

Culturally grounded pathways to sustainable agricultural investment in Papua

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Abstract: This study explores the cultural foundations necessary for sustainable agricultural investment in Papua, Indonesia, with a focus on indigenous Melanesian communities. The purpose is to examine how legal recognition of land rights intersects with cultural legitimacy to shape investment acceptance. A qualitative methodology was employed, combining legal document analysis with semi-structured interviews involving tribal leaders, policymakers, NGO workers, and community representatives. Findings reveal a persistent gap between formal legal frameworks and practical implementation, where laws acknowledging indigenous land rights are inconsistently enforced. Investment legitimacy depends not only on legal compliance but also on alignment with core cultural values such as kinship, reciprocity, and ancestral stewardship. Community-supported mechanisms like voluntary contributions and endowment funds emerge as culturally accepted investment tools. The study concludes that sustainable investment must be embedded in community-led, culturally rooted approaches supported by participatory governance. Practical implications include the need for policy reforms that integrate Free, Prior, and Informed Consent (FPIC), strengthen adat-based institutions, and establish transparent, inclusive financial mechanisms. These findings offer a culturally grounded framework for ethical, inclusive agricultural investment in indigenous territories.

Keywords: *Endowment fund, Indigenous rights, Melanesian values, Papua Indonesia, Sustainable investment.*

1. Introduction

Papua, located in the easternmost part of Indonesia, possesses abundant natural resources and ecological wealth, yet it remains one of the most economically disadvantaged regions in the country. According to BPS [1] the poverty rate in the Papua Highlands Province reached 29.91 percent, making it the highest nationally. This paradox, where resource-rich regions fail to achieve broad-based development, reflects what scholars commonly refer to as the "resource curse" [2, 3]. Despite decades of state-led interventions, including the introduction of the Papua Special Autonomy Law (Law No. 21 of 2001, amended by Law No. 2 of 2021), the overall well-being of indigenous Papuans has shown limited progress.

One of the underlying problems lies in the misalignment between national investment frameworks and the socio-cultural contexts of indigenous Papuan communities. Agricultural and natural resource investments are often implemented without adequate recognition of customary land rights, traditional governance systems, and cultural values [4, 5]. Consequently, indigenous communities are frequently excluded from key decision-making processes and rarely receive equitable benefits from development activities [6, 7]. This disconnect undermines the legitimacy of public policy interventions and often leads to local resistance, social tension, and a loss of trust in both governmental and private institutions.

Although Indonesia's legal architecture includes provisions that formally recognize indigenous rights, the practical enforcement remains weak. Article 18B paragraph (2) of the 1945 Constitution acknowledges the rights of traditional communities, and the Constitutional Court Decision No. 35/PUU-X/2012 affirmed that customary forests are not state land but belong to indigenous groups. These milestones, however, have yet to be translated into consistent institutional practice. Mechanisms intended to ensure inclusive investment, such as community consent protocols, voluntary contribution schemes, and benefit-sharing arrangements, are often either absent or poorly implemented in agricultural development projects [8].

This study emerges from the growing recognition that sustainable investment in Papua cannot be achieved through legal or financial instruments alone. It must also engage meaningfully with the cultural logics and lived experiences of local communities. Specifically, this research focuses on the central role of indigenous values such as kinship, reciprocity, and reverence for ancestral land in shaping community responses to investment. While existing literature has addressed economic and policy aspects of development in Papua, limited attention has been given to the socio-cultural prerequisites for legitimate and sustainable investment.

To address this gap, the study adopts a qualitative approach combining legal analysis, policy review, and interpretive engagement with cultural practices. It explores how instruments such as voluntary contributions and the proposed Endowment Fund can be aligned with indigenous values to foster inclusive development. By situating financial and legal mechanisms within the framework of cultural legitimacy, this research contributes to a more ethical, community-driven model for agricultural investment in Papua.

