TOURIST VILLAGE MULTIPLIER EFFECT STUDIES: SMALL SCALE APPROACH
BEST PRACTICE OF DESA WISATA NGLANGGERAN, YOGYAKARTA, INDONESIA

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Abstract

Purpose of the Study: Tourism stakeholders and academics have begun to question the benefits of developing tourism in rural areas. This study aims to identify tourists, tourism entrepreneurs, and employees' characteristics and measure the multiplier effect for local communities in Nglanggeran tourist village, Yogyakarta. Specifically, this study measures income generation (direct, indirect, and induced), employment generation, and the multiplier effect of both.

Methodology: This research uses a descriptive quantitative approach. Primary data collection was carried out by the non-participant observation method (for four months). While the technique of determining the sample size (100 tourists, 51 entrepreneurs, and 62 employee respondents) used is non-probability sampling, referring to the Slovin formula with a margin of error of 10%.

Main Findings: This study found that local entrepreneurs can be categorized as small and medium-sized enterprises (SMEs). Data analysis results show that tourism village had an important economic impact for local communities with a Keynesian income multiplier effect value of 2.57, 1.74 for the Income multiplier type I ratio, and 2.23 for the type II. While the employment multiplier value is 0.0000041.

Implication/Applications: This study's results can answer doubts about the economic benefits received by local communities from the development of the Tourism Village.

The originality of the study: This study is the latest research, especially considering the implementation of the multiplier effect formula on a small scale. However, this study has some limitations, such as the sample area used (Desa Wisata Nglanggeran) and the context of the tourism impacts studied. Further research is expected to reach other tourist villages and expand its studies to environmental and socio-culture issues.

Keywords: Economic Benefits, Multiplier Impacts, Tourist Village, Small and Medium-Sized Enterprises (SMEs), Local Entrepreneurs.

INTRODUCTION

In Indonesia, tourism has significantly contributed to the economic sector, especially through foreign exchange since 2008, which has continued to increase consistently until now. BPS (the Central Bureau of Statistics) statistics (BPS, 2020) show that since 2008, foreign exchange growth has, on average, been above 10%. Meanwhile, only in 2019, tourism foreign exchange was recorded at a deficit of 14%. This data shows how the tourism sector plays an essential role in the macroeconomic sector. Although this industry can compete with the oil and gas sector, the tourism business is often criticized for its micro benefits or direct impact on local communities. Local people, especially those living in rural areas, are considered not to have benefited optimally. In fact, they tend to be acted only as objects, not as subjects of development.

This phenomenon has also been in the spotlight for many countries that rely on tourism as a source of economic growth. In fact, towards the end of the second world war (1939 - 1945), the UN has realized the importance of the role of government in rural development (Amaliatulwalidain, 2019; Torre & Wallet, 2016). At present, attention to local communities or even rural areas has become an increasingly campaigned issue. Concretely, on the World Tourism Day 2020 agenda, UNWTO (2020) is campaigning for tourism development that pays attention to local communities' welfare and rural areas. This year, they focus on the issue of "tourism and rural development." This agenda is a concrete action for equitable distribution of tourism development, which previously tended to be centered in urban areas. Even the benefits were only felt by some people (venture capitalists).

Indonesia has a long history related to the role of rural areas and local communities in tourism development. Before the term tourism became known, reputedly that aristocrats often traveled to various rural areas on Java island and its surroundings (Spillane, 1991; Sunjayadi, 2017). Even during the colonial era, visitors from Europe were recorded as having visited several villages in the archipelago, especially to some areas controlled by the Dutch due to security

factors. Since then, rural tourism has continued to evolve until, in 2005, the Indonesian government mapped out a development program in rural areas. Almost all ministries had their own programs in rural areas, including the Ministry of Tourism, with the Tourist village concept (*Desa Wisata*) (Putra, 2001).

This background shows that the agenda, both in the context of global, international, national, regional, and even local, contributes to maintaining rural potential (natural and socio-cultural) from the pressures of modernization and urbanization (Wiscombe & Gelder, 2017). Therefore, currently, the Tourist village program is believed to be one of the rural development concepts that can involve local communities while being environmentally friendly. In other words, the tourist village has been considered as one of the sustainable tourism products that correspond to the socio-cultural characteristics of Indonesia (Arcana & Wiweka, 2015b, 2016; Demolinggo et al., 2020; Kemenpar, 2019; Parantika et al., 2020; Sunarta & Arida, 2017).

Government recognition through the Ministry of Tourism and Creative Economic in tourist villages as a product that represents sustainable tourism values since 2017 has strengthened this assumption. This appreciation was shown through the holding of ISTA (Indonesia Sustainable Tourism Awards) and ASTA (ASEAN Sustainable Tourism Awards) (CNN, 2017). This event was created to encourage and appreciate tourism stakeholders who pay attention to the issue of sustainability. There were four categories: sustainable tourism destination management, economical use for local communities, cultural preservation for communities and visitors, and environmental preservation. The interesting part is that the government has adopted standard CBT (Community Based Tourism) principles from ASEAN, which are applied to 104 indicators for assessing sustainable tourist destinations (Kompas, 2019).

