multi-business policy, while the remaining 54.9% can be attributed to variables outside the research model.

Figure 3. PLS Algorithm



All of the variables that were deemed reliable can have their reliability evaluated using Cronbach's Alpha and Composite Reliability, which are available in Table 2. A variable can be considered dependable if it has an Average Variance Extracted > 0.50, a Composite Reliability > 0.80, and a Cronbach's Alpha > 0.70 (Ringle et al., 2015).

Table 2. Reliability of Variables

	Cronbach's ...	Composite ...	Average ...
Economic Development	0.869	0.911	0.718
Multi Business Policy	0.841	0.887	0.610
Sustainable Forrest Management	0.777	0.856	0.598

In order to determine the relative influence of the structural model on the observed measure for endogenous latent variables, Q-squared was used to construct a predictive relevance (goodness of fit) using a Stone-Geisser test. Q- square = 1 – (1–R-square). Q- square = 1 – (1–R-square) The fact that the Q-square value is positive

and > 0.35 suggests that the observed value has been accurately rebuilt and that the model has a high degree of predictive significance (Ringle et al., 2015). Subsequently, as illustrated in Figure 4, all hypotheses were tested via PLS Bootstrapping from the smartPLS. A significance threshold of 5% and an acceptability range of ± 1.96 for the H_0 can also be used to evaluate it. As seen in Table 3, the alternative hypothesis is accepted or the hypothesis (H_0) is rejected if the T statistic value is greater than or equal to 1.96.

Figure 4. PLS Bootstrapping

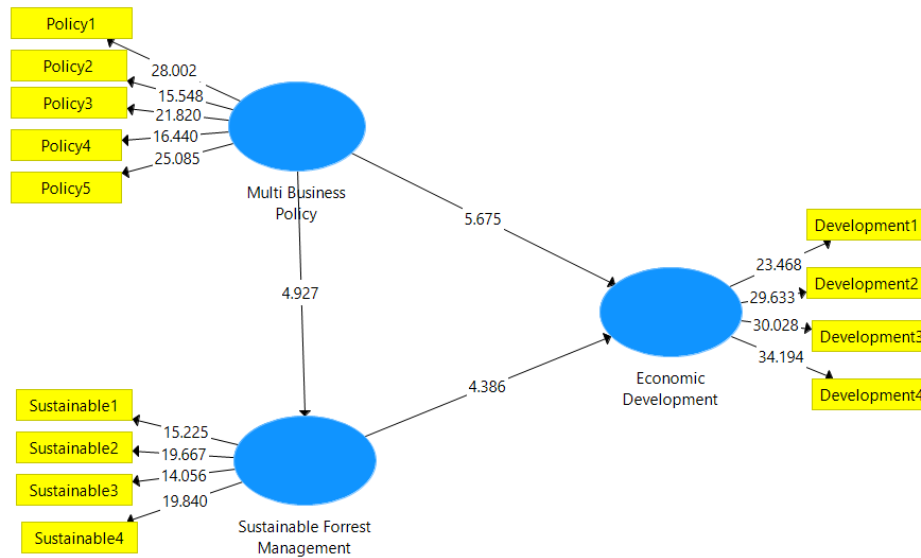


Table 3. Path, T-Statistics and P Values

	Original ...	T Statistics...	P Values
Multi Business Policy -> Economic Development	0.455	5.675	0.000
Multi Business Policy -> Sustainable Forrest Management	0.458	4.927	0.000
Sustainable Forrest Management -> Economic Development	0.328	4.386	0.000
	Original...	T Statistic...	P Values
Multi Business Policy -> Sustainable Forrest Management -> Economic Development	0.150	3.119	0.002

Using PLS Bootstrapping calculations, the following relationships are supported: Multi-Business Policy positively influences Economic Development of Community around Forests (H1 is supported), Multi-Business Policy positively affects Sustainable Forest Management (H2 is supported), Sustainable Forest Management positively affects Economic Development of Community around Forests (H3 is supported), and Sustainable Forest Management mediates the relationship between Multi Business Policy and Economic Development of Community around Forests (H4 is supported).

The communities around forests throughout Indonesia have been given land for agriculture and livestock businesses using a plasma core system. However, the standard income of the communities around the forest is still marginalized because the yields of agricultural, livestock and multi-business production around the forest does not have any certainty about where the outcomes of their multi-businesses will go. Likewise, the communities around the forests have difficulties to sell their products of these multi-businesses. There are several Ministerial Regulations regarding multi-businesses for communities around forests throughout Indonesia, but they do not provide a perfect solution.

