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POLICY UNCERTAINTY AND ITS IMPACT ON INVESTMENT RISK IN SUSTAINABLE AGRIBUSINESS VENTURES

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Abstract

Policy uncertainty is one of the factors that significantly affects the investment climate in the agribusiness sector, especially in the context of sustainable development. This study aims to explore the relationship between policy uncertainty and investment risk in sustainable agribusiness efforts in Indonesia. Through a literature review method, this study analyzes various scientific sources and policy documents related to regulatory changes, regulatory inconsistencies, and political and economic uncertainty that impact investment decisions in the agribusiness sector. The results of the study indicate that policy uncertainty can increase financial and operational risks for investors, hinder capital flows, and reduce interest in long-term investment in environmentally friendly agribusiness systems. In addition, this uncertainty weakens legal certainty, increases transaction costs, and reduces market efficiency. This study recommends the importance of cross-sector policy harmonization, regulatory transparency, and legal certainty as a foundation for creating a stable agribusiness investment climate that supports sustainable development goals.

Keywords: policy uncertainty, investment risk, sustainable agribusiness

INTRODUCTION

The agribusiness sector plays a strategic role in the Indonesian economy, both as the main driver of the agricultural sector and as an important pillar in supporting national food security, job creation, and rural development (L. Li et al., 2023). In recent decades, efforts towards sustainable agribusiness have received increasing attention, along with increasing awareness of the importance of maintaining a balance between economic productivity, environmental sustainability, and social welfare. Sustainable agribusiness is expected to be a development model that is adaptive to climate change, efficient in resource utilization, and inclusive of small farmers and business actors throughout the supply chain. However, achieving this goal cannot be separated from a stable and conducive investment climate. Unfortunately, one of the main challenges in developing sustainable agribusiness in Indonesia is policy uncertainty which often becomes a serious obstacle in making investment decisions. Policy uncertainty refers to a condition when the direction, content, and consistency of government policies are difficult for business actors to predict, either due to sudden regulatory changes, weak coordination between institutions, or inconsistencies between central and regional policies. In the context of agribusiness, this form of uncertainty can cover various aspects, such as business licensing, land management, agricultural subsidies, export-import tariffs, environmental regulations, and fiscal incentives. Unexpected policy changes or overlapping policies can create uncertainty in business planning and disrupt investment profit projections. Investors, both domestic and foreign, tend to be cautious or even postpone investment decisions if the risks due to inconsistent policies are considered too high. As a result, the potential for innovative and sustainable agribusiness development is hampered, especially in sectors that require long-term capital and legal certainty (Szabó, 2019a). The phenomenon of policy uncertainty does not stand alone, but is intertwined with the dynamics of politics, bureaucracy, and governance. Changes in leadership at the national and regional levels, differences in development visions between agencies, and pressure from interest groups often result in fluctuating and less synchronized policies (J. Li et al., 2024). On the other hand, agribusiness as a sector that is highly dependent on public regulations requires clear and integrated policy direction, given its relationship to natural resource management, access to financing, distribution of crops, and environmental protection. When policies change too quickly or are not in line with each other, business risks increase, especially in terms of legal uncertainty and high compliance costs. In the long term, this condition can erode investor confidence in the stability of the business climate in the agribusiness sector, and encourage investment relocation to other sectors or countries that are considered more stable.

Amid the urgency of agricultural transformation towards a sustainable agribusiness system, the role of investment is very important in providing environmentally friendly technology, production infrastructure, and research and development capacity. Long-term investment requires legal certainty, stable regulations, and pro-investment policy support. When government policies do not provide clear and consistent signals, business actors become reluctant to take risks or tend to choose a conservative approach in business expansion. For example, investors may postpone the construction of agricultural processing plants if there is no clarity regarding land availability, spatial planning, and tax incentives (Olasehinde-Williams et al., 2023). Alternatively, agritech companies may be reluctant to introduce precision farming technologies if agricultural digitalization policies have not been translated into concrete support systems on the ground. This uncertainty not only impacts short-term profitability but also undermines the systemic transformation towards sustainable agriculture.

