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Tourism and farmers' economic transformation: lessons from North Toraja

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Farm diversification is becoming increasingly important for farmers in developing countries to improve economic resilience, especially with the increasing instability of agricultural markets. Agritourism, as one of the diversification strategies, can provide farmers with an alternative source of income. However, the factors influencing this diversification decision, particularly in rural areas such as North Toraja, Indonesia, still need to be fully understood. This qualitative research aims to understand the factors that influence farmers' livelihood diversification decisions in North Toraja, focusing on the role of agritourism and its implications for economic resilience and sustainable development. Data was collected through semi-structured interviews with 30 North Toraja farmers who have yet to diversify their businesses. The results showed that farmers' diversification decisions are influenced by several factors, including internal motivation (such as income generation opportunities and lifestyle needs), resource availability (land, capital, skills), market conditions (demand for agricultural products and agritourism services), and accessibility (strategic location and good access). The analysis also revealed that 83% of farmers were motivated by income generation opportunities, while 60% considered capital and location important factors in diversification. Farm diversification through agritourism provides additional income opportunities and contributes to farmers' economic resilience. This research emphasizes that diversification decisions are complex processes influenced by economic, social, and cultural factors. The results of this study provide insights into the dynamics of farmers' diversification decisions and provide policy implications to support sustainable rural development through agritourism.

KEYWORDS

agriculture, tourism, diversification, rural, adaptation, socio-cultural, Indonesia

Introduction

The restructuring of the global economy, driven by advances in production methods, trade liberalization and changing consumer behavior, has had a significant impact on the rural economic landscape, particularly for farmers (Liu et al., 2018; Snashall and Poulos, 2023). One consequence is an increased focus on specialized agricultural markets as a new opportunity (Quisumbing et al., 2015). While promising, specialty markets also hold risks, particularly related to market fluctuations and potential oversupply due to intense competition (Kehinde et al., 2021). This has prompted farmers to consider diversification as an important strategy to increase economic resilience and ensure the sustainability of their businesses (Yusriadi et al., 2024b). However, the decision to diversify is not a simple one, as farmers need to consider various factors and associated risks, including market dynamics, access to resources, and their adaptive capacity (Banik, 2019).

The agricultural sector in Indonesia, which is dominated by small businesses, is undergoing a transformation toward business diversification (Tambunan, 2019). One example is the shift away from main commodities such as maize toward more specific niche markets (Skøt et al., 2016). In addition, the integration of tourism activities is also a growing trend among Indonesian farmers (Andréfouët et al., 2021). The growth of the agricultural sector in Indonesia has shown positive development over the past few decades, signaling a transition toward a more developed economy (David and Ardiansyah, 2017). The land area utilized for agriculture is significant, covering millions of hectares of dryland, dryland mixed with shrubs, and plantations (Sabagh et al., 2021). Data shows a significant increase in the Gross Domestic Product of the agriculture sector (including forestry and fisheries), reaching IDR 2,253.8 trillion in 2021, up from IDR 1,900.6 trillion in 2018.

Although Indonesia's agricultural sector has progressed, challenges remain, especially for smallholder farmers (Yusriadi et al., 2024c). Imports of agricultural products still dominate the domestic market, while population growth and increased purchasing power are driving demand higher, especially for commodities such as rice (Duffy et al., 2021). The expansion of the agricultural sector has also led to greater competition from both large agricultural companies and imported products (Quisumbing et al., 2015). In this situation, livelihood diversification, such as integrating tourism, becomes an attractive option for some farmers (Bellotti et al., 2018). However, not all farmers choose this path. While some studies have shown diversification to be an adaptation strategy to market and climate fluctuations (Banik, 2019), little is known about the reasons behind some farmers' reluctance to diversify (Ellis et al., 2018; Mohammadkhani, 2024). Most of the existing literature tends to focus on the drivers of diversification, without delving deeper into the reasons behind the choice not to diversify (David and Ardiansyah, 2017; Tamsah et al., 2022; Yusriadi et al., 2024a). This approach only presents part of the picture and ignores the complexity of farm-level decision-making. More comprehensive research, which considers the perspectives of farmers who diversify and those who do not, is urgently needed to understand the dynamics of adaptation in the agricultural sector, particularly in the context of agrotourism as a form of livelihood diversification.