Based on ISTA nominations or winners in the previous three events (since 2017), tourist village seems to dominate in various categories. Some of the tourist villages that have received this award include Nglanggeran tourist village, Pentingsari tourist village, Arborek Sustainable tourism village, Cibuntu tourist village, Koja Doi tourism village, Kereng Bangkirai tourist village, Sanankerto 'Boonpring' tourist village, Pujonkidul Village, Penglipuran tourist village, Pemuteran village, Gubugklalah tourist village, Waerebo traditional village, Sesaot tourist village, and Kertosari - Green tourist village.

This achievement may be considered one of the government program's successes to continue to encourage village development. Even since 2015, the government has consistently increased village funds to 111.8 trillion or 1.5 billion per village in 2019 (Kementerian Keuangan, 2019). With considerable financial support, several regions in Indonesia have transformed into tourist villages. At least 1,734 Tourist villages have been spread across 8 major islands in Indonesia (Kemenpar, 2019). Economic or capital support for local communities is expected to strengthen their role in maintaining, preserving, and developing village potential, from cultural heritage to the environment (Arida & Pujani, 2017; Azalea et al., 2019; Dewi, 2013; Evans & Pickel-Chevalier, 2013; Kusmayadi, 2000; Musaddad et al., 2019; Nawangsih & Ariono, 2018; Oktini, 2007; Pitanatri, 2019; Prafitri & Damayanti, 2016; Raharjana, 2012; Setiawan et al., 2018).

Currently, several tourist villages of ITSA 2017 winners have developed independently. One of them is Nglanggeran tourist village, which has successfully received international recognition, such as the ASEAN Community Based Tourism (CBT) Award in Singapore and the 2018 ASEAN Sustainable Tourism Award in Thailand. This recognition has influenced the image or popularity of the tourist village and significantly increased the number of visits. As a result, local people have begun to adapt to become entrepreneurs in the tourism business. They started running a homestay, producing chocolate, and raising *Etawa* goats. The number of homestays in this tourist village is 80 homestays, with a capacity of up to 280 persons (Nglanggeran, 2016). This village is also a tourist village pioneer that adapts digital tourism and adopts a data-based development system. The significant economic growth has made the Nglanggeran tourist village a role model for developing a Tourist village in Indonesia. This success story encourages other regions to apply identical rural tourism development models.

The massive growth of the tourist village has actually raised concerns about the preservation of nature and the social life of rural communities. Stakeholders and academics have begun to question the benefits of developing tourism in rural areas, especially local communities. Environmental sustainability and economic benefits are some of the questions regarding programs considered to commercialize village potential. The village as a tourism commodity is also considered to change the community's mindset to become more individualistic and capitalist. This phenomenon then encourages this research to examine the economic benefits for local communities. Some of the issues questioned in this study include, what are the characteristics of businesses, entrepreneurs, employees (local people), and tourists visiting Nglanggeran Tourism Village? In addition, the issue related to how much economic benefits will be received by local communities, either directly, indirectly, or induce? is the main issue that will be examined in this research. Therefore, this study has an objective to determine the economic impact on rural communities, otherwise known as the multiplier effect. This study also identifies tourists' characteristics, entrepreneurs, and employees' profiles in the Nglanggeran tourist village area. If multiplier effect analysis is used to look at the macroeconomic impact (Shuifa et al., 2011; Var & Quayson, 1985; Wagner, 1997), in this study, the multiplier effect formula is used to assess the microeconomic impact on local communities (Hughes, 1994). Specifically, this study measures income generation (direct, indirect, and induced), employment generation, and the multiplier effect. This study's results can answer doubts about the economic benefits received by local communities from the development of the Tourism Village.

This study has limitations on the sample used (Desa Wisata Nglanggeran). Besides, this study limits tourism's impact from an economic perspective, so that environmental and socio-cultural impacts need to be further studied. It is hoped that further research can reach out to other tourist villages and expand its studies to other environmental and socio-culture issues. With a more comprehensive study, concerns about tourism development in rural areas can be answered.

LITERATURE REVIEW

One way to build sustainable tourism is by protecting natural resource ecosystems and trying to guarantee the income and economy of local communities (Wagner, 1997). Therefore, welfare or micro-economic impacts are quite important issues in tourism development, especially in rural areas. This study adopts several concepts and theories relevant to the study's context, including rural tourism, tourist village, sustainable tourism, tourist spending, the impact of tourism, and the multiplier effect.

Rural tourism and tourist village (*Desa Wisata*)

Rural tourism and tourist village are often used to refer to the phenomenon of tourist activities in rural areas. Although there is not much literature discussing it, the fact is that the two terms have different histories and purposes of use. (Andayani et al., 2017) argues that rural tourism is an activity to enjoy culture and traditions in a village. Besides, rural tourism is often characterized by small-scale industries in rural areas dominated by natural potential, culture, and traditional local life (Chan et al., 2016; Whitney-Squire, 2016). This potential is believed to be able to attract tourists to visit (Fletcher et al., 2016).