2. Literature Reviews

2.1. *Indigenous Land Rights and the Cultural Foundations of Development in Papua*

The recognition of indigenous land rights in Indonesia, particularly in Papua, has been a subject of both constitutional reform and ongoing contestation. Article 18B (2) of the 1945 Constitution affirms that the state recognizes and respects the traditional rights of indigenous legal communities, a provision further supported by the Papua Special Autonomy Law and the Constitutional Court's decision No. 35/PUU-X/2012. These frameworks collectively acknowledge the communal ownership of customary forests and land, placing indigenous communities at the center of natural resource governance at least in principle [5, 9].

However, the practical implementation of these laws remains inconsistent and poorly enforced, often failing to protect communities from extractive land acquisition or marginalization. Numerous studies argue that legal reforms alone are insufficient unless accompanied by institutional accountability, cultural understanding, and participatory engagement [10-12]. For the indigenous peoples of Papua, land is not merely a commodity it is a living symbol of ancestry, social identity, and spiritual duty. The imposition of external agricultural investments that neglect these socio-cultural values frequently leads to distrust, resistance, and, in some cases, conflict.

This dissonance between formal legal recognition and local cultural realities underscores a fundamental challenge: development cannot succeed unless it is rooted in the indigenous worldview. Therefore, understanding the cultural foundations of Papuan society, such as the values of kinship, reciprocity, leadership, and communal responsibility, is essential. These values must inform how investments are introduced, negotiated, and sustained. Yet, few studies have examined the intersection between cultural values and development finance mechanisms such as voluntary contributions or endowment systems revealing a critical gap in both theory and practice.

2.2. *Inclusive Investment, Social Legitimacy, and the Role of Endowment-Based Models*

The second strand of the literature focuses on the dynamics of investment, benefit-sharing, and long-term social legitimacy. Papua's economic stagnation, despite its resource abundance, reflects the broader phenomenon of the "resource curse" a paradox in which regions rich in natural resources fail to

achieve equitable development due to institutional weakness, elite capture, and environmental degradation [3, 12]. This condition is exacerbated in contexts like Papua, where state control over investment projects often sidelines local voices and customs.

To mitigate this, the concept of a Social License to Operate (SLO) has emerged as a framework for community legitimacy and project sustainability [13, 14]. Unlike formal legal permits, SLO emphasizes ongoing, informal community acceptance based on trust, respect, and mutual benefit [13, 15]. In indigenous territories, especially in Melanesian cultures like those in Papua, securing social license requires more than legal compliance, it demands meaningful cultural alignment and proactive inclusion of traditional leaders in planning and decision-making processes.

Emerging studies on voluntary contributions and community-based endowment funds offer promising avenues for such alignment. These models involve investors committing to share benefits not just through temporary compensation, but via long-term, community-managed funds designed to support education, healthcare, and local enterprise. Globally, similar approaches have been adopted in indigenous communities across Canada, Australia, and Latin America [16, 17] yet there is a distinct lack of adaptation and empirical exploration in the Papuan context.

By positioning investment not as an external imposition but as a collaborative and culturally respectful endeavor, endowment-based models can serve as a bridge between economic development and indigenous empowerment. However, the literature remains sparse on how such financial mechanisms can be culturally contextualized within Melanesian worldviews or operationalized through participatory governance in Papua.

2.3. Research Framework

This study proposes a culturally grounded framework for understanding and designing sustainable agricultural investment in Papua, informed by the intersection of indigenous values, legal structures, and development theory. Drawing on qualitative data and supported by theoretical insights from Legal Pluralism and the Capability Approach, the research framework explains how investment engagement can gain legitimacy and sustainability by aligning with local norms, enhancing community agency, and integrating legal recognition.