This study aims to understand the factors that influence livelihood diversification decisions among farmers in North Toraja Regency, South Sulawesi, Indonesia, with a focus on the role of agrotourism as a diversification strategy. Agrotourism, which integrates agricultural practices with tourism activities, represents an opportunity for farmers to create additional income streams while preserving agricultural traditions and promoting local culture. North Toraja is an ideal case study due to its distinct agricultural landscape, traditional farming systems, and rich cultural heritage, all of which are conducive to the development of agrotourism. The region's unique combination of terraced rice fields, coffee plantations, and cultural practices tied to local customs makes it a prime setting for exploring how agrotourism can support rural livelihoods, diversify agricultural activities, and contribute to sustainable economic development.

Farmers' decisions to diversify are the result of a complex consideration of multiple factors. Research shows that four main factors drive this decision: internal and external incentives

that encourage farmers to diversify; availability of capital, labor, and other productive assets; market demand, access to market information, and competition; and business location, infrastructure, and access to transportation. In contrast, farmers who choose not to diversify often feel that the economic costs, risks, or lifestyle incompatibilities outweigh the potential benefits. This research contributes to understanding agrotourism as a form of diversification by examining its positioning in farmers' strategies as a primary business or a complementary activity to other agricultural pursuits. By exploring the motivations and barriers farmers face in North Toraja, this study aims to provide a more comprehensive picture of how agrotourism can drive agricultural diversification and support sustainable rural development while highlighting the challenges and opportunities for farmers engaging in this type of tourism.

Method

Approach

This research uses a qualitative approach to understand the reasons behind farmers' livelihood diversification deeply. A qualitative approach, mainly through semi-structured interviews, is crucial for exploring the perspectives and experiences of research subjects in a rich and in-depth manner. Although qualitative methods have been widely accepted in human geography, the potential for rich insights from the perspectives of research subjects still needs to be addressed, especially in terms of informing more effective quantitative research designs, such as surveys. This research is also exploratory, meaning it aims to understand the issues surrounding farm enterprise expansion, particularly regarding entrepreneurship to tourists. Diverse findings wider than the initial focus are natural and expected in exploratory research.

Sampling technique

This study involved 30 farmers from North Toraja and surrounding areas. This sample selection aims to increase the representation and depth of the study, providing a broader perspective on the factors that influence farmers' decision to diversify their livelihoods. Although the method used to select these 30 farmers is not specified, the choice of location in North Toraja and its surroundings indicates the focus of the study on farming communities in the region. The number of 30 respondents also indicates an attempt to reach data saturation, a condition where the information obtained from the interviews is comprehensive enough and no significant new information is found.

Data collection technique

Data was collected through face-to-face interviews conducted at each farmer's home. The interviews lasted between 15 and 45 min and were conducted between June and July 2024. The interview format used was semi-structured, which allowed the researcher to dig deeper into topics that

emerged during the interview and provided flexibility in eliciting richer information from respondents. The choice to conduct interviews in farmers' homes indicates an attempt to create a comfortable and familiar atmosphere for respondents so they are more open to sharing information and experiences.

Data analysis

In line with the exploratory nature of the research, an open coding approach was used to identify emerging themes from the interview data. This approach allows researchers to systematically analyze qualitative data by identifying, categorizing, and describing phenomena found in the data. The open coding process involves reading the interview data repeatedly, marking keywords, phrases, or sentences that represent a particular idea or concept, grouping similar codes into broader categories, and developing themes that represent patterns or meanings that emerge from the data.

Result

All 30 participants stated that their enterprises are open to the public. The enterprises they run in this mountainous tourism area include cultivation of horticultural crops such as vegetables and fruits, as well as tourism support businesses such as coffee shops and inns. To quantify the findings from the semi-structured interviews, the factors influencing farmers' decisions to diversify were categorized and analyzed based on their frequency of mention across all participants. This approach allows for clearer interpretation and understanding of the weight of each factor in farmers' decision-making processes. Table 1 summarizes the findings related to these factors, showing the number of participants who identified each factor as influential in their livelihood diversification.

Motivation

The interest of some farmers in cultural values beyond agriculture, such as educating tourists and developing culturally based businesses, led this research to explore motivational factors in livelihood diversification. Five of the interviewed farmers (17%) explicitly mentioned long-term personal motivations beyond financial gain as drivers for their entrepreneurship. This phenomenon aligns with the concept of "Cultural Entrepreneurship" (Christie, 2002; Klamer, 2011). However, income generation is a primary motivation, with 25 farmers (83%) stating it as a key reason for diversification. Lifestyle needs, such as time flexibility and balancing family commitments, were mentioned by 12 farmers (40%).