While the tourist village is a representation of Indonesia to refer to the *Desa Wisata*, a program initiated by the Ministry of Culture and Tourism in developing rural tourism, *Desa Wisata* is defined as a product that is integrated between attractions, accommodation, and supporting facilities that are packaged in the frame of community life and local traditions. Meanwhile, the main supporting elements are villages and communities with a direct, indirect, or induced relationship or impact with tourism activities in an area/destination (Kemenpar, 2019).

As a phenomenon, the tourist village can be considered as part of rural tourism. But specifically, tourism villages are formed based on several criteria, including ownership and management by the community, contributing to social welfare, contributing to maintaining and improving the quality of the environment, encouraging active participation of local communities and tourists, travel services and guides, availability of food and drinks, accommodation (homestay), and tour operators. Currently, tourist village is considered as one of the tourism products that represent sustainable tourism development. Especially in accelerating economic, social, cultural, and environmental growth in rural areas by involving local communities (Arcana & Wiweka, 2015b, 2016; Kemenpar, 2019; Sunarta & Arida, 2017).

Sustainable tourism

Sustainable development is believed to be beneficial for local communities, destinations, and even tourists (Arcana & Wiweka, 2015a, 2015b; Carr et al., 2016; Demolinggo et al., 2020; Walker & Moscardo, 2016; Wiweka et al., 2019). This concept involves local communities in campaigning for environmental awareness and providing positive experiences for tourists (Pickel-Chevalier, 2015). There are three main pillars of sustainable development currently recognized, including economic, social, and environmental sustainability (Hall et al., 2015). Meanwhile, UNWTO defines sustainable tourism as "tourism that meets the needs of present tourists and host regions while protecting and enhancing opportunity for the future" (UNWTO, 1996). Currently, sustainable tourism has been defined variously, according to the characteristics of a region. In general, some of these views emphasize the ability of a product or tourism development concept to minimize negative impacts and at the same time maximize the positive impacts of tourism (Arcana & Wiweka, 2015a; Bramwell & Sharman, 2002; Harris et al., 2012; McCool & Moisey, 2008; Miller & Twining-Ward, 2005; Weaver, 2006; Wiweka & Arcana, 2016).

Tourist Expenditure

According to (Stynes, 1999), economic impact analysis tracks the flow of economic expenditures and activities associated with policies or actions. To calculate the tourism sector's economic impact, it must be started by surveying tourists to determine the estimated tourist expenditure (Frechtling & Horváth, 1999).

Economic Impact & Multiplier Effect

The economic implications provide opportunities for researchers to investigate the relationship between tourism and economic growth (Nunkoo et al., 2020). The economic impact of tourism can be grouped into direct, indirect, and induced impacts (Arabsheibani & Labarthe, 2013; Frechtling & Horváth, 1999; Khan et al., 1990; Putra et al., 2019; Vanhove, 2011). (Vanhove, 2005) also classifies the impacts of tourism into Income generation, employment generation, tax revenue generation, the balance of payment effects, improvement of a region's economic structure, encouragement of entrepreneurial activity, and Economic disadvantages. This study will measure the multiplier effect through the income generation, and employment generation approaches. (Archer, 1976) argues that tourist expenditures that affect income generation include:

a. Direct Income Generation is the initial outlay that creates direct income for hoteliers, service stations, and other tourism industries.

b. Indirect Income Generation is the payment of employee salaries and wages of local employees, and tour companies fill their shares.

c. Induced Income Generation represents the wages and salaries of employees in a rising economy. Besides, consumption also increases and provides an additional boost to economic activity.

This variable is calculated based on tourist expenditure during their visiting the tourist village of Nglanggeran. Meanwhile, the multiplier effect of tourism is the total increase in output, labor income, and employment through inter-industrial relations in an area resulting from tourism spending (Dube, 1995; Frechtling & Horváth, 1999). The multiplier effect of tourist expenditure can be identified through two formulas. First, the Keynesian Income Multiplier, which is a value that shows how much visitor expenditure has an impact on increasing local people's income (local entrepreneurs and employees). The second is the Income Ratio multiplier, a value that shows how much the direct impact felt by visitor spending has an impact on the local economy (local entrepreneurs' income, labor income, and consumption expenditure at the local level) (Afriwanda & Zulkifli, 2017; Arabsheibani & Labarthe, 2013; Ikhsan et al., 2017; Putra et al., 2019; Rohyani et al., 2019). This model is formulated as follows:

$$\text{Keynesian Income Multiplier} = \frac{D+N+U}{E}$$

$$\text{Income Ratio Multiplier, Type I} = \frac{D+N}{D}$$

$$\text{Income Ratio Multiplier, Type II} = \frac{D+N+U}{D}$$

Where:

E: Total tourist expenditure (IDR)

D: Local income obtained directly from E (IDR)

N: Local income obtained indirectly from E (IDR)

U: Induced local income from E (IDR)

The value of Keynesian Local Income Multiplier, Type I Income Multiplier Ratio, Type II Income Multiplier Ratio has the following criteria:

a. If these values are less than or equal to zero (≤ 0), then the tourism activity has not been able to have an economic impact on the local's community.

b. If these values are between zero and one ($0 < x < 1$), then the tourism activity still has a low economic impact value.

c. If these values are greater than or equal to one (≥ 1), then tourism activity has an economic impact on the local community.