In addition to impacting investment decisions, policy uncertainty also increases information asymmetry among agribusiness actors (Shaikh, 2021). When regulations change suddenly or are not evenly disseminated, business actors with limited access to information will have difficulty understanding their obligations and rights. This condition can exacerbate the inequality between large companies and agribusiness MSMEs, where small groups will be more vulnerable to regulatory risks. In such a situation, legal risks, operational risks, and market risks increase significantly, which ultimately disrupts business stability and the competitiveness of Indonesian agribusiness products in domestic and international markets. On the other hand, countries that have succeeded in promoting sustainable agribusiness generally have relatively stable, transparent policy frameworks that support an inclusive and long-term investment climate. This condition shows that there is an urgent need to systematically examine the relationship between policy uncertainty and investment risk in the sustainable agribusiness sector. This research is important to identify patterns of policy uncertainty that have the most impact on agribusiness investment, as well as to understand how business actors respond to these situations in their business practices. This study is also expected to contribute to the formulation of policies that are more responsive to the needs of business actors, as well as encourage the creation of a more adaptive, innovative, and sustainable agribusiness ecosystem. In the context of globalization and increasingly tight international market competition, Indonesia needs to strengthen the attractiveness of the agribusiness sector through policies that are credible, accountable, and able to reduce uncertainty, which has so far been the main barrier to investment. Furthermore, it is important to understand that investment risks in agribusiness do not only come from external factors such as commodity price fluctuations or climate change, but also from institutional factors and domestic policies ("Impact of Risk Management on Sustainable Farming Business," 2022). Therefore, public policy reforms need to be directed at creating an investment climate that supports sustainable agribusiness growth. This includes simplifying licensing, strengthening regulatory transparency, harmonizing central and regional policies, and increasing bureaucratic capacity in managing the dynamics of the agricultural sector. The government also needs to build a periodic policy monitoring and evaluation system, so that every change in regulation is truly based on empirical data and consultation with stakeholders, including investors, farmers, and academics (Wang & Jia, 2025).

By clarifying the relationship between policy uncertainty and investment risk in the sustainable agribusiness sector, it is hoped that this study will be able to encourage the development of more measurable policies that support long-term sustainability. This study also opens up space for further discussion on the importance of synergy between the government and the private sector in creating a resilient agribusiness ecosystem amidst various economic, social, and environmental challenges. Thus, the results of this study are not only academically relevant, but also have practical implications in supporting the sustainable agricultural development agenda in Indonesia.

RESEARCH METHOD

The research method used in this study is the literature review method or library study, which aims to explore and analyze the relationship between policy uncertainty and investment risk in sustainable agribusiness efforts. The literature review was conducted by collecting, reviewing, and synthesizing various scientific sources such as journals, books, policy reports, and official documents from relevant national and international institutions. The main focus is on literature that discusses the dynamics of government policies, agribusiness regulations, and risk factors that influence investment decisions in the sustainable agribusiness sector.

The review process begins with a systematic search of relevant articles and publications using academic databases such as Google Scholar, Scopus, and ScienceDirect, with keywords such as policy uncertainty, investment risk, agribusiness sustainability, and regulatory impact. Inclusion criteria include literature published in the last ten years, relevant to the context of agribusiness and economic policy, and presenting empirical and conceptual analysis related to the influence of policy uncertainty on investment. These sources are then reviewed qualitatively to identify the main themes, patterns of relationships between variables, and theoretical approaches used in previous studies.

The results of this literature review are analyzed using a descriptive-analytical approach, with the aim of developing a conceptual framework that describes how policy uncertainty can affect investment risk in sustainable agribusiness. This approach not only aims to summarize the findings of previous literature, but also highlights research gaps and potential directions for further study. Thus, this method allows for the development of a comprehensive and structured argumentation regarding the implications of policy uncertainty for long-term investment in the sustainability-oriented agribusiness sector.