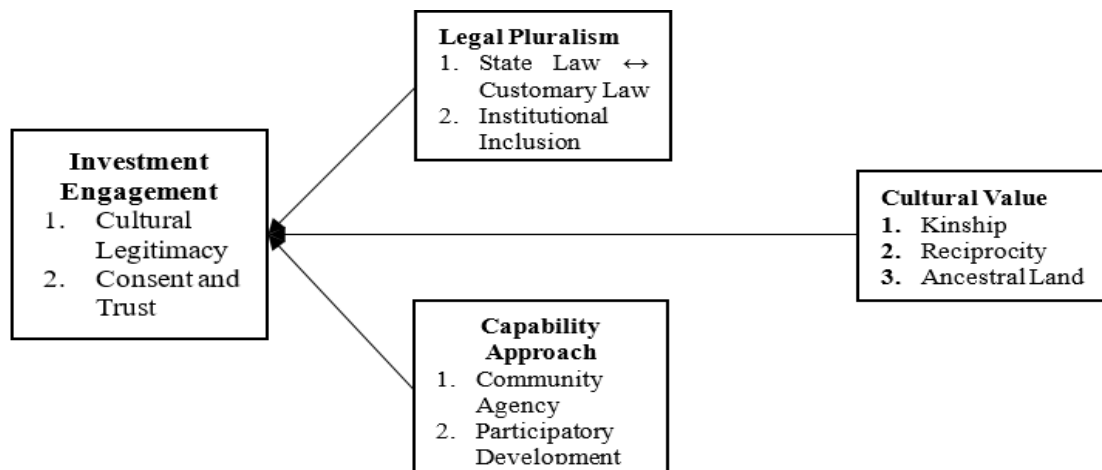


Figure 1.
Conceptual Framework for Culturally.

At the core of the framework are the cultural values of indigenous Melanesian communities in Papua. These include principles such as kinship, reciprocity, and reverence for ancestral land, which collectively form the moral foundation through which investment decisions are evaluated by local stakeholders. In indigenous Papuan societies, land is not merely a resource but a spiritual and collective

legacy. Therefore, any development initiative must engage respectfully with these cultural logics to be considered acceptable or beneficial.

To operationalize this cultural foundation, the framework incorporates Legal Pluralism as a critical lens. This perspective recognizes that state law coexists with customary (*adat*) law and that legitimacy in indigenous contexts often depends on both. Although national laws such as the 1945 Constitution (Article 18B(2)) and the Constitutional Court Decision No. 35/PUU-X/2012 formally recognize indigenous land rights, their enforcement remains fragmented and uneven. Legal pluralism underscores the importance of aligning legal instruments with community-based governance systems. Investment practices must not only comply with formal law but also gain approval through local customs and institutions to be considered lawful and legitimate in the eyes of the community.

The framework also draws on the Capability Approach, which shifts the focus of development from economic output to the enhancement of people's substantive freedoms and choices. In the context of Papua, this means ensuring that investment does more than generate profits or infrastructure, it must also expand local communities' capacity to make decisions, preserve cultural identity, and determine their own development trajectories. This approach supports the use of participatory mechanisms such as voluntary contributions and community-managed Endowment Funds, which not only provide long-term financial support but also build institutional ownership and intergenerational benefit.

Figure 1 illustrates this framework by showing how the three foundational dimensions, Cultural Values, Legal Pluralism, and the Capability Approach independently and collectively shape Investment Engagement. Each of these components contributes to establishing the social legitimacy, community consent, and cultural alignment necessary for development interventions to succeed in indigenous territories. When implemented in an integrated manner, this framework enables a more ethical, inclusive, and sustainable model of investment one that respects both legal rights and cultural worldviews while fostering long-term community empowerment.

This research framework guides the empirical analysis presented in the following sections. It serves not only as a diagnostic tool for understanding current barriers but also as a normative model for designing better investment practices in Papua and similar indigenous contexts.

3. Research Methodology

This study employs a qualitative descriptive approach to explore the socio-cultural prerequisites for sustainable agricultural investment in Papua. A qualitative design is appropriate given the study's central focus on indigenous perspectives, cultural norms, and legal practices, all of which require nuanced understanding rather than statistical generalization. The research integrates document analysis and semi-structured interviews, allowing for a contextualized examination of how customary values, legal structures, and financial mechanisms interact in shaping investment outcomes within indigenous communities.

Data collection was conducted through two primary sources. First, document analysis was carried out to examine key legal and policy frameworks relevant to indigenous land rights and investment governance in Papua. These included the 1945 Constitution of the Republic of Indonesia (particularly Article 18B(2) on indigenous peoples), the Papua Special Autonomy Law (Law No. 21/2001) and its amendment (Law No. 2/2021), the landmark Constitutional Court Decision No. 35/PUU-X/2012 on customary forests, and the implementing regulation Government Regulation No. 106 of 2021 concerning the authority and governance of the Papua Special Autonomy. In addition, various regional regulations related to land use, forestry, and community-based planning were also reviewed. Supplementary sources included academic literature, NGO reports (notably from AMAN and Conservation International), and public policy documents. These texts were critically analysed to identify the disconnect between formal legal recognition and the practical realities of customary land tenure and community participation in investment decision-making.

Second, semi-structured interviews were conducted with 12 informants selected through purposive sampling. The selection aimed to include stakeholders with diverse insights into land ownership,

traditional authority, community expectations, and investment management in different parts of Papua. Interviews were guided by open-ended questions designed to elicit informants' views on community consent, cultural values, legal protection, and mechanisms for long-term benefit-sharing such as voluntary contributions and endowment models [18]. The interviews offered in-depth reflections that complemented and contextualized the findings from document analysis.

The informants included tribal and village leaders, customary council representatives, government officials, academics, NGO workers, an agricultural investor, and members of local community groups. To protect confidentiality, each informant was assigned a unique code. The table below presents the profile of the informants involved in this study.

Table 1.
Informants.

Informant Code	Position / Role	Affiliation / Community	Description
INF-01	Tribal Leader	Papua and West Papua Provinces	Recognized local authority on customary land
INF-02	Customary Council Representative	Papua and West Papua Provinces	Focus on legal advocacy and land rights
INF-03	Former Government Official	Merauke and Boven Digoel Regencies	Involved in drafting regional autonomy policy
INF-04	Agricultural Investor	JERAT & Yadupa Foundations Papua	Operating palm oil project on indigenous land
INF-05	NGO Field Coordinator	Cenderawasih University, Jayapura	Advocacy for indigenous empowerment
INF-06	Academic / Legal Scholar	Vice Speaker of Pepuan People Assembly, Manokwari	Expert in indigenous rights and forestry law
INF-07	Young Community Leader	Keerom District	Youth perspective on development and culture
INF-08	Village Head	West Papua	Responsible for village investment negotiations
INF-09	Provincial Investment Agency Officer	Former Director of Ministry of Marines and Fishery	Coordinates investment permits and CSR
INF-10	Endowment Fund Advisor	Manokwari	Involved in fund design and management
INF-11	Religious Leader	Yadupa Foundation Jayapura, LP3BH Legal Aid Foundation, Manokwari	Bridges religious values and cultural norms
INF-12	Women's Group Representative	Biak	Provides gender perspective on land and rights

Data analysis was carried out using thematic analysis, drawing from Braun and Clarke's framework for qualitative interpretation. The researcher first immersed in the data through repeated reading of interview transcripts and legal documents, followed by the generation of initial codes based on recurring issues such as "land as identity," "legal disconnection," "voluntary trust mechanisms," and "endowment sustainability." These codes were then grouped into broader themes, reviewed for consistency, and finalized based on their relevance to the research objectives. Throughout the analysis, careful attention was paid to capturing both convergent and divergent perspectives across the various stakeholder groups.

To ensure credibility, the study employed data triangulation by integrating multiple sources including legal documents, institutional reports, and stakeholder narratives [19, 20]. Member checking was also conducted with selected informants to validate the accuracy of interpretation and maintain trustworthiness. The research process was carried out with cultural sensitivity, respecting local protocols and securing verbal or written consent from all participants. Identities were anonymized, and

all interviews were conducted with approval from the research ethics committee of the affiliated academic institution.

This qualitative approach allowed for a grounded, context-sensitive understanding of the complex dynamics between indigenous rights, cultural values, and sustainable investment practices in Papua. The findings generated through this methodology form the basis for a culturally aligned and policy-relevant framework discussed in the following sections.

4. Result and Discussion

4.1. Disconnection Between Legal Recognition and Ground Implementation

Although Indonesian law has made formal strides in recognizing the rights of indigenous communities most notably through Article 18B (2) of the 1945 Constitution, the Papua Special Autonomy Law, and the Constitutional Court Decision No. 35/PUU-X/2012—this study reveals a profound disconnection between legal ideals and ground-level realities in Papua. Despite the progressive intent of these frameworks, indigenous communities often do not experience their promised protections in practice.

Empirical findings from this study highlight the depth of this disconnect. Several informants indicated that legal recognition has not translated into institutional access or empowerment at the local level. INF-06, a legal scholar, noted that even government actors responsible for implementing indigenous land rights are frequently unfamiliar with the relevant provisions. As a result, communities are not only unaware of their entitlements but also lack the procedural knowledge or administrative support to assert them.

This gap is further compounded by infrastructural and bureaucratic limitations. INF-03, a former government official, explained that although regional governments have the autonomy to establish derivative regulations under the Special Autonomy framework, they rarely possess the necessary technical tools such as customary land maps or verified community registries. INF-08, a village head, added that without these resources, efforts to negotiate with investors are conducted on uncertain legal ground, often leaving communities vulnerable to exploitation.

The consequence of this institutional vacuum is visible in ongoing cases of land appropriation without consent, particularly in regions such as Merauke. As noted by INF-05, an NGO field coordinator, large-scale agricultural initiatives including the Merauke Integrated Food and Energy Estate (MIFEE) have led to what many describe as systematic land grabbing, where customary territories are transferred to investors without meaningful community involvement. Study from Fahmi and Armia [21] confirm that indigenous land has been reallocated under state-issued permits, often in violation of both *adat* norms and procedural safeguards such as Free, Prior, and Informed Consent.

INF-02, a customary council representative, emphasized that from the community's perspective, legal protections feel largely symbolic. "The government says we have rights," he stated, "but when companies come, our voices are not heard." This sentiment reflects a broader erosion of trust in legal institutions. Laws that are not reinforced by participatory mechanisms or culturally rooted enforcement strategies are perceived as disconnected from daily lived experiences.

The findings are consistent with broader academic literature. Putri, et al. [20] argues that legal recognition without implementation leads to a state of legal stagnation, where communities remain visible in principle but invisible in enforcement. Dwi [22] describes this as a form of legal invisibility, in which rights are codified but not institutionalized.

In sum, the study underscores that Papua's legal framework for indigenous rights, though robust on paper, lacks operational substance. Without proactive investment in legal education, administrative readiness, and customary institution support, the rights granted to indigenous Papuans risk remaining aspirational. The Merauke case illustrates how, in the absence of such systems, large-scale investment can easily override local claims, exacerbating social disempowerment and fueling long-term resistance. The challenge, therefore, is not only to recognize indigenous rights but to institutionalize and localize them in ways that resonate with both state and customary systems.

4.2. Cultural Foundations of Investment Acceptance

In indigenous Papuan communities, particularly those influenced by the Melanesian worldview, land is not treated as an economic asset subject to market exchange. Rather, it is understood as a sacred and ancestral trust, passed down through generations and communally held for the welfare of future descendants. This belief positions land not only as a spatial resource but as a deeply embedded social, spiritual, and moral institution. The findings of this study confirm that such cultural foundations are not peripheral to investment decisions; they are central in shaping how communities interpret, assess, and respond to external engagement.

Across multiple interviews, informants emphasized that land is inseparable from identity, kinship, and spiritual responsibility. INF-01, a tribal leader, described land as “our connection to the ancestors,” while INF-07, a young community leader, explained that relinquishing land rights without ritual and consensus was equivalent to severing one's lineage. INF-11, a religious leader, further added that any project involving ancestral land must be blessed not only by legal permits but by community elders and traditional rituals. These perspectives reflect a communal logic in which land decisions are made through consensus, guided by customary authority and social obligations rather than individual ownership or government decree.

A key cultural principle that emerged strongly from the data is reciprocity. Communities do not view development as a one-sided transfer of capital or infrastructure, but as a relational process involving mutual benefit, long-term commitment, and moral accountability. INF-02 noted that when investors “only bring permits and ignore the elders,” they are seen as exploitative, regardless of the project's economic promise. In contrast, investment models that engage in dialogue, provide voluntary contributions, and recognize *adat* structures tend to garner stronger community acceptance. This aligns with the idea of a Social License to Operate, in which legitimacy arises not from formal approval alone but from ongoing cultural and relational validation.