Meanwhile, (Mathieson & Wall, 1982) argues that three types of employment affect employment generation, including:

a. Direct employment is a type of work that generates income from tourists' expenses, for example, tourist expenses for lodging and travel companies.

b. Indirect employment is a type of work that is still related to the tourism industry but indirectly receives income from tourist expenses, such as doctors serving hotel employees and tourists, traders, and fuel station officers.

c. Further employment is an additional job in the tourism sector carried out by local communities (Vanhove, 2011).

(Vanhove, 2005) states that employment generation (Ek) can be analyzed based on the number of workers involved in Nglanggeran Tourist village. Meanwhile, the following formula can use to calculate the employment multiplier.

$$\text{Ek (Employment generation)} = \frac{Direct + Indirect\ Employment}{Expenditure/spending}$$

METHODOLOGY

This research uses a descriptive quantitative approach (Sugiono, 2010). Secondary data sources used include online media articles, scientific literature, and travel promotion media. Meanwhile, to collect primary data, researchers conducted non-participant observation (for four months) in the Nglanggeran tourist village located in Patuk District, Gunungkidul Regency, Yogyakarta. The researcher identifies, interviews, and distributes questionnaires to tourist village managers, local entrepreneurs, employees, and tourists (Sugiyono, 2015). The sample size determining technique used is non-probability sampling, while the formula used is Slovin with a margin of error of 10%. The number of tourist respondents involved in this study was 100 people, which were calculated based on the total population of tourists

visiting in 2018 of 138,129 tourists. Applying the same method, 51 (out of 106 total population) local entrepreneurs (9 kiosks, 4 restaurants, 32 inns, 3 souvenir shops, 1 transportation rental, 1 farm, and 1 spa) were respondents who came from business owners. Meanwhile, the respondents consisted of 62 employees from 192 populations (16 *Pokdarwis* (village organizations), 9 cocoa industry, 10 SPA, 1 tour guide, 7 restaurant staff, 17 breeders, 2 souvenir shop, and 1 kiosk employee. The instruments used are designed regarding the theory of tourist characteristics, the multiplier effect, and the economic impact of tourism, which have been described in the literature review section. The data collected through a questionnaire is then calculated using the income generation formula and employment generation multiplier effect. The calculations' results are then described, combined, and interpreted with other data, such as interviews and secondary data.

RESULTS AND DISCUSSION

Administratively, the Nglanggeran tourist village is located in Patuk District, Gunungkidul Regency, Yogyakarta. This village's area is 762.79 hectares, most of which are owned by the village and used for agriculture, plantations, fields, and yards. This village also has a Purba Volcano Ecotourism area of 48 hectares. The village area consists of five hamlets, namely Karangsari Hamlet, Doga (government center), Nglanggeran Kulon, Nglanggeran Wetan, and Gunungbutak Hamlet. Demographically, nearly 45% of the villagers, aged 40 to 69, work as farmers (30.67%). Some of the main tourism products of this Tourist village include Purba Volcano, Nglanggeran Embung, and Kedung Kandang Waterfall. Through the *Pokdarwis* mentoring program, local communities have also started to get involved in tourism activities by forming several community groups (culinary providers, farmer groups, homestay groups, livestock groups, cocoa management groups, craftsmen groups, traders' groups, and Indonesian migrant workers (TKI) groups.

This group since 2016 has developed several products, with the majority made from chocolate, especially because this village is a producer of the commodity. The products produced include chocolate banana chips, chocolate *Bakpia*, chocolate sticks, chocolate *Dodol*, chocolate dumplings, powder SPA materials, cocoa powder, chocolate bars, various kinds of chocolate powder drinks, *Etawa* goat milk powder, batik crafts, and masks.

Tourist Characteristics

Based on the data collection results, in terms of socio-demographics, most (more than 80%) of the tourists visiting Nglanggeran Tourism Village are millennials or have a productive age between 15-32 years, with student and worker professions.