Nevertheless, income generation tends to be the main motivation for farmers who choose to diversify their businesses by utilizing tourist visits. On the other hand, other motivations such as lifestyle also influence the diversification decision. For example, some farmers stated that they were motivated to diversify

TABLE 1 Frequency of factors associated with the decision to diversify livelihoods.

Factors	Number of farmers mentioning ($n = 30$)
Internal motivation	
Income generation	25
Lifestyle needs	12
Cultural entrepreneurship	5
Resources	
Availability of land	15
Access to capital	18
Skills and labor availability	10
Market conditions	
Demand for agricultural products	22
Demand for agritourism services	20
Accessibility	
Strategic location	16
Good accessibility	10

to have time flexibility and be able to adjust working hours to family needs. Limited agricultural land is also a driver of livelihood diversification for some farmers. On the other hand, some farmers choose to develop a business at home because it demands a high time commitment. They realize that running a parallel business with farming requires extra dedication, for example by being present on the farm for 6 days a week. Another challenge they face is the uncertainty of income, where there may be no sales for a few days if farm production is low.

It is important to note that catering to travelers is a choice for farmers. This decision is heavily influenced by personal motivations and preferences. Farmers who choose to serve tourists may be driven by a desire to increase income, expand social networks, or preserve local culture. In contrast, farmers who do not choose to serve tourists may have different motivations and priorities, such as income stability, work-life balance, or a more traditional type of work.

Resources

Business location and resource capacity play a crucial role in decisions to diversify, particularly in tourism. Eighteen farmers (60%) noted that access to capital is essential for business expansion, while 15 farmers (50%) emphasized the importance of available land for diversifying into other agricultural or tourism-related businesses. The involvement of family members was cited by three farmers (10%) as a strategy to manage resource limitations, particularly labor constraints. A major challenge is finding adequate labor, with 10 farmers (33%) expressing that the availability of skilled labor is a barrier to diversifying their businesses effectively, especially for enterprises requiring direct services to tourists.

Limited labor is a significant obstacle, especially for businesses that involve direct services to tourists. Farming already takes up a lot of time and energy, while the yield is relatively small. Finding additional labor is also difficult due to capital constraints. Many of us, especially those who are older or work part-time, find it hard to do everything ourselves. As a result, many choose not to diversify for fear of not being able to serve tourists optimally (interview, 2024).

For most of the household-scale farmers involved in this study, labor constraints are a significant barrier to business diversification, especially those involving direct services to tourists. Without additional staff, they feel the burden of agricultural work is already time- and labor-consuming, while yields are relatively small. The situation is further complicated for elderly or part-time farmers. Lack of capital to hire additional labor makes them reluctant to develop tourist-oriented businesses. This finding is reinforced by the responses of participants who chose not to diversify. They explicitly mentioned difficulties in meeting labor needs as the main reason. This limitation makes it difficult for them to optimally serve tourists and run parallel businesses outside of their main farming activities.

Market conditions

Market demand plays a significant role in shaping the farmers' diversification choices. Twenty-two farmers (73%) noted that the demand for agricultural products influenced their decision-making, and 20 farmers (67%) highlighted the appeal of catering to agritourism services as a diversification strategy. It was noted that 10 farmers (33%) are currently running tourism-based businesses, and an additional five farmers (17%) are considering entering this sector soon. Some farmers, however, expressed concerns about oversupply and price fluctuations, particularly for crops like shallots, making diversification into tourism an attractive alternative.

Marketing agricultural products through distributors is less effective. The effort spent is not proportional to the results obtained. We find it more profitable to sell directly to tourists. Therefore, our current focus is to attract as many tourists as possible to come here (interview, 2024).

Business diversification in the tourism sector opens opportunities for farmers to expand in various fields. Apart from serving the needs of tourists directly, they can also venture into the homestay business, cafes, and so on. Moreover, current tourism trends show an increasing interest in cultural tourism, which can be an opportunity for farmers to offer unique experiences to travelers. Increased competition in the agricultural market has prompted some farmers to start looking at diversification. Those who initially focused on certain commodities are now considering developing other agricultural products to sustain their business. One farmer who previously focused on other commodities, then decided to diversify by cultivating shallots, said:

One of the main challenges we face today is the oversupply of shallots. Indonesia does experience a bumper harvest cycle every few years, and currently the production is abundant. As a result, there is a huge stock of shallots in the market, while the demand is relatively stable. This condition is certainly not favorable for us (interview, 2024).