These dynamics are best understood within the broader Melanesian value system, which provides the ethical benchmarks for evaluating any form of external engagement. Kelly and Nicholson [23] identifies ten core values central to this worldview: land, kinship, reciprocity, food sharing, ancestral reverence, ritual practice, leadership, education, compensation, and work. These values operate as cultural criteria against which communities assess whether investors are acting with good faith and respect. Investment initiatives that ignore these criteria even if legally compliant or economically viable are frequently rejected due to perceived moral and cultural violations.

This pattern aligns with the existing literature on cultural legitimacy in indigenous development. Tomateo and Grabowski [24] argues that indigenous interpretations of land and development are grounded in relational ethics and moral obligation, not in notions of private property or utilitarian benefit. Franklin's articulation of Melanesian values helps explain why development projects that bypass cultural protocols are often viewed as threats rather than opportunities [25].

Importantly, the findings reveal that indigenous communities are not inherently anti-development. Rather, they are highly discerning about the terms under which development occurs. As INF-12, a women's group representative, noted, “We want schools, clinics, and jobs, but we want them on our terms, through our voice.” This highlights a critical nuance: the resistance to investment is not rooted in opposition to progress, but in the defense of cultural sovereignty and community agency.

In summary, the acceptance of agricultural investment in Papua depends not only on regulatory approval or financial viability but also on deep cultural alignment. Respect for ancestral authority, adherence to norms of reciprocity, and recognition of land as a spiritual domain are not symbolic concerns; they are structural determinants of legitimacy and long-term success. Sustainable investment in indigenous territories, therefore, requires more than procedural inclusion. It demands a cultural ethics of engagement, grounded in mutual respect, relational accountability, and the meaningful participation of those whose lives and landscapes are most affected.

4.3. Institutional Gaps in Endowment Fund Realization

Although the Papua Special Autonomy Law provides a clear legal basis for the creation of an Endowment Fund to secure long-term community benefits from resource-based investments, this study found that the institutional mechanisms required to operationalize such a fund remain underdeveloped. The legal mandate outlined in Article 38(2) suggests a forward-looking approach to financial sustainability through the allocation of resource-derived revenues. However, the fund's realization has been hampered by the absence of regulatory instruments, technical infrastructure, and local capacity to manage such a system effectively.

Several informants acknowledged the conceptual strength of the Endowment Fund but highlighted practical challenges that prevent its implementation. INF-10 emphasized the lack of institutional readiness, noting that no formal management body or community-based governance structure currently exists to oversee the fund. Similarly, INF-03 observed that while the Endowment Fund is often mentioned in planning discussions, it rarely progresses into formal regulations or actionable development programs. These insights suggest a disconnection between legal intention and institutional execution, where policy concepts are not matched by operational frameworks.

At the local level, there is strong community support for the establishment of an Endowment Fund, but only under conditions that guarantee transparency, fairness, and inclusive governance. Community stakeholders expect a participatory structure that involves traditional leaders, women, and youth, then expectation voiced consistently by informants such as INF-12. This reflects both a cultural emphasis on collective stewardship and a pragmatic concern over accountability, particularly in areas where distrust of political elites remains high.

The findings point to a broader institutional vacuum, where legal authorization exists without sufficient follow-up through technical guidelines, enforcement mechanisms, or community training. Without dedicated regulations, financial oversight procedures, or administrative coordination between provincial and district governments, the fund remains a rhetorical tool rather than a functioning development instrument. The lack of detailed policy design not only inhibits implementation but also creates a risk of mismanagement or elite capture if and when such funds are eventually initiated.

This situation mirrors challenges documented in international contexts, where the success of indigenous-managed endowment models often depends on strong governance systems, regulatory protections, and culturally aligned fund management structures. Studies by Appiah-Opoku [26] on indigenous economic institutions show that without local autonomy, administrative capacity, and legal clarity, even well-intentioned financial initiatives can fail to serve their intended purpose.

In the Papuan context, the cultural foundations for such a fund are already present, rooted in Melanesian values of intergenerational responsibility and collective welfare. However, the institutional infrastructure required to support this model has not been built. For the Endowment Fund to function as a genuine tool of empowerment, it must be embedded within participatory governance structures and supported by multi-level coordination across legal, financial, and customary domains.