RESULT AND DISCUSSION

Types of Investment Risks Incurred

In the context of sustainable agribusiness, investments face various types of risks that can hinder the success and sustainability of the project. One of the main risks that often arises is financial and funding risk. This risk includes uncertainty in obtaining capital, exchange rate fluctuations, and changes in interest rates that can affect the cash flow and profitability of agribusiness projects (Vasista, 2022). Uncertainty in macroeconomic and fiscal policies often adds to this financial uncertainty, because investors find it difficult to predict the direction of regulations that will affect return on investment. In addition, access to financing also depends heavily on institutional stability and market confidence in government policies. If the government does not have a strong commitment to the agribusiness sector, then funding support from financial institutions, both local and international, tends to be weak. As a result, agribusiness projects are often delayed or stopped due to lack of funds, which in turn causes financial losses. On the other hand, operational and supply chain risks are crucial issues, especially in unstable policy conditions. Sudden changes in import regulations, fertilizer subsidies, or export policies can cause serious disruptions in production, distribution, and logistics flows. Uncertainty in the supply of agricultural inputs such as seeds, fertilizers, and pesticides due to changing policies disrupts the efficiency and productivity of agribusiness. In addition, inadequate infrastructure conditions, especially in rural areas, exacerbate the challenges in maintaining a smooth supply chain. When the logistics flow is disrupted, production results are difficult to market optimally, causing losses due to decreased quality, delayed distribution, or even loss of market. In the long term, this operational instability creates an unattractive investment environment due to the high operational uncertainty that investors must face (Sachse et al., 2012). Legal and licensing risks are also important dimensions that must be watched out for in agribusiness investment, especially those related to land development and production processes.

In many cases, overlapping regulations between the central and regional governments create confusion regarding land ownership rights, area use status, and environmental permit obligations. When legal certainty is weak, investors face high risks of agrarian conflicts, local community demands, and potential revocation of business licenses that impact project continuity. Complex licensing procedures, lengthy bureaucracy, and potential corrupt practices extend investment time and costs, thus reducing the attractiveness of this sector as a long-term investment destination. In addition, failure to fulfill legal aspects can lead to litigation, administrative sanctions, and even termination of operations that directly affect the company's financial performance. Therefore, legal uncertainty is one of the main obstacles to sustainable agribusiness development (Gutkevych & Vikhliaiev, 2021). Overall, the types of investment risks in the agribusiness sector are greatly influenced by the dynamics of national and local policies. When policies are inconsistent and overlapping, financial, operational, and legal risks will increase. This is a major challenge for investors who are oriented towards long-term and sustainable investment. Therefore, there needs to be a guarantee of legal certainty, policy stability, and regulatory transparency to create a conducive investment climate for the agribusiness sector.

The Impact of Policy Uncertainty on Investor Decisions

Policy uncertainty is one of the main factors affecting the investment climate in various sectors, including the agribusiness sector. In the context of a dynamic global economy that is often vulnerable to political and regulatory turmoil, policy stability is an important instrument to maintain investor confidence. When a country or region is unable to provide legal certainty and consistency in economic, tax, trade, or investment regulatory policies, investors tend to take cautious steps or even withhold their investment decisions. This is especially true in the agribusiness sector, which is characterized by being long-term, capital-intensive, and highly dependent on government policies related to land, licensing, subsidies, and commodity trade (Sun et al., 2021). One of the most obvious impacts of policy uncertainty is a decline in investor interest, both domestic and foreign (Ahmed & Sarkodie, 2021). When regulations change frequently or are not consistently enforced, private investors will hesitate to invest because of the unpredictable risks. In many cases, sudden changes in fiscal policy, agricultural subsidies, or export-import tariffs can directly affect the profitability and feasibility of agribusiness projects. Foreign investors also pay close attention to the ease of doing business ranking and perceptions of a country's institutional stability. When regulations are not transparent, licensing processes are complicated, or there is excessive political intervention in the food and agriculture sector, investors tend to withdraw and look for other, more predictable locations. This phenomenon not only hinders capital inflows but also reduces the potential for technology transfer and increasing the production capacity of the national agribusiness sector (Ahmed & Sarkodie, 2021).

