

Contribution of the Existence of Agrotourism to Income and Welfare of Local Communities on Lombok Island (Case Study of the Sembalun Tourism Area, East Lombok Regency)

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ABSTRACT

This research aims to analyze the contribution of agrotourism to the income and economic welfare of local community households on Lombok Island, especially in the Sembalun Tourism Area, East Lombok Regency. The research uses a descriptive method with the analysis unit of local community households in the Sembalun Tourism Area. The research area includes all villages designated as tourist areas in Sembalun District, namely Sembalun Village, Sembalun Lawang Village and Sembalun Bumbung Village. The number of respondents was determined using the Slovin formula as 99 households selected by random sampling. Data was collected using structured interview methods, field observation and literature study; then analyzed using quantitative descriptive analysis and multiple linear regression. The research results show that the presence of agrotourism on Lombok Island, especially in the Sembalun Tourism Area, can increased economic activities by 4.48 from 24.9%. Factors that significantly increase the income and economic welfare of local communities apart from the existence of agrotourism are the area of land controlled and capital ownership; while the number of workers in the household and the education of the head of the household have no effect on household income.

Keywords: Tourism, Land, Capital, Labor, Education.

INTRODUCTION

Lombok Island is one of the two large islands in West Nusa Tenggara Province, with enormous tourism potential. This potential is an opportunity for local governments to improve the welfare of their communities through developing the tourism sector. However, the tourism development policy on Lombok Island through Regional Regulation Number 7 of 2013 concerning the Regional Tourism Development Master Plan has not shown significant benefits for improving the welfare of local communities. This condition has created an increasing social gap between local communities and migrant communities.

To improve the welfare of the community, the government has developed the concept of agrotourism as an alternative to tourism. Agrotourism is a combination of tourism sector activities with agricultural sector activities. Thus, agrotourism can become a more stable and sustainable source of income for local communities, most of whom work in the agricultural sector. Previous research results have shown that agrotourism can contribute significantly to farmer household income (Citra, 2018; Lestariningsih et.al, 2018; Handayani et.al, 2019; Kusniasanti, 2019). For example, the results of Citra's research (2018) in the Lubuk Minturun Koto Tengah Agrotourism Area, Padang City found that the contribution of agrotourism to farmer household income reached 26 percent. This shows that agrotourism can be an important source of income for farming communities.

The development of agrotourism on Lombok Island can also act as a solution to increase the income and welfare of local communities, most of whom work in the agricultural sector. By developing agrotourism, people can increase their income through selling agricultural, livestock and fishery products, as well as offering tourism activities based on agricultural activities. Thus, agrotourism can be expected to reduce social inequality and improve welfare for local communities.

One of the tourist areas based on agrotourism on Lombok Island is the Sembalun Tourism Area (NTB Tourism

Office, 2020). The Sembalun Tourism Area is located at the foot of Mount Rinjani and has become a very popular tourist destination for domestic and foreign tourists. The Sembalun tourist destination offers various agricultural-based tourism activities, such as farmer tours, rice field tours, strawberry garden tours and others. The existence of agrotourism also opens up business opportunities for local communities, like being a workers in a tourist areas, opening restaurants, becoming traders of agricultural products and handicrafts as souvenirs for local, national and foreign tourists. This research aims to analyze the contribution of agrotourism to the income and welfare of local community households on Lombok Island, especially in the Sembalun Tourism Area, East Lombok Regency.

RESEARCH METHODS

This research uses a descriptive method with an analysis unit of local community households in the Sembalun Tourism Area. The research area includes all villages designated by the government as tourist areas in Sembalun District, namely Sembalun Village, Sembalun Lawang Village and Sembalun Bumbung Village. The number of respondents was determined using the Slovin formula as 99 households selected by random sampling based on the number of local people who lived in the area before it was designated as a tourist area. Data was collected using structured interview methods, field observations and literature studies; and analyzed using quantitative descriptive analysis and multiple linear regression.