Given the widespread support for an Endowment Fund and concerns over long-term sustainability, it is important to explore diversified investment instruments suited to both local risk tolerance and return expectations. Table 1 presents a comparative overview of possible investment options for managing the Endowment Fund, summarizing the benefits, risks, and typical return ranges for each.

Table 2.
Investment Option for Endowment Fund.

Investment Type	Benefits	Drawbacks	Estimated Returns
Bank Deposits	Safe and stable	Low returns compared to other investments	3% – 5%
Bonds	Fixed income from bond coupons; relatively secure, especially government bonds	Lower returns than stocks; inflation risk	5% – 7% (government), 7% – 10% (corporate)
Dividend Stocks	Passive income from dividends; potential for stock price appreciation	Stock price fluctuations; potential dividend cuts	5% – 12% (depending on company)
Property & REITs	Rental income or REIT dividends; property value tends to appreciate	Requires substantial capital; low liquidity	7% – 15% (depending on location and property type)
Peer-to-Peer (P2P) Lending	Higher returns than bank deposits; flexibility in borrower selection	Higher default risk; not insured by the Deposit Insurance Corporation (LPS)	10% – 20% (depending on platform and risk level)
Business/Startup Investment	High profit potential if the business succeeds; dividend or profit-sharing	High risk of business failure; requires business expertise	15% – 30% (if successful)
Infrastructure/Social Projects	Stable returns if the project is well-managed; positive social impact	Longer return period; regulatory dependence	5% – 12% (depending on project)
Hedge Funds/Private Equity	Managed by investment professionals; high return potential	Requires large capital; less transparency for small investors	10% – 25% (depending on strategy)

The proposed Endowment Fund, while culturally aligned with the Melanesian principle of intergenerational responsibility, must also be underpinned by practical investment strategies that ensure long-term sustainability and risk mitigation. Table 1 presents a range of investment options that could be tailored to the needs and capacities of indigenous Papuan communities. Low-risk instruments such as bank deposits and government bonds offer financial safety but may yield returns too modest to meet community expectations over time, especially when adjusted for inflation. Meanwhile, property investments and dividend stocks present moderate returns with potential for value appreciation, though they often require significant capital and carry liquidity constraints.

Importantly, peer-to-peer lending and business/startup investment if guided by proper selection and oversight can align with community empowerment goals by funding local enterprises. However, their higher default risks and dependency on platform regulation must be carefully managed. Infrastructure or social projects, when developed collaboratively, offer the potential for both social and financial returns, particularly in under-served regions of Papua. These models may resonate with community priorities for schools, health services, or clean water access.

Lastly, private equity and hedge funds, while offering the highest returns, may pose challenges in transparency, accessibility, and alignment with community values, especially for smaller endowment sizes. Therefore, a balanced investment portfolio combining low-risk options with strategic allocations to community-based business or infrastructure is likely to be the most viable approach. This diversified model should be accompanied by financial literacy training, local management participation, and external audit mechanisms to prevent elite capture and ensure accountability. In this way, the Endowment Fund can function not only as a financial tool, but as a governance platform that embodies both economic and cultural sustainability.

5. Implications

This study offers critical implications for both theory and practice at the intersection of indigenous rights, sustainable agricultural investment, and culturally legitimate governance in Papua. By integrating empirical findings with theoretical insights, it contributes to scholarship on legal pluralism and development while guiding ethical approaches to agricultural investment in indigenous territories.

Theoretically, the research advances the understanding that cultural legitimacy is foundational for legal and economic legitimacy in agricultural development. Although Indonesia's legal frameworks such as Article 18B(2) of the 1945 Constitution and Constitutional Court Decision No. 35/PUU-X/2012 formally recognize indigenous land rights, they are not consistently translated into practice. The concept of legal pluralism underscores the need to harmonize statutory law with customary (*adat*) systems, particularly in agrarian communities where traditional land tenure governs farming practices and food systems. Meanwhile, the capability approach emphasizes that agricultural development must empower communities to pursue culturally valued livelihoods, rather than impose external production models or extractive schemes.