According to the research findings, communities surrounding forests require regulations pertaining to multi-business policies in order to secure the assurance of sales of multi-business outcomes from the Central Government and the Regional Government. This can be achieved through cooperation with regulators, such as the Ministry of Forestry, Ministry of Agriculture, and Ministry of Trade, in addition to forestry practitioners and economic development specialists for the communities surrounding the forests. Collaboration between these institutions is key to design strategic policies to ensure guaranteed sales of multi-business products for communities around the forests. This effort involves various stakeholders, including the Ministry of Environment and Forestry, Ministry of Agriculture, Ministry of Trade, academics and other regulators.

Roles of the Ministry of Environment and Forestry

Indonesia's forest management, which includes environmental preservation and sustainable forest management, falls under the purview of the Ministry of Environment and Forestry. The Ministry of Environment and Forestry is required to make sure that, in addition to forest conservation, its policies consider the socioeconomic aspects of nearby communities as part of this cooperation. Getting permits and assistance for community businesses centered around forests, like agroforestry, ecotourism, and non-timber forest product management, could be one stage in the process. Additionally, in order to help these items enter the market, the Ministry of Environment and Forestry must collaborate with other organizations.

Roles of the Ministry of Agriculture

The Ministry of Agriculture plays a role in supporting agricultural development around forests. Collaboration between the Ministry of Agriculture and the Ministry of Environment and Forestry can be carried out through agroforestry programs that combine food crops with forest plants. This program does not only increase the food security of communities around the forests, but also maintains forest sustainability. The Ministry of Agriculture can also provide training and counseling to farmers around forests about sustainable agricultural techniques and diversification of agricultural products to increase their added value and competitiveness in the market.

Roles of the Ministry of Trade

The Ministry of Trade plays a role in ensuring market access for the outcomes of multi-business communities around the forest. The ministry can help them by creating a fair and profitable market for products from the communities around the forests. Support in the form of supportive regulations, access to financing, as well as promotion and marketing of products in national and international markets is very important. The Ministry of Trade can also collaborate with other institutions to develop efficient supply chains and reduce obstacles that communities around forests may face in selling their products.

Roles of Academics and Regulators

Academics and researchers have important roles in providing the data and information needed for evidence-based policy making. Research conducted by academics can help identify potentials and challenges in forest management and business development in communities around the forests. The results of this research can then be used by policy makers to design effective strategies. Apart from that, academics can also be involved in providing training and counseling to communities around the forests about sustainable forest management techniques and businesses to be developed.

Synergy between Institutions

Effective collaboration between the Ministry of Environment and Forestry, Ministry of Agriculture, Ministry of Trade, academics and other regulators requires good cooperation. The establishment of a forum or special working team consisting of representatives from each institution can be a solution to ensure synergy and good communication. This forum can be used to discuss and formulate strategic policies, resolve problems that arise, as well as monitor and evaluate policy implementation. In addition, there is a need for a clear and transparent framework regarding the roles and responsibilities of each institution in this collaboration. This framework must include coordination mechanisms, division of tasks, as well as indicators of success to be achieved. With a clear framework, it is expected that the collaboration between these various institutions can

run smoothly and produce effective policies to ensure guaranteed sales of multi-business products for communities around the forests.

Empowerment of Communities Around the Forests

Last but not least, this collaboration must focus on empowering communities around the forests. The community needs to be actively involved in every stage of policy planning and implementation. Active participation of the community will ensure that the adopted policies are in accordance with the local needs and conditions. Training and counseling on business management, market access, and sustainable production techniques are also important to increase the capacity and competitiveness of communities around forests.

This collaboration must be pursued synergistically to achieve the desired goal, that is improving the welfare of communities around the forests through sustainable management of forest resources. Government-guaranteed policies and regulations are required with relation to market certainty and sales of the products produced by multi-community enterprises.

CONCLUSION

Based on the analysis and discussion of the research result above, it can be concluded that the important factors for the economic development of communities are multi-business policy and sustainable forest management. With strong collaboration, it is expected that the certainty in the sales of multi-business products of the communities around the forests can be achieved. This collaboration will not only improve community welfare, but also support sustainable forest management.

Multi-Business Policy positively affects Economic Development of Community around Forests, Multi-Business Policy positively affects Sustainable Forest Management, Sustainable Forest Management positively affects Economic Development of Community around Forests, and Sustainable Forest Management mediates the relationship between Multi-Business Policy to Economic Development of Community around Forests.

Recommendations for regulators and practitioners that should be prioritized by Indonesian government are forest management, community empowerment, and sustainable practices to prevent environmental conflicts and forest conversion, as well as social forestry policies balance economic, ecological, and social needs. Government intervention and multi-business policies are crucial for promoting sustainability and economic benefits. Policies and regulations regarding market certainty and sales of the outcomes of multi-business of the community are needed that are guaranteed by the government.

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