Local community household income is calculated using the following formula (Lopulalang et al, 2020; BPS, 2013):

$$I = \sum_{i=1}^n (TR_i - TC_i) \dots\dots\dots(1)$$

Where

I : Total household income (IDR)

TR_i: Total household income from activity i (IDR)

TC_i: Total household expenditure from activity i (IDR)

i=1 : Agricultural sector businesses

i=2 : Businesses outside the agricultural sector

i=3 : Workers in the agricultural sector

i=4 : Workers outside the agricultural sector

i=5: Other sources of income such as transfer income or property income.

The contribution of the existence of agrotourism (K) in question is the contribution of income originating from activities that emerged and developed after the existence of agrotourism (X) to the total household income of local communities in the Sembalun Tourism Area (I):

$$K = (X / I) \times 100 \% \dots\dots\dots(2)$$

To analyze the factors that influence household income in local communities, the following multiple linear regression model is used:

$$I = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \mu \dots\dots\dots(3)$$

Where:

I = Local Community Household Income (IDR)

X_1 = Number of household workers (People)

X_2 = Area of land controlled (Are)

X_3 = Capital value owned (IDR Million)

X_4 = Education of head of household (Years)

X_5 = Contribution to the Existence of Agrotourism (IDR Million)

β_0 = Constant

β_i = Regression coefficient of the i th variable

μ = Nuisance variable

The Coefficient of Determination will be used to analyze the contribution of the independent variable (Agrotourism and Household characteristics) to the dependent variable (Household income), then to analyze the influence of all independent variables together on the dependent variable the F-test (overall test) is used. and to analyze the influence of each independent variable on the dependent variable, a t-test (partial test) is used at a significance level or maximum error of 10 percent.

To analyze the level of welfare of local community households using World Bank criteria, namely an income equivalent to \$2 USD per capita/day is said to be the minimum threshold for a household to be considered prosperous.

RESULTS AND DISCUSSION

Sources and Value of Local Community Household Income

Sources of household income for local communities are sorted based on the BPS (2013) approach, namely household income originating from businesses in the agricultural sector, businesses outside the agricultural sector, workers in the agricultural sector, workers outside the agricultural sector, and income from other sources. Household income from other sources can come from outside the results of work, namely from income transfers such as from family gifts, migrant worker transfers, government assistance or subsidies; and from property income, such as from renting land assets, houses, royalties, interest and other assets (Shand, 1986; Siddik, 2023.). Based on this approach, it was found that the overall household income of local communities in the Sembalun Tourism Area in 2022 was IDR 99,454,322. This income predominantly comes from agricultural sector businesses (food crop farming, horticulture, plantations and animal husbandry), namely IDR. 88,222,554 or 88.71%; the remainder comes from businesses outside the agricultural sector (trade businesses, services, craft industries) amounting to IDR. 4,778,848 (4.81%), workers outside the agricultural sector IDR 3,054,545 (3.07%), from other sources, namely from transfer income (government assistance or subsidies) and from property income (results from renting land, houses or rooms) amounting to IDR 2,815,556 (2.83%); Meanwhile, from activities as an agricultural worker it is only IDR 581,818 or 0.59% of total household income (Table 1).

Table 1 Sources and Amount of Household Income of Local Communities in the Sembalun Tourism Area, 2022

No	Source of Income	Revenue (IDR/year)	Expenditure (IDR/year)	Income (IDR/year)	Contribution (%)
1	Agricultural Sector Business	109,582,820	21,360,265	88,222,554	88.71
2	Non-Agricultural Sector Business	6,290,667	1,511,818	4,778,848	4.81
3	Agricultural employees/laborers	872,727	290,909	581,818	0.59

4	Non-agricultural employees/lab	3,272,727	218,182	3,054,545	3.07
5	Other sources	3,081,616	266,061	2,815,556	2.83

Source: Processed Primary Data, 2022

The contribution is unequal between income from agricultural sector businesses and from other sources, because on average local people in the Sembalun Tourism Area still have land, even though it is small, namely an average of 17.5 acres, but because it can be cultivated all year round with crops -plants with high economic value such as strawberries, garlic, potatoes and the like; then its contribution to household income is high. On the other hand, even though the crops cultivated are on average capital intensive and labor intensive, meaning they require a lot of capital and labor, work as farm laborers is rarely done by local people, because they are busy with their own farming work. Work as agricultural laborers is generally carried out by agricultural laborers from outside the area, many of whom come to the Sembalun Tourism Area, because the wages of agricultural laborers in the Sembalun Tourism Area are higher than outside the tourist area. Because of this, local community household income from agricultural sector labor activities contributes the lowest compared to other sources.