Policy uncertainty also has a direct impact on increasing the risk premium that must be borne by investors. In economic theory, the higher the uncertainty of an investment, the higher the rate of return expected by investors to compensate for the risk. As a result, the agribusiness sector in countries with unstable policies will be considered less attractive because the cost of capital required is higher. Lenders and financial institutions tend to set higher interest rates for the agribusiness sector in countries with policy uncertainty, given the potential risk of project failure or losses due to government intervention. This has implications for the worsening financing climate, especially for farmers, cooperatives, and small business actors who are highly dependent on external capital support. In the long term, this condition can widen the gap in access to agribusiness investment, because only large players or those with special access to information and power networks are able to survive amidst this uncertainty (Szabó, 2019b).

Furthermore, policy uncertainty can encourage a shift in investment strategies, both in terms of sector and geographic location. Investors tend to choose sectors that have more stable regulations and lower risks, such as the information technology sector, financial services, or manufacturing that are less dependent on land and agrarian conditions. Even in the context of agribusiness itself, investors may prefer neighboring countries that have a more conducive regulatory climate and a clearer incentive system. This shift can create development disparities between regions and slow the growth of the agribusiness sector in countries with inconsistent policies. In addition, the decision to move investment to another location or sector is often accompanied by significant losses, either in the form of lost job opportunities, technological stagnation, or loss of state revenue from taxes and levies. Countries that fail to provide the policy certainty that investors need will ultimately lose regional and global competitiveness, while limiting their ability to achieve food security and sustainable agricultural development.

When policy uncertainty becomes a systemic phenomenon, its impact is not only limited to a decline in direct investment, but also damages long-term trust in the government and national economic institutions. In many cases, this uncertainty arises due to changes in government regimes accompanied by changes in policy direction without a long-term strategic basis. Often, programs and regulations that have been running are suddenly stopped or replaced without a clear transition, creating acute uncertainty among business actors. This shows that the challenge in building a healthy agribusiness investment climate lies not only in the private sector, but also in the state's capacity to design accountable, participatory, and sustainable policies.

Therefore, institutional reform, increased transparency, and political and economic stability are absolute requirements for creating a resilient and competitive agribusiness investment climate. Thus, the influence of policy uncertainty on investor decisions is very significant and multidimensional. Declining investment interest, increasing risk costs, and shifting investment strategies are logical consequences of a policy system that is unable to provide certainty and sustainability. Therefore, it is important for policy makers to realize that investment, especially in strategic sectors such as agribusiness, requires a stable, predictable regulatory ecosystem that supports long-term innovation. Without this, various initiatives to encourage inclusive economic growth and agricultural development will be difficult to achieve in a sustainable manner.

Investment Risk Mitigation Strategy Amidst Policy Uncertainty

In the context of agribusiness investment that is increasingly vulnerable to national and global policy dynamics, the need for risk mitigation strategies is becoming increasingly urgent. Policy uncertainty, whether in the form of changes in tax regulations, subsidies, licensing, or export-import barriers, creates systemic risks that can damage the long-term planning of business actors (Ratnam & Thakur, 2024). Therefore, a comprehensive approach is needed that is able to balance capital protection and flexibility in dealing with uncertainty. In this case, agricultural insurance, alternative financing schemes, public-private partnership mechanisms, and investment diversification and digital technology are important components in managing risk adaptively. Agricultural insurance plays a crucial role in providing protection against production risks such as crop failure due to natural disasters, climate change, or pest and disease attacks. In unstable policy conditions, insurance becomes an important instrument to maintain the continuity of farming businesses and investment in the agribusiness value chain. The government has a strategic role in encouraging the agricultural insurance ecosystem through premium subsidies, increasing farmer literacy, and providing regional-based risk data. However, the effectiveness of insurance will only be optimal if it is integrated with flexible alternative financing schemes. For example, results-based financing, farmer group-based microcredit, to non-conventional collateral systems such as future harvest contracts, can bridge the limited financial access of farmers and agribusiness MSMEs that have so far been untouched by formal banking institutions. These schemes act as a financial cushion in dealing with income fluctuations due to changing policies, while expanding financial inclusion in the agricultural sector (Iriani et al., 2024).