Practically, the findings reveal how the absence of culturally aligned agricultural governance mechanisms undermines the implementation of land rights and inclusive rural development. Land grabbing and state-led agricultural projects such as MIFEE in Merauke demonstrate how legally sanctioned, top-down interventions can displace indigenous food systems, provoke resistance, and erode trust. While policy reforms such as the revision of the Papua Special Autonomy Law (Law No. 2/2021) and Government Regulations No. 106 and 107 of 2021 aim to support community-based planning, this study finds that they remain poorly implemented and disconnected from customary institutions.

For policymakers, these findings underscore the need to move beyond legal recognition and toward localized agricultural governance that embeds Free, Prior, and Informed Consent (FPIC), participatory land mapping, and benefit-sharing within farming-based communities. Sustainable agricultural investment in Papua must be coordinated with district-level capacity-building and the empowerment of customary land custodians.

For investors and agricultural development actors, the study highlights that regulatory permits are not sufficient to ensure community acceptance. Agricultural investment must be grounded in long-term relationships, *adat*-based protocols, and shared food security goals. Mechanisms such as voluntary contributions, community-managed Endowment Funds, and inclusive agricultural cooperatives are not optional—they are essential to building legitimacy and sustainability.

For indigenous communities and civil society, the findings affirm the centrality of cultural agency in shaping rural development. Resistance to investment reflects a demand for agricultural systems that are locally governed, culturally meaningful, and economically equitable. Strengthening *adat* councils, legal literacy, and food sovereignty initiatives can help transform formal rights into functional rural resilience.

In sum, bridging the gap between legal frameworks and on-the-ground agricultural legitimacy requires a shift toward culturally grounded, community-led investment models that prioritize not only productivity but also equity, heritage, and food system sustainability. Only through this approach can agricultural investment in Papua become truly ethical, inclusive, and resilient.

6. Conclusion

This study reveals that the gap between formal legal recognition and the lived realities of indigenous Papuan communities is not only institutional but fundamentally cultural. Although frameworks such as the Papua Special Autonomy Law and Constitutional Court decisions affirm indigenous land rights, they often fail to reflect the values of kinship, reciprocity, and ancestral responsibility that shape community responses especially in the context of agricultural investment.

Investment in agriculture is not assessed by indigenous communities solely in terms of productivity or profit, but by its alignment with *adat*, respect for customary authority, and contribution to food security and communal well-being. Top-down and transactional models have consistently faced

resistance, reinforcing the need for participatory and culturally legitimate mechanisms. Community-supported tools such as voluntary contributions and Endowment Funds illustrate a growing demand for agricultural development models that are inclusive, long-term, and socially grounded.

This study proposes a revised investment framework tailored to the Papuan context. It begins with community consultation anchored in *adat*, ensures the application of Free, Prior, and Informed Consent (FPIC), and culminates in community-managed financial mechanisms that support agricultural sustainability. While the amendment of the Special Autonomy Law (Law No. 2/2021) and the issuance of PP No. 106 and 107 of 2021 provide important legal pathways, their effectiveness will depend on how meaningfully they are implemented and integrated with indigenous governance structures.

In conclusion, sustainable agricultural investment in Papua requires more than legal compliance. It must be designed as a culturally rooted, community-driven process one that bridges legal frameworks, respects indigenous knowledge systems, and advances both ecological resilience and local livelihoods.

Transparency:

The authors confirm that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained. This study followed all ethical practices during writing.

Author Contributions:

AS conceptualized the study, provided the theoretical framework, and supervised the research design and analysis. LW contributed to data collection, field coordination, and literature review refinement. DWP assisted in interpreting the agricultural components and contextualizing the agronomic insights into the analysis. YDF contributed to policy analysis, stakeholder engagement, and drafting sections related to institutional frameworks. All authors contributed to writing, critically revised the manuscript for intellectual content, and approved the final version for submission.

Acknowledgment:

The authors wish to express their sincere appreciation to the local government of Tamberau Regency and community leaders in Wewe Village for their cooperation and support during the fieldwork. Special thanks also go to the EcoNusa Foundation for facilitating stakeholder engagement and providing logistical support throughout the research process.

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