Table 1: Tourist Socio-demographic Characteristics

Socio-demographic Characteristics			
Description	**Option**	**Sample (n)**	**Percentage (%)**
Gender	Male	46	46.00
	Female	54	54.00
Ages	15 – 23	53	53.00
	24 – 32	31	31.00
	33 – 41	8	8.00
	42 – 50	7	7.00
	≥ 51	1	1.00
Education Background	Elementary	1	1.00
	Junior High School	6	6.00
	Senior High School	75	75.00
	Diploma	2	2.00
	Bachelor's degree	16	16.00
Occupation	Student and College	48	48.00
	Civil Service Employment	7	7.00
	Military Police	1	1.00
	Private Company	34	34.00
Status	Single	74	26.00
	Married	26	74.00
Total Revenue	0 – IDR 500.000	41	41.00
	IDR 500.001 – 1.000.000	11	11.00
	IDR 1.000.001 – 1.500.000	12	12.00
	IDR 1.500.001 – 2.000.000	19	19.00
	≥ IDR 2.000.001	17	17.00

Source: Primary Data, 2019

Meanwhile, from the psycho-geographic aspect, tourists who visit are categorized as local and domestic tourists. Besides, they often use online media (Google, Facebook, and Instagram) to obtain the information and have some motivation, such as vacation, having recreation with friends or groups (20 to 50 people), research, and internship program.

Table 2: Tourist Psycho-geographic Characteristics

Tourist Geographic Characteristics				
	Description	**Option**	**Sample (n)**	**Percentage (%)**
	Origin	Local	66	66.00
		Domestic	34	34.00
Tourist Psychographic Characteristics				
Before Traveling (Pre-Trip)	Source of Information	Friends and relatives	21	21.00
		Brochure	1	1.00
		Online Media/Internet	70	70.00
		Print Media	1	1.00
		School/College	3	3.00
		Others	4	4.00
	Travel Motivation	Vacation	37	37.00
		Research	7	7.00
		Recreation	54	54.00
		Others	2	2.00
During Traveling (During Trip)	Travel Partner	Alone	10	10.00
		Group	63	62.00
		Family Members	27	27.00
	Mode of Transportation	Personal	85	85.00
		Rental	9	9.00
		Public Transport	4	4.00
		Institution Vehicles	2	2.00
	Length of Stay	≤ 1 day	53	53.00
		2 – 4 days	33	33.00
		5 – 8 days	9	9.00
		≥ 9 days	5	5.00
After Traveling (Post-Trip)	Visit Frequency (per year)	1	78	78.00
		2	10	10.00
		3	5	3.00
		4	1	4.00
		> 4	6	6.00

Source: Primary Data, 2019

Local Entrepreneurs Characteristics

The entrepreneurs are local people, most of whom are aged between 39 to 61 years. They have started a business between one to seven years ago. Their businesses can also be categorized as small and medium-sized enterprises (SMEs) (generally having one to five employees) with an average income of IDR 500.000-1.000.000.

Table 3: Local Entrepreneurs Characteristics

Description	Option	Sample (n)	Percentage (%)
Gender	Male	35	68.63
	Female	16	31.37
Ages	23 - 30	3	5.88
	31 - 38	9	17.65
	39 - 46	20	39.22
	47 - 61	19	37.25
Education Background	None	1	1.96
	Elementary	5	9.80
	Junior High School	20	39.22
	Senior High School	22	43.14
	Diploma	3	5.88
	Bachelor's degree	0	0.00
Total Revenue	< IDR 500.000	27	52.94
	IDR 500.001 – 1.000.000	13	25.49
	IDR 1.000.001 – 1.500.000	5	9.80

	IDR.500.001 – 2.000.000	4	7.84
	IDR 2.000.001 – 2.500.000	1	1.96
	≥ IDR 2.500.001	1	1.96
Established Since	< 1 year	2	3.92
	1 - 7 years	39	76.47
	8 - 14 years	8	15.69
	15 - 21 years	1	1.96
	22 - 29 years	1	1.96

Source: Primary Data, 2019

Employee Characteristics

Workers involved in several business units can be categorized as productive age between 19-39 years, with an educational background between junior high and high school. Most of them are spread across several business units such as souvenir craftsmen, breeders, and village tourism managers, with an average income (more than 90% of respondents) of IDR 500.000-1.000.000. The average duration of work in the tourist village of Nglanggeran is three to twelve hours per day (except during the picking season). Based on interviews, the number of people involved in labor-related tourism has consistently increased every year.

Table 4: Employee Characteristics

Description	Option	Sample (n)	Percentage (%)
Gender	Male	33	53.23
	Female	29	46.77
Ages	19 - 25	9	14.52
	26 - 32	22	35.48
	33 - 39	14	22.58
	40 - 46	12	19.35
	47 - 53	5	8.06
Education Background	None	1	1.61
	Elementary	10	16.13
	Junior High School	26	41.94
	Senior High School	24	38.71
	Diploma	1	1.61
	Bachelor's degree	0	0.00
Total Revenue	< IDR 500.000	20	32.26
	IDR 500.001 – 1.000.000	39	62.90
	IDR 1.000.001 – 1.500.000	3	4.84
	≥ IDR 1.500.001	0	0.00
Number of Employees	Restaurant	6	9.68
	Shop	1	1.61
	Souvenir	21	33.87
	Breeders	16	25.81
	Village Tourist Managers (*Pokdarwis*)	18	29.03
Length of Employment	< 1 year	6	9.68
	1 -4 years	41	66.13
	5 - 9 years	9	14.52
	9 - 13 years	6	9.68

Source: Primary Data, 2019

The Tourism Multiplier Effect in Nglanggeran Tourist Village on The Local Economy

The economic impact of tourism in Nglanggeran tourist village is generated from the flow of money originating from tourist expenses to local business. Tourists need various products and services during their visits, such as lodging, equipment rental, consumption, and other personal needs. If residents can meet tourists' needs through developed business units, there will be economic transactions between tourists and local people. If this happens continuously and benefits the local community, then economic benefits will be created for the community from tourism activities in Nglanggeran village.