Furthermore, public-private partnerships have emerged as an important strategy in overcoming policy risks that have a broad impact on the agribusiness ecosystem. In this partnership, the private sector can collaborate with the government to create a joint framework in building infrastructure, logistics systems, distribution of superior seeds, or even developing market information systems. Thus, dependence on short-term policies can be reduced because business actors have a stable channel in carrying out production and distribution activities. Partnerships also allow for the spread of risk between the government and market players. For example, in irrigation development projects, construction or operational risks can be shared, so that investors are not fully burdened by the uncertainty of spatial planning policies or environmental regulations. In the context of agribusiness, this partnership model has been applied in food estate projects, farmer-company partnerships, and contract farming schemes involving financial institutions as financing support partners (Huyen et al., 2023).

On the other hand, investment diversification is a fundamental step to reduce the impact of policy uncertainty on a particular sector or commodity. Diversification not only includes portfolio allocation in various agricultural sub-sectors such as horticulture, staple foods, and plantations, but also extends to geographical areas that have a better level of regulatory stability. This approach allows investors to spread risk across regions or sub-sectors with varying policy sensitivities. In addition, diversification can also take the form of expanding into agribusiness support services such as harvest storage, food processing, or cold chain logistics. Investment in such infrastructure is relatively more resilient to seasonal policy fluctuations, while strengthening the competitiveness of the sector as a whole. In a global context, diversification into export markets can also provide protection against domestic policy fluctuations, as long as there is a mitigation strategy for international trade risks. The use of digital technology is a complementary strategic component in mitigating investment risk. The role of technology not only strengthens operational efficiency, but also increases resilience to changing policies by providing real-time information, predictive risk analysis, and automation of the financial system.

Blockchain-based digital platforms, for example, enable transparency in the supply chain, which is crucial when trade regulations change or export-import regulations tighten. Likewise, the use of the Internet of Things (IoT) in land and weather monitoring, which adds value to insurance providers in measuring risk more accurately. In the field of financing, agricultural fintech enables access to capital based on peer-to-peer lending technology, crowdfunding, or tokenization of agricultural products. All of these digital instruments expand the reach and resilience of agribusiness actors to policies that often change in a short time (Alawode & Chiamaka, n.d.).

Thus, investment risk mitigation strategies amidst policy uncertainty require synergy between economic, institutional, and technological instruments. This approach is not enough to be merely reactive, but must be proactive and systematic, based on long-term planning and collaborative commitment between the government, private sector, and agricultural communities. In an increasingly uncertain environment, resilience to risk is no longer only measured by the ability to survive a crisis, but by how quickly business actors are able to adapt and innovate in the face of ever-growing policy complexity. Alternative insurance and financing strategies must be integrated with institutional partnerships and the use of technology to create investment systems that are not only resilient, but also sustainable in the long term.

The Role of Government in Ensuring Policy Certainty

The role of the government is very central in ensuring policy certainty that supports the growth of this sector in an inclusive and competitive manner. Prolonged policy uncertainty is often a major obstacle in investment decision-making, both by local and foreign actors (Government Policy and Agricultural Production: A Scoping Review to Inform Research and Policy on Healthy Agricultural Commodities | Globalization and Health, n.d.). Therefore, appropriate and strategic government intervention is needed not only to create a conducive business climate, but also to maintain the sustainability of the agricultural economy as a whole. The government is responsible for building a regulatory framework that is consistent, adaptive, and responsive to changes in global and domestic dynamics, especially those related to food challenges, climate change, and market volatility.

One of the main roles of the government in ensuring policy certainty is to carry out policy reforms consistently and based on data. This reform involves a comprehensive evaluation of existing policies and the use of data and technology to design new policies that are more accurate, effective, and relevant to needs in the field (Rahman et al., 2024). In this regard, the use of big data, agricultural information systems, and predictive modeling are important tools for understanding food production, distribution, and consumption patterns. A data-driven approach allows the government to identify regulatory gaps, estimate risks, and adjust policy interventions to be more targeted. Without targeted and measurable policy reforms, agribusiness programs will be vulnerable to inconsistencies, overlapping regulations, and lack of investor appeal. Furthermore, stakeholder involvement in the agribusiness policy formulation process is an important step to ensure the legitimacy and acceptability of policies. This involvement includes farmers, industry players, academics, non-governmental organizations, and investors as an integral part of the agribusiness value chain.