Contribution to the Existence of Agrotourism

After the Sembalun area was designated as one of the agro-tourism areas on Lombok Island, the world's attention to this area increased, as evidenced by the increasing number of domestic and foreign visitors coming to the area (NTB One Figure, 2022). At the same time, the development of tourism facilities and support is also increasing, starting from the development of transportation and communication infrastructure and facilities; hotels and home stays, restaurants, eateries, coffee shops, the emergence of financial institutions, government and private institutions, as well as other entertainment venues, so that areas that were previously quiet and isolated have turned into areas that are busy and open to the outside world. At the same time, residents arrived from outside the area, both for tourism purposes; or with the aim of staying to fill job opportunities and open up business opportunities that develop in the area. The designation of the Sembalun area as an agrotourism area also has an impact on the economic activities of local communities who have lived in the area for generations. This can be seen from the economic activities carried out by local communities that emerged and developed after the Sembalun area was designated as an agrotourism area (Table 2).

Table 2. Sources and Value of Local Community Household Income Derived from the Presence of Agrowistas in the Sembalun Tourism Area in 2022

No	Description	Revenue (IDR/year)	Expenditure (IDR/year)	Income (IDR/year)	Contribution (%)
1	Activity Appears After Agrotourism				
	1) Parking services	687,879	110,606	577,273	1.94
	2) Motorbike taxi services	2,004,848	176,970	1,827,879	6.15
	3) Lodging	1,454,545	496,970	957,576	3.22
	4) Lodging employees	1,090,909	72,727	1,018,182	3.43
	5) Bank Employees	606,061	36,364	569,697	1.92
	Total 1.	5,844,242	893,637	4,950,607	16.66
2	Developing Activities After Agrotourism				
	1) Strawberry farming business	25,710,303	2,361,092	23,349,211	78.57

2) Strawberry traders	1,234,303	363,636	870,667	2.93
3) Red onion traders	454,545	181,818	272,727	0.92
4) Garlic traders	454,545	181,818	272.727	0.92
Total 2.	7,853,696	3,088,364	24,765,332	83.34
Total Income	33,697,940	3,982,001	29,715,938	100.00

Source: Processed Primary Data, 2022

In Table 2 you can see the various types of work that emerged and developed which were carried out by local communities after the Sembalun area was designated as an agrotourism area; and has provided quite a large income for community households, reaching an average of IDR 29,715,938 per year. Most of this income comes from activities that developed after the existence of agrotourism, namely IDR 24,765,332 or 83.34%; and those originating from activities that emerged after the existence of agrotourism amounted to IDR 4,950,607 or 16.67%.

The types of work that emerged and were pursued by local people contributed significantly to household income were motorbike taxi services (6.15%), then as employees or workers in lodging houses (3.43%), lodging service businesses (3.22%).), parking services or workers (1.94%) and as bank employees (1.92%); so that overall the employment contribution that appears as a positive impact of the existence of agrotourism is an average of IDR. 4,950,607 per household or around 16.66 percent of all income obtained as a result of agrotourism.

The most obvious positive impact of agrotourism in the Sembalun area is the development of businesses that have been carried out by local communities since before the area became a tourist area, such as strawberry farming, strawberry, garlic and shallot trading businesses. After being designated as an agrotourism area, more and more tourists visit the area; and the most popular one visited, especially by domestic tourists, is strawberry farming, because this farming business is only found in the Sembalun Tourism Area which is a highland on Lombok Island. Tourists are usually charged an entrance fee to the strawberry garden and are given to pick their own strawberries to buy at a price determined by the garden owner; usually at a higher price compared to harvested strawberries. Therefore, the contribution of strawberry farming to local community income is the highest compared to other sources that developed after becoming an agrotourism friend, reaching IDR 23,349,211 or 78.57% of all income obtained from the positive impact of agrotourism (Table 2).