Tourist Expenditure

According to Holden, not all tourist expenses during the tour are carried out in the tourist location (village). Some transactions occur outside tourist sites or in an economic context known as economic leakage of total consumer spending (Arabsheibani & Labarthe, 2013; Frechtling & Horváth, 1999; Khan et al., 1990; Putra et al., 2019; Vanhove, 2011). In general, seen from the proportion of recreation costs, the tourist expenditure visiting Nglanggeran tourist village experiences an economic leakage of 6.27% or an average of IDR 29.180 per person per visit. These costs are in travel costs (calculated from fuel and transportation rental from the outside village). At the same time, the rest is the expenses incurred in the Tourism Village.

In general, tourists' expenditures vary, depending on their activities during their visit. However, researchers have provided several variables or expenditure items that are generally offered by tourism village managers. The researcher then processed and analyzed the total and average tourist expenditure on each visit through distributed questionnaires. The cost variables that dominate include lodging (homestay) and equipment rental.

Table 5: Proportion of Tourist Expenditure in Nglanggeran Tourist Village

No	Variable Cost	Total Expenditure (IDR)	Percentage (%)
Economic Leakage			
1.	Transportation	2.918.000	6.27
Total		**2.918.000**	**6.27**
Tourist Expenditure in Village			
2.	Documentation	120.000	0.26
3.	Consumption	3.211.000	6.89
4.	Lodge or homestay	26.710.000	57.35
5.	Package (Equipment rental)	5.300.000	11.38
6.	Souvenir	2.230.000	4.79
7.	Ticket	1.276.000	2.74
8.	Local Transportation	4.401.000	9.45
9.	Car Parking and Toilet	409.000	0.88
Total		**43.657.000**	**93.73**
Total Tourist Expenditure		**46.575.000**	**100.00**

Source: Primary Data, 2019

To calculate the average tourist expenditure, the researcher uses the following formula:

$$\text{Average of Tourist Expenditure (AC)} = \frac{\text{Total Tourist Expenditure (TC)}}{\text{Number of Tourist Sample (Q)}}$$

$$AC = \frac{46.575.000}{100}$$

$$AC = IDR\ 465.750$$

The results of data calculations show that the average tourist expenditure on each visit per person is IDR 465.750.

Income Generation

Nglanggeran tourist village revenue is obtained from entrepreneurs and employee revenue, and employee expenditure data, which are grouped into three parts, namely direct income generation, indirect income generation, and induced income generation. To analyze the Income Multiplier effect, this study collected data through business owners and workers. The assumption is that with this method, the researcher gets an illustration of the direct revenue received by owners, the income of the workers provided by the business owner, as well as the third layer of income that is assumed from the daily needs' employee expenses variable. This data will then be calculated to obtain the Income Multiplier effect value received by the local community.

Direct Income Generation (D)

Direct income is calculated based on the average income of 51 entrepreneurs per month.

Table 6: Total Entrepreneurs Net Income (D) in Nglanggeran Tourist Village

Type of Business	Sample (n)	Range of Net Income per Month (IDR)	Total Income per Month (IDR)	Percentage (%)
Homestay	32	1.000.000 – 2.500.000	14.930.000	27.84
Restaurant	3	650.000 – 2.000.000	5.500.000	10.26
Shop	10	1.500.000 – 2.000.000	11.550.000	21.54

Souvenir	5	300.000 – 15.000.000	20.550.000	38.32
Local Transportation (Pajero)	1	900.000 – 1.100.000	1.100.000	2.05
Total	51		53.630.000	100.00

Source: Primary Data, 2019

The business units in table 6 are the direct beneficiaries of tourism activities in Nglanggeran tourist village. Most of these business units are categorized as small and medium-sized enterprises (SMEs) that have been around for about five years ago and are generally owned by residents. In general, the income of the business unit owner ranges from IDR 1.000.000-2.500.000 per month. The highest income is the souvenir business, with a total income of IDR 20,550,000 per month with a percentage of 38.32% of the total business income. A souvenir shop is a business unit managed by the Pokdarwis group of Nglanggeran tourist village, which offers all products processed by the local community themselves.

The tourist length of stay is linear to the increase in the economic impact. In addition to calculating revenue, this study also identifies the production costs of the above business units. Production cost variables used include labor costs, purchase of raw materials (input), maintenance, daily operational costs (electricity and water), credit repayment, daily food, local transportation, and taxes or levies paid to the local government.