The government's openness to aspirations and feedback from stakeholders will create a sense of ownership and shared commitment in policy implementation. In addition, multi-stakeholder participation also contributes to increasing transparency and accountability of public policies. In this context, public consultation forums, sectoral policy dialogues, and the preparation of research-based policy documents are important mechanisms that must be institutionalized by the government so that the decision-making process is more democratic and accommodating to real needs in the field (Novrini et al., 2025).

The government also plays a major role in providing investment protection instruments and regulatory stabilization, especially for the agribusiness sector which is heavily influenced by external factors such as climate, global commodity prices, and exchange rate fluctuations (Dai, n.d.). In this case, the presence of instruments such as agricultural insurance, financing guarantees, and risk guarantee facilities is important to increase investor confidence in the prospects of national agribusiness. The government can create a legal framework that protects the interests of business actors from sudden or inconsistent policy interventions. The preparation of regulations that provide clarity on the rights and obligations of business actors, as well as fair and transparent dispute resolution mechanisms, are important elements in strengthening legal and investment certainty. In addition, regulatory stabilization that prioritizes harmonization between institutions and consistency across government periods will provide a positive signal to market players.

It is also important for the government to develop a long-term policy roadmap that can provide a clear direction for national agribusiness development. This roadmap not only includes the vision and mission of agricultural sector development, but also details the implementation steps that involve coordination between ministries and institutions. This long-term planning must be accompanied by periodic evaluations to be flexible in responding to the dynamics of change both domestically and internationally. The government needs to avoid reactive policy changes, without comprehensive studies, because this can actually increase uncertainty and weaken investment interest. In this framework, policy stability is one of the important indicators in assessing the business climate in the agribusiness sector.

The certainty of policy guaranteed by the government also requires strengthening the capacity of the bureaucracy and state apparatus in formulating and implementing policies professionally and effectively. Often, policy implementation is disrupted not because of regulatory weaknesses, but because of the weak capacity of human resources in carrying out the mandate of the regulation. Therefore, increasing bureaucratic competence, implementing good governance, and utilizing digitalization systems in public services are priorities to ensure that policies that have been formulated can be implemented optimally. The government must also build a strong monitoring and evaluation system so that policy implementation can be controlled, improved, and adjusted in a timely manner.

Overall, the government's role in ensuring certainty of agribusiness policies is not only focused on regulatory aspects, but also includes aspects of coordination, facilitation, and protection of business actors. A government that is able to present a stable, open, and adaptive policy environment will create a healthy and sustainable investment climate for the national agribusiness sector. Amid the complexity of global food challenges and the need for domestic food security, the government's commitment and courage in carrying out progressive and inclusive policy reforms are key to encouraging competitive and resilient agribusiness growth.

CONCLUSION

Policy uncertainty has become one of the main factors affecting investment dynamics in the agribusiness sector, especially in the context of long-term sustainability. This uncertainty includes sudden regulatory changes, policy inconsistencies between the central and regional levels, and a lack of clarity in the direction of national strategic policies. In situations like this, investors become more cautious, even reluctant to invest in agribusiness projects that should be able to support food security and rural economic development. This shows that an unstable policy climate can reduce the growth potential of the sustainability-oriented agribusiness sector.

The impact of policy uncertainty on investment risk can be seen in various aspects, ranging from increasing risk costs, difficulties in long-term planning, to disruption of the supply chain and distribution of agricultural products. Investors face obstacles in obtaining financing, legal guarantees, and certainty of permits that should be important foundations for the sustainability of agribusiness businesses. In addition, agribusiness actors, especially small farmers and food MSMEs, are the most vulnerable to unpredictable policy changes. This condition shows that policy uncertainty not only impacts capital and profits, but also the social and ecological dimensions of sustainable agribusiness. Therefore, efforts to create policy certainty are crucial in encouraging a conducive investment climate in the agribusiness sector.

Data-based policy reform, multi-party participation in policy formulation, and harmonization between central and regional regulations need to be strengthened to ensure the sustainability of this sector. Clarity in the direction of long-term policies that support sustainable agriculture and are resilient to climate change is also key to attracting and retaining investors. With maintained policy stability, the agribusiness sector can develop sustainably, create economic value, improve farmer welfare, and contribute to national food security.

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