Apart from strawberry farming, other activities that are developing and widely carried out by local communities are agricultural product trading businesses; and the most developed and seen as an impact of the existence of agrotourism is the trading business of horticultural commodities, namely strawberries, garlic and shallots. The development of trading businesses for these three types of horticultural products is because these commodities are often used as souvenirs by domestic tourists who visit the Sembalun area. The special features of these three types of commodities are that strawberries on Lombok Island can only be produced and found in the Sembalun tourist area; while shallots and garlic, apart from being larger and of better quality, some people on the island of Lombok view Sembalun garlic and shallots as having medicinal properties for various diseases, especially "nunggal onions and "black onions" produced in the Sembalun Tourism Area . However, the contribution of trading businesses for these three types of commodities is still relatively low and lower than the contribution of other sources of income.

If the household income of local communities originating from activities that emerged and developed after the existence of agrotourism above is compared with the total household income in Table 1, which is IDR. 99,454,322/year; then this means that the contribution of agrotourism to the income of local communities in the Sembalun Tourism Area is 29.88%; namely, from activities that developed after agrotourism contributed 24.90% and from activities that emerged after agrotourism was 4.98%. This means that the contribution of agrotourism to local community income is quite large; and most of it is contributed by the same type of work as the type of work before the area was designated as an agrotourism area. In conclusion, Agrotourism improved the income

and welfare of the commun by 4.98% from 24.90%.

Factors that Influence Household Income in Local Communities

Based on the results of analysis using multiple linear regression, it was found that household income from the presence of agrotourism (X5), area of land ownership and control (X2), amount of capital ownership (X3) had a very significant effect on household income of local communities in the Sembalun Tourism Area. This means that the household income of local communities in the Sembalun Tourism Area is largely determined by the existence of agrotourism, the area of land ownership and control and the amount of capital or productive assets owned by the household. Meanwhile, the number of workers in the household (X1) and the education of the head of the household (X4) do not show a significant influence on the household income of local communities (Table 3).

Table 3. Results of Regression Analysis of Factors Affecting Local Community Income in the Sembalun Tourism Area, 2022.

Description	Symbol	Coefficient	T-calculated	Sig.	Tolerance	Vif
Constant		2.548	4.353	0		
Number of Workers	X1	-0.067	-0.338	0.74	0.796	1.26
Land Area	X2	0.456	2.738	0.01	0.686	1.46
Total Capital	X3	0.214	2.645	0.01	0.748	1.34
RT Head Education	X4	-0.017	-0.108	0.91	0.903	1.11
Existence of of agrotourism	X5	0.152	3.833	0	0.786	1.27
Coefisien Determination (R ²)		0.41				
F-Count		12.932				
F-Table		2.29				
T-Table		1.29				
Income Regression Equation: $I = 2.548 - 0.067X_1 + 0.456X_2^* + 0.0214X_3^* - 0.017X_4 + 0.152X_5^*$						
Source: Processed Primary Data, 2022						

The household workforce referred to in this research follows the concept of workforce according to the Central Bureau of Statistics (2013), namely residents or household members aged 15 years and over. In the Sembalun Tourism Area, members of local community households aged 15 years and over, apart from the head and housewife, on average still have junior high school and high school education and a small number are still studying at tertiary institutions; It is rare to find household members who are in the workforce other than their parents. Therefore, the number of workers in a household does not reflect the amount of economic labor available in the household, because on average they do not enter the labor market or they are still not in the labor force. In fact, there is a tendency that the more workers there are in the household, the lower the household income tends to be. This is very likely to happen, because for households that have many members who are of working age (aged ≥ 15 years), this means higher education costs are required, so that the opportunity for households to increase capital or invest in productive activities is reduced. This can cause the income of households that have a lot of workers to be lower than households that have household members, but do not have or have fewer members of working age (labor force). This means that the hypothesis that is built which assumes that the number of workers in the household and household income has a positive relationship or correlation cannot be accepted. The results of this research is in line with the results of Siddik's 1991 research in four poor villages in Central

Lombok Regency (in Siddik, 2023), that the greater the household income, the less the number of household workers entering the job market, because the average number of workers available continue their education to a higher level.

The education of the head of the household also shows the same influence as the number of workers. The educational structure of heads of local community households, most of them have low levels of education, namely 44% have elementary school education and 37% have had junior high school education; while 14% have a high school education and 4% have a tertiary education. With predominantly low education, it is difficult for local communities to see and take advantage of the economic opportunities that arise with the existence of agrotourism. This can be seen from the contribution of income from businesses that emerged after agrotourism was only 4.98%; while those originating from the development of old jobs as strawberry farmers and agricultural product traders who do not require higher education, the contribution reached 24.90%. In fact, the jobs that appear to be entered by local community household workers are types of menial jobs that do not require a particular education, which are often "prestige" entered by those with higher education, such as parking workers and motorbike taxi services. Therefore, the education of the head of the local community household in the Sembalun Tourism Area has no effect and is positively correlated with household income.

From the results of the analysis above, it is clear that the independent variables that need to be maintained and even improved by local communities and regional governments to increase the income and economic welfare of local communities are the existence of agrotourism and agricultural land owned and controlled by local communities as well as capital resources or productive assets. others owned by the household.

Local Community Welfare Level

In Table 1 it is shown that the average household income of local communities in the Sembalun Tourism Area is IDR. 99,454,322 per year; and IDR 29,715,938 of which came from agrotourism (Table 2). If the household income is converted or calculated per day and per capita with the assumption that each household has an average of 3.5 members and 1 year is calculated as equal to 360 days, then the average household income of local communities in the Sembalun Tourism Area is IDR. 78,932/capita/day; and from the existence of agrotourism Rp. 23,584/capita/day. If the exchange rate of US\$1 is calculated to be equal to IDR 15,150 as is the average during 2022/2023, then the household income of the local community is equivalent to US\$5.21/capita/day and from the presence of agrotourism it is US\$ 1.56.

Based on the data above and referring to the World Bank criteria, the minimum income threshold for a prosperous community is US\$ 2/capita/day; then it means that local community households in the Sembalun Tourism Area are already included in the prosperous criteria even without the existence of agrotourism; and welfare increased by 29.88 percent after the introduction of agrotourism. The welfare of the community is supported by the fertile natural conditions of the Sembalun area and climatic conditions that are suitable for highland agricultural commodities with high economic value, such as strawberries, potatoes, carrots, broccoli, cauliflower, paprika, garlic, shallots, large chilies. , tomatoes and various other types of plants that are difficult to grow well in other places, so even though 83 percent of local people have less than 50 acres of land, because they can be cultivated all year round with these agricultural commodities of high economic value, their income is high. Moreover, after the introduction of agrotourism, the economic value of the location of the area at the foot of and near Mount Rinjani, the cold climate, well-organized rice fields and the commodities produced, the economic value has increased with the increasing number of domestic and foreign tourist visits to the area. . Therefore, to maintain and improve the welfare of local communities in the Sembalun Tourism Area, it is necessary to maintain the ownership and status of agricultural land which is an original asset of local communities that has been passed down from generation to generation.

CONCLUSIONS AND RECOMMENDATIONS

Conclusion

The existence of agrotourism on Lombok Island, especially in the Sembalun Tourism Area, has been able to increase the income and economic welfare of local community households by 29.88 percent of total household

income; 24.90 percent of which is a contribution from the development of activities that existed before the existence of agrotourism; and 4.48 percent is a contribution from activities that emerged after the existence of agrotourism.

Factors that significantly increase the income and economic welfare of local communities apart from the existence of agrotourism are the area of land controlled and capital ownership; while the number of workers in the household and the education of the head of the household have no effect on household income.

Suggestion

The key to sustainably maintaining and increasing the income and economic welfare of local community households is to maintain ownership and control of agricultural land by local communities. Therefore, it is recommended to the community and local government that physical development for housing residents and supporting tourism be directed at dry lands that are less productive. Apart from that, it is also necessary to provide courses and special skills training to the young generation of local communities, so that they are also able to fill and open up job opportunities and business opportunities that develop after the existence of agrotourism.

BIBLIOGRAPHY

1. Aqualdo N., Malantino R (2014). Analysis of the Economic Impact of Tourist Attractions on Household Income of Local Community Case Study of Bukit Tigapuluh National Park (TNBT) Indragiri Hulu Regency. *Online Journal of Students at the Faculty of Economics, Riau University*, 1:1–17.
2. Central Bureau of Statistics Jakarta (2013). Enumeration Results of Agricultural Business Household Income Survey. Central Bureau of Statistics. Jakarta
3. Central Bureau of Statistics Indonesia (2013). Results of the ST2013 Agricultural Business Household Income Survey Enumeration. Central Statistics Agency. Jakarta
4. Central Bureau of Statistics East Lombok (2021). Indicators of People's Welfare in East Lombok Regency. BPS East Lombok. Selong
5. Central Bureau of Statistics (2000). People's Welfare Indicators (Welfare Indicators). BAPPENAS. Jakarta:
6. Central Bureau of Statistics West Nusa Tenggara (2021). Indicators of People's Welfare in West Nusa Tenggara Province. Central Bureau of Statistics West Nusa Tenggara . Mataram
7. Citra, PPE (2018) Contribution of the Agrotourism Sector to Farmers' Household Income, Lubuk Minturun Sungai Lareh Village, Padang City. Diploma Thesis, Andalas University.
8. Handayani S.M., Jamhari, Waluyati L.R., Mulyo J.H. (2019). Contribution of Rice Agrotourism Income to Household Income in Various Tourism Village Categories. *Agrarian*. 5.32-42
9. Kohongia M., Loho A.E., Kaunang R. (2019) Contribution of D'mooat Tourism to Household Income Around Mooat Village, East Bolaang Mongondow Regency. *AGRIRUD*. 1.147-152
10. Kurniasanti S.A. (2019). Analysis of Agrotourism Development Strategy (Case Study of Siamese Orange Fruit Farmers' Village in Bangorejo District - Banyuwangi). *Journal of Tourism and Creativity*. 3. 65-76
11. Lestariningsih U., Setiadi A., Setiyawan H. (2018). Analysis of the Effect of Agrotourism on Increasing the Income of Chrysanthemum Farmers in Bandungan District, Semarang Regency. *Agrisaintifika: Journal of Agricultural Sciences*. 2. 51-59.
12. NTB One Data. (2022). Number of Tourist Visits in 2016-2020 and 2021. NTB Province Data. Mataram
13. NTB Tourism Department (2020). 99 Tourist Villages in NTB. West Nusa Tenggara Province data. Mataram
14. Nurhidayati S.E. (2015). Evaluation study of the implementation of Community Based Tourism (CBT) as a supporter of sustainable agrotourism in Society, Culture and Politics. 28. 1-11.
15. Permadi D.B., Burton M., Pandit R., Race D., Walker I. (2018). Local community's preferences for accepting a forestry partnership contract to grow pulpwood in Indonesia: A choice experiment study. *Forest Policy and Economics*. 91. 73-83
16. Shand, R.T.(1986). *Off-Farm Employment in The Development of Rural Asia (Volume Two)*. National Centre for Development Studies Australian National University. Canberra Australia.
17. Siddik M., Amirudin, Juniarsih N. 2013. Economic Behavior of Poor Communities Around the Mount

Rinjani Forest Area, Lombok Island. Indonesian Agribusiness Journal. Vol 1 No 1, June 2013

18. Siddik, M., 2023. Economic Behavior of Farmer Households: Theoretical, Empirical Models and Their Application to Farmer Households on Lombok Island, Sahabat Alam Rafflesia Foundation. Yogyakarta.
19. Swastika I.D., SriBudhi M.K., Dewi M.U. 2017. Analysis of Agrotourism Development for Community Welfare in Petang District, Badung Regency. Udayana University Economics and Business E-Journal. 6. 4013-4136.
20. Utama, I.G.B.R., 2021. Agrotourism as Alternative Tourism. <https://www.researchgate.net/publication/277074027> [December 1, 2021]