Table 7: The Proportion of Net Income and Production Costs to Total Revenues in Business Units

Variable	Amount (IDR)	Percentage (%)	Description
Total Revenue in the Business Unit			
Net Income	**53.630.000**	**29.64**	**Local**
Production Cost			
Labor wages	30.332.000	16.64	Local
Raw material (input)	45.930.000	25.38	Local
Maintenance	1.500.000	0.83	Local
Operational Costs	1.580.000	0.87	Non-Local
Credit Refund	1.000.000	0.55	Non-Local
Daily Food	43.870.000	24.24	Local
Local Transportation	3.115.000	1.72	Local
Taxes	0	0	Non-Local
Total	**127.127.000**	**70.33**	
Total Revenue	**180.957.000**	**100.00**	

Source: Primary Data, 2019

The entrepreneur profit (owner's income) is the total income minus the total cost of production. Production costs in the data above are costs incurred by all business units, with the largest percentage for raw materials, daily food, and labor wages. The data above illustrates that tourism activities have created a capital turnover in the business unit of IDR 180.957.000. If classified based on the impact received, most of the capital turnover (98.57%) was received by local communities (business owner income, labor wages, inputs, maintenance costs, daily food, and local transportation costs) or local based. Meanwhile, the other 1.43% is the cost that is not accepted by the local community (leakage), which consists of operational costs, credit repayments, and taxes and levies.

Indirect Income Generation (N)

Table 4 shows that the largest number of employees is in the tourist village manager (*Pokdarwis*). They are responsible for managing all tourism activities and coordinating with all entrepreneurs in Nglanggeran tourist village. The community involved in *Pokdarwis* consists of the chairman, vice-chairman, secretary, accounting, business development, marketing and promotion, tour guides, ticket officers, and parking attendants.

Table 8: Total Employees Income (N) in Nglanggeran Tourist Village

Type of Business	Sample (n)	Total Employees Income per Month (IDR)	Percentage (%)
Restaurant	6	3.800.000	9.61
Shop	1	500.000	1.26
Souvenir	21	9.870.000	24.96
Breeders	16	12.050.000	30.48
Village Tourist Managers (Pokdarwis)	18	13.320.500	33.69
Total	**62**	**39.540.500**	**100.00**

Source: Primary Data, 2019

Table 8 shows that the highest employee income is Pokdarwis labor, amounting to IDR 13.320.500 or an average Pokdarwis member income is IDR 740.028 per month.

Induced Income Generation (U)

The local employee income from the business unit influences this further impact due to sourcing from local labor's daily expenses (World Travel and Tourism Council, 2012). The Nglanggeran tourist village local employee expenditure includes daily food costs, local transportation costs, children's education fees, electricity costs, retribution, and taxes.

Table 9: Employee Expenditure in Nglanggeran Tourism Village

Variable Cost	Total Employee Expenditure per Month (IDR)	Percentage (%)
Daily Food Costs (U)	26.530.000	55.08
Local Transportation	3.964.000	8.23
Electricity Costs	2.835.000	5.89
Children's Education Fee	14.748.000	30.62
Retribution and Taxes	90.000	0.19
Total	**48.167.000**	**100.00**

Source: Primary Data, 2019

Income Multiplier Analysis

Data in table 5 (tourist expenditure IDR 46,575,000), table 6 (local entrepreneurs' income is IDR 53,630,000), table 8 (Employee income is IDR 39,540,500), and table 9 (employee expenditure for daily food is IDR 26,530 .000) used to calculate the Keynesian Income Multiplier and the Ratio Income Multiplier.

Keynesian Income Multiplier

Formula:

$$\text{Keynesian Income Multiplier} = \frac{D+N+U}{E}$$

$$= \frac{53.630.000 + 39.540.500 + 26.530.000}{46.575.000} = \textbf{2.57}$$

$$\text{Ratio Income Multiplier Type I} = \frac{D+N}{D}$$

$$= \frac{53.630.000 + 39.540.500}{53.630.000} = \textbf{1.74}$$

$$\text{Ratio Income Multiplier Type II} = \frac{D+N+U}{D}$$

$$= \frac{53.630.000 + 39.540.500 + 26.530.000}{53.630.000} = \textbf{2.23}$$

Table 10: Total Multiplier Effect Value of Capital Turnover in Nglanggeran Tourist Village

Type of Multiplier Effect	Multiplier Value
Keynesian Income Multiplier	2.57
Ratio Income Multiplier Type I	1.74
Ratio Income Multiplier Type II	2.23

Source: Primary Data, 2019

The table above shows the tourist expenditure multiplier effect value while visiting Nglanggeran tourist village per IDR 1 (per tourist per visit). This figure shows the magnitude of the multiple impacts received by the community. With an average tourist expenditure per visit of IDR 465.750, with a Keynesian Income Multiplier value of 2.57, each tourist expense will increase local people's income by IDR 1.196.978. The Type I Income Multiplier Ratio value of 1.74 will impact increasing business unit income by IDR 810.405 on the total community income, including direct and indirect impacts (revenue of local entrepreneurs and employees). Meanwhile, the Type II Income Multiplier Ratio value is 2.23, which will have an impact on the income of IDR 1.038.623 on the total income of the community which includes direct, indirect, and induced impacts (revenue of local entrepreneurs and employee, and both expenditure at the local level). According to a multiplier analysis result value (≥1), it can be argued that tourism activities in the Nglanggeran tourist village have an essential economic impact on the community. Income Multiplier generally measures additional income (salary, wages, rent, interest, and profit) in the economy due to increased tourist expenditure.

Employment Generation (Ek)

This formula calculates the value of the impact of tourist expenditure on employment opportunities (workers). Although, in theory, based on the interaction, there are only two types of workers (direct and indirect employment), considering the reality in the tourist village, the researcher took the initiative to add one more type (in between employment). This addition considers several professions that technically have direct interaction with tourists but get wages through intermediaries (tourism village managers).

Table 11: Number of Employees Based on Their Interactions

Type of Business	Number of Employees
Direct Employment	
Restaurant Staff	5
Souvenir Shop Staff	6
Total	**11**
In Between Employment	
Guide	12
Total	**12**
Indirect Employment	
Pokdarwis Staff	61
Pokdarwis Member	56
Purba Rasa Management Staff	14
Purbaya Breeder	16
Purba Ayu SPA Staff	10
Nglanggeran Batik Member	10
Nglanggeran Mart	2
Total	**169**
Total of Employees	**192**

Source: Primary Data, 2019

Employment Multiplier Analysis

In general, this formula aims to compare total employees (direct, indirect, and in between employment) with the tourist expenditure in Nglanggeran Tourism Village.

$$\text{Ek} = \frac{\text{Direct} + \text{Indirect Employment}}{\text{Expenditure/spending}}$$

$$\text{Ek} = \frac{11 + 12 + 169}{46.575.000}$$

Ek = 0.0000041

The analysis above indicates that every tourist expenditure of IDR 1 (one) can involve or create employment opportunities for 0.0000041 employees in Nglanggeran tourist village, both employees who directly and indirectly interact with tourists, or categorized between the two. Therefore, if the average tourist expenditure per visit is IDR 465.750, it will be able to involve or provide employment opportunities for as many as 2 (two) people (1.9).

CONCLUSIONS AND RECOMMENDATIONS

This study found that tourists visiting Nglanggeran tourist villages have a productive age ranging from 15-23 years or are classified as the millennial generation (Damanik et al., 2019; Setiawan et al., 2018; Wiweka et al., 2019; Wiweka et al., 2019). Meanwhile, local entrepreneurs in this village can generally be categorized as small and medium-sized enterprises (SMEs) (Indrajaya et al., 2019) with businesses such as lodging, restaurants, souvenir artisans, and kiosks. All employees involved in the Nglanggeran tourist village are local people who work three to twelve hours per day. In addition, the data analysis result also indicates that the Nglanggeran tourist village is proven to have an essential economic impact on the local community. Economic impacts arising from tourism activities are direct impacts, indirect impacts, and induced impacts as measured by the multiplier effect's value. This argument is evidenced by the multiplier effect value > 1. Specifically, data calculations results indicate that the multiplier effect value is 2.57 for the Keynesian Income Multiplier, 1.74 for the Income Multiplier Ratio Type I, and 2.23 for the Type II Income Multiplier Ratio. Then the Employment Multiplier value in Nglanggeran tourist village is 0.0000041. Based on these figures, it can be determined that the average tourist expenditure of IDR 465.750 per tourist per visit has an impact on 2 (two) workers (1.9) or the local community. Meanwhile, assuming the number of visits in 2018 is 138.129 tourists, tourism activities in Nglanggeran village can impact more than 732 (732.68) workers or local communities each day. This figure can be categorized as very high, especially considering the tourism village business as small and medium-sized enterprises (SMEs). The results of this research recommend the development of tourist villages in several villages in Indonesia.

However, to strengthen it, researchers believe that similar research also needs to be carried out in several samples of other tourist villages, in order to obtain fairly accurate generalizations.

LIMITATIONS AND STUDY FORWARD

To conclude, the tourism village is one type of tourism product that is ideal for positively impacting the local community. Researchers hope that in the future, studies with a similar approach will be carried out in various tourist villages in Indonesia with various characteristics. This approach is considered quite successful in capturing the benefits of tourism received by the community. Besides, research related to other impacts, such as socio-culture and the environment, is expected to continue to be developed and combined with economic-based research results. The Tourist Village Manager is also expected to continue coordinating with the central government, local governments, academics, and other stakeholders to hold training for local communities, business units, and workers. This training is essential to improve the quality and maintain the tourism industry's improvement, which currently dominates.

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AUTHORS' CONTRIBUTION

This work was carried out in collaboration among all authors. Karyatun, Wiweka, and Demolinggo designed the study, performed the statistical analysis, wrote the protocol, and wrote the first draft of the manuscript. Pramania Adnyana and Iffatunisa managed the analyses of the study and the literature searches. All authors read and approved the final manuscript.

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