Although diversification into the tourism sector is considered promising, not all farmers who have developed businesses in agriculture feel the need to directly serve tourists on site.

Indeed, there are tourists who ask and want to buy our agricultural products. However, our focus is on craft products. The agricultural business is just a small diversification (interview, 2024).

These farmers do not seem to have adequate facilities to support on-site direct sales. Given that their focus is not on agricultural production, the need to diversify into direct sales does not feel urgent. This underlines the importance of another factor in serving tourists, namely the availability of adequate facilities.

Accessibility

Proximity to main tourist routes emerged as a significant factor in determining diversification choices. Sixteen farmers (53%) cited their strategic location as favorable for attracting tourists, while 10 farmers (33%) found that accessibility was a key advantage for business operations. On the contrary, farmers situated far from tourist routes often face challenges in serving tourists, with some opting to market their crops through traditional channels instead. One farmer involved in sales at tourist sites said:

The location of our business is very strategic. Every day, many tourists pass by the road in front of the house. This condition is certainly very favourable for us. We can keep working while taking care of the household. In addition, we can also utilise this opportunity to sell our agricultural products as a form of business diversification (interview, 2024).

Farm businesses located on large, paved roads or close to motorways are generally more accessible to tourists. Proximity to major transport routes, especially highways, provides greater opportunities to attract buyers from among passing tourists. Therefore, many farmers in such strategic locations have developed various tourist services to complement their farming businesses. On the other hand, farmers who are located relatively far from the main tourist routes tend to have fewer opportunities to attract tourist buyers. A farmer who does not open his business to the public believes that his remote location is a major obstacle in attracting tourists. "The location of the business must be strategic and easily accessible for tourists to be interested in coming. Because of this constraint, we are not interested in opening our business to tourists," he said. Other farmers expressed similar sentiments. Inadequate road access is the main reason they are reluctant to open businesses for the public. As a result, they only focus on marketing their crops through collectors. The location factor is also

an important consideration in developing agritourism businesses, such as homestays and cafes. However, for farmers who focus on developing agricultural businesses, the location factor is not very influential, unless they really plan to make agritourism the focus of business diversification.

Discussion

The role of location is indeed crucial in farm diversification. Easy access to major transport routes, particularly roads, allows farmers to reach tourists and directly market their products. This advantage encourages farmers to diversify by developing tourism-oriented businesses, such as homestays, cafes, and agricultural product sales, complementing traditional farming. Comparatively, studies in countries like Italy and Spain have shown that strategic location and accessibility are similarly pivotal in farmers' decisions to diversify into agritourism (Arru et al., 2021). Interestingly, the tourism potential is wider than that of farmers near roadside locations. In regions such as Austria and Switzerland, where farming communities are in more remote or mountainous areas, the unique natural beauty and local culture have become attractions, prompting farmers to collaborate with local communities to create themed tourism experiences (Wilson et al., 2018). This study adds to the literature by confirming that farmers in North Toraja also explore similar opportunities through collaboration, forming tourism associations, and developing thematic tourism packages, such as "farm trails," to attract tourists.

While economic motivations drive diversification, it is not merely about short-term profit. Like studies conducted in New Zealand and the UK, this research reveals that farmers often take a long-term and community-oriented approach (Wilson et al., 2018). Such visionary farmers act as pioneers, and their success stories inspire others to pursue similar ventures. This collective approach has been shown to contribute to individual business growth and the economic and social development of rural communities, fostering resilience and self-sufficiency. Hence, this study's contribution is methodological in exploring farmers' motivations and practical, highlighting how community collaboration can drive rural economic diversification and development.

Comparing this study's case with other contexts, the development of integrated "farm tourism routes" linking different farming locations, even those distant from main roads, has proven to be a significant catalyst for change (Busby and Rendle, 2000; Mei et al., 2017; Sharples and Vass, 2006). Farmers who were initially hesitant to diversify have re-evaluated their options after witnessing the success of agrotourism models. This mirrors findings from Japan and France, where proven models of farm tourism have motivated farmers to diversify their activities beyond traditional agriculture, resulting in an adaptive agricultural business model that leverages tourism as a complementary income stream (Bocken, 2020; Mei et al., 2017). In North Toraja, similar potential exists, as the research findings suggest that diversification into tourism services can be an attractive option to complement conventional agricultural sales, thereby enhancing the economic resilience of smallholder farmers.

This research confirms that farmers' decisions to diversify their businesses, including tourism, are driven by opportunity

and risk factors. The challenges in the conventional agricultural sector and the potential benefits of diversification are key motivators. The findings highlight that diversification among farmers is not just a linear shift from agriculture to tourism but a complex, multi-dimensional process. For example, this study shows parallels with agrotourism development in South Africa and Brazil, where farmers diversify not only by offering tourism services but also by expanding the variety of agricultural commodities, providing accommodation services (homestays), and establishing food businesses (cafeterias) (van der Ploeg et al., 2012). This demonstrates an adaptive and dynamic approach, aligning with entrepreneurship theories emphasizing opportunity creation amidst economic pressure and market uncertainties.

The ability to adapt to change is influenced by various factors, including individual and collective human capital, which covers knowledge, experience, skills, and problem-solving abilities. Comparative studies from Australia and Canada have shown that farmers with more substantial human capital tend to be more adaptive and resourceful in dealing with market changes (Snashall and Poulos, 2023). This study adds to the discourse by showing that similar patterns exist in North Toraja, where entrepreneurial farmers actively seek market opportunities and adapt to challenges. Moreover, the study underscores that diversification decisions are not made in isolation. The availability of financial capital, access to resources, and social capital through networks and trust within the farming community significantly influence farmers' capacity to diversify. These findings are consistent with those from Vietnam and Kenya, where social capital has been shown to facilitate information-sharing, cooperative action, and collective marketing efforts, ultimately supporting the success of agritourism ventures (Snashall and Poulos, 2023).

From a policy perspective, this study offers implications for supporting smallholder farmers in sustainable diversification. By highlighting the importance of accessibility, infrastructure development, and social networks, the findings suggest that local governments and development agencies should consider targeted investments in rural tourism infrastructure, such as road improvements and market access facilities. Training and capacity-building programs can also enhance human capital, enabling farmers to better evaluate and capitalize on tourism opportunities.

In practice, the study's findings point to the potential for developing agrotourism models that align with sustainable development principles and combine economic, social, and environmental benefits. By encouraging the development of farm-based tourism services, farmers can create diversified income streams, preserve local culture, and promote sustainable agricultural practices. The research contributes to the broader understanding of rural development by showing how diversification through tourism can enhance economic resilience, reduce dependence on traditional agriculture, and foster sustainable livelihoods in regions like North Toraja and beyond.

Conclusion

This study shows that farmers' decisions to diversify their businesses, mainly through the integration of tourism

services and direct on-site sales, are influenced by various factors. These results contribute to understanding farmers' business diversification dynamics and motivations. However, the exploratory method and limited sample size limit the generalizability of these findings. Therefore, further quantitative research with larger samples must confirm the identified factors. Accessibility factors, both at the macro and micro scales, influenced farmers' diversification decisions, especially in the tourism sector. The proximity of business locations to tourist destinations or major tourism routes creates greater market opportunities. In addition, other factors such as natural beauty and proximity to other tourism businesses are also relevant. Further analyses, such as geographic information systems, can provide a more detailed mapping of micro-accessibility and business diversification.

This research also underlines that risk perception is essential in diversification decisions. This risk is influenced by economic conditions, access to resources, and the success of other farmers in diversifying. For a deeper understanding, further qualitative research is needed, primarily focusing on how farmers assess and respond to risk in business diversification. Personal motivations and preferences are also essential factors in farmers' diversification decisions. Some farmers choose not to diversify due to lifestyle factors and commitment to the type of farming they already do. This subjective dimension shows that personal values and socio-cultural aspects influence decision-making. Overall, this research builds a foundation for further studies on farmers' business diversification decision-making dynamics. A more holistic understanding of diversification's motivations, perceptions, and supporting and inhibiting factors will be useful in formulating more effective policies and assistance programs for the agricultural sector.

Data availability statement

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author.

Ethics statement

The studies involving humans were approved by Cahaya Prima University Ethics Commission for Social Humanities. The studies were conducted in accordance with the local legislation and institutional requirements. The participants provided their written informed consent to participate in this study.

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Author contributions

YY: Writing – original draft, Writing – review & editing, Conceptualization, Data curation, Formal analysis, Methodology, Resources, Visualization. AC: Investigation, Project administration, Resources, Validation, Supervision, Writing – original draft. MM: Formal analysis, Project administration, Resources, Investigation, Supervision, Writing – original draft.

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Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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