



Assessing the Economic Impact of Bridge Construction on the Gili Ree Hamlet Community, Lombok Timur Regency, Indonesia

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Abstract. This study aims to determine how the impact of bridge construction on the economic conditions of the people of Gili Ree hamlet, Paremas village, Jerowaru sub-district, Lombok Timur district. The approach used is a qualitative approach, which uses descriptive methods. With primary data and secondary data derived from selected informants, namely the head of Gili Ree hamlet as a key informant and people who work as fishermen and traders as the main informants, using purposive and snow ball methods. The results of this study indicate that the impact of bridge construction on the economic conditions of the Gili Ree hamlet community is the smooth distribution of goods and services, an increase in business turnover and changes in asset use while other impacts arising from the existence of this bridge are able to facilitate the accessibility of children to go to school and the smoothness of access between Gili Ree Hamlet and Gili Belek Hamlet becomes easier.

Keywords: Development Impact, Economy, Distribution, Bridge.

1. INTRODUCTION

The problem of regional development cannot be denied because it starts with the absence of adequate infrastructure [1]. Infrastructure development has the potential to contribute to a stronger economic recovery [2]. According to Putra et al. [3], the interaction between regions is reflected in the state of transportation facilities and the flow of people, goods and services. Transportation is a benchmark in spatial interactions between regions and has a very important role in supporting the development process of a region [4]. Regions with diverse geographical conditions require integration between types of transportation in serving the needs of the community.

Basically, the transportation system is developed to connect two different areas. Transportation is used to move people or goods from one place to another so that they have increased economic value [5]. Connectivity should be used to increase competitiveness, equalize economic growth, and equitable regional development. This includes opening up remote, border, underdeveloped, and underdeveloped areas [6]. One region depends on another, and another region depends on a particular region. Among these areas, there are certain areas that have advantages over others so that these areas have several facilities that are able to serve the needs of residents within a wider radius, so that residents in a certain radius come to the area to obtain the needs obtained. According to Niu et al. [7], infrastructure development has a very vital role in fulfilling the basic rights of the people. However, the macroeconomic results of research from Nahar et al. [8] show that the gap between regions and underdevelopment in a region is still a challenge that needs to be overcome.

This is important so that we can achieve the goal of social welfare and fulfillment of the constitutional rights of the Indonesian population. Realizing social welfare is one of the goals stated in the preamble of the 1945 Constitution of the Republic of Indonesia. The fact that there are still some regions in Indonesia that are considered underdeveloped, outermost and frontier regions with lower development and welfare indices than other regions, shows that social inequality still exists [8].

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Infrastructure is a catalyst for development. The availability of infrastructure can have an effect on increasing community access to resources, thereby increasing access to resource productivity, which in turn encourages economic growth. Infrastructure or facilities and infrastructure have a very strong relationship with social welfare and environmental quality as well as the process of economic growth of a region. This can be shown by indications that areas that have a better infrastructure system usually have a better level of social welfare and environmental quality as well as economic growth [9]. A long-standing problem that needs to be addressed is the uneven distribution of infrastructure, both in terms of volume and quality.

Areas without access to transportation such as roads and bridges can have a significant impact on various aspects of people's lives. As a result, business and economic activities can be hampered due to difficulties in the distribution of goods and services and people will also find it difficult to access public services such as health and education [9]. Areas classified as underdeveloped are those inhabited by communities that face a number of problems, including economic issues, human resources, infrastructure, regional capacity, accessibility, and regional characteristics. The government has encouraged development in these areas through various policies, one of which is through pioneer transportation efforts, with the aim of serving and connecting communities, especially those living in the outermost, underdeveloped, poorest, and border areas (3TP), in the hope of reducing regional disparities [10]. The low quality of infrastructure in a number of underdeveloped regions is empirically more due to structural constraints, namely that the region has not been prioritized because it is considered not to have a direct impact on increasing PAD or not optimal support for related sectors.

If this is allowed to continue, the low performance of the regional economy and the problem of structural poverty will never be resolved because according to the structure, the largest number of poor people are actually in the villages [11]. One indicator of the success of a country's development is the increasing quality of education of its citizens. The quality of education of citizens is very important because considering the global competition in the future is also increasing. The development of infrastructure or physical facilities has a relationship with the welfare and economic growth process of a region. Indirectly, infrastructure will support the productivity of the economic sector so that it will encourage economic growth [10].

There is previous research that examines the impact of bridge construction on the socio-economic conditions of coastal communities has been conducted in Poasia Village, Abeli Subdistrict, Kendari City, Southeast Sulawesi [12]. Other research is also located in Cerbon District, Barito Kuala Regency [13]. In addition, there is also research related to the impact of bridge construction policies on the community's economy in Pengujan Village, Teluk Bintan District, Bintan Regency [14]. Lombok Timur Regency is located at the eastern end of Lombok Island, Nusa Tenggara Barat, Indonesia [15]. Geographically, the regency lies between 8°-9° South latitude and 116°-117° East longitude, covering an area of 2,679.88 km², which includes 1,605.55 km² of land and 1,074.33 km² of ocean. Administratively, Lombok Timur Regency consists of 20 sub-districts, 13 urban villages (*kelurahan*), and 96 rural villages (*desa*), along with several small islands [16]. These islands face challenges in meeting basic needs due to limited accessibility and connectivity.

One of the prominent villages in this subdistrict is Paremas Village, with an area of 1,366.10 hectares. Among its seven hamlets, Gili Ree Hamlet holds great potential for development, ranging from mangrove tourism to seafood culinary experiences. Nearly 90% of the population, which stands at 281 people, depends on fishing as their main livelihood. Access to Gili Ree Hamlet involves traveling from the main road to the dock, followed by a sea route using boats or fishing vessels. The construction of a bridge between Gili Belek Hamlet and Gili Ree Hamlet, long awaited by the local population, has been a vital development. The bridge, completed in 2021, addressed significant challenges faced by the community, particularly in the areas of education and the economy. Prior to the bridge, the residents relied on small boats, with operating hours limited between 06:00 and 21:00 WITA. During low tide, schoolchildren from Gili Ree could walk to Gili Belek, but during high tide, they had to swim to attend school.

Before the bridge, the sea divided the two hamlets, creating a physical and social barrier. The construction of this connecting bridge was carried out by PT Sasak Inti Nusa, funded by IDR 2.57 billion from the 2021 regional budget (APBD). This bridge is expected to significantly improve the economic conditions of the community in Gili Ree Hamlet, Paremas Village. With this background, the aim of this research is to analyze the impact of the bridge construction on the economic conditions of the community in Gili Ree Hamlet, Paremas Village, Jerowaru Subdistrict.

2. METHOD

This study used a qualitative approach to explore and understand the perceptions and experiences of participants related to the impact of bridge construction on the economic conditions of the community in Gili Ree Hamlet, Paremas Village, Jerowaru Sub-district. Qualitative methods are used to describe and explore in-depth information through narratives built by researchers on the object under study. Data collection was done through observation, in-depth interviews, and documentation. The research informants consisted of key informants, main informants, and additional informants who were selected using purposive and snowball techniques. The presence of the researcher at the research location is very important to obtain valid information, and this research does not aim to influence the research subject. The research locations were chosen based on the importance of transportation infrastructure, including bridges, as the backbone of regional economic growth. Data analysis was conducted interactively and continuously using triangulation techniques to ensure the validity and validity of the data. The data obtained were then reduced, presented, and verified to conclude the impact of bridge construction on the economic conditions of the community.

3. RESULT AND DISCUSSION

3.1 Bridge Construction

1. History of Bridge Construction

Gili Ree is one of the hamlets located in Paremas Village, the word "Ree" is taken from the Sasak language which if interpreted in Indonesian as grass or weeds that used to be this Gili there were only weeds, but changes occurred in the early 80s where many residents from the Sakra sub-district preferred to move and settle in Gili Ree so that until now Gili Ree is inhabited by residents whose ancestors came from Sakra Village [17]. Gili Ree itself is located in the middle of the sea which is not too large in area and is adjacent to Gili Belek. Most of the people of Gili Ree make a living as fishermen, traders and migrants. Some residents of Gili Ree depend on their lives as fishermen. Their daily life starts very early in the morning, when the sun is just rising. They use traditional boats to go to sea and catch fish. Fishermen in Gili Ree usually use nets, fishing rods or other fishing gear. After hours at sea, they return home with their catch. This job is highly dependent on the weather, tides and seasons, so fishermen must always pay attention to sea conditions.

Apart from fishermen, there are also residents of Gili Ree who work as traders. They usually have small stalls or sell merchandise in front of their respective homes. These traders sell a variety of goods, ranging from food and drinks to other necessities. Some Gili Ree residents are also migrants, who leave the island to work or pursue opportunities elsewhere. They may work in tourist attractions in Lombok or other places in Indonesia. Their daily lives off the island may involve work in tourism, construction or other sectors. Although they live their lives elsewhere, they may remain connected to family and friends on Gili Ree. In Gili Ree, there are public facilities in the form of mosques and public cemeteries only, to get access to health, residents will take a boat or sampan to the mainland, while for access to education their children will cross to Gili Belek, which is the closest Gili to Gili Ree. Before 2021, there was unrest among residents, namely that their children who went to school had to swim to Gili Belek with the risk of getting their uniforms and school books wet, this is what initiated the construction of a bridge connecting Gili Ree and Gili Belek.

Through the village apparatus, the bridge construction program was proposed in 2016 through the Ministry of Development of Disadvantaged Regions and Transmigration whose funds were then submitted to the Lombok Timur Transportation Office. This bridge construction project has a budget of IDR 2.7 billion from the 2021 APBD and has a work period from June 10 to November 10, 2021 the contractor carrying out the work is PT Sasak Inti Nusa. The bridge that connects the two gilis is 241 meters long and 2.5 meters wide

and uses piles with a size of 6 meters with an estimate of being planted in the sea with a depth of two meters, the length of the bridge post to 4 meters and has 6 lights as street lights installed on each edge. In accordance with the technical feasibility study of the bridge work, the size is in accordance with its strength to accommodate the load. This is because the purpose of the bridge construction is to connect community access.

2. Informant Characteristics

Informants are the most important part of a study because the information to be researched relates to the objects and subjects to be studied. In this study, in determining informants, researchers used the technique purposive dan snowball. Engineering purposive is a technique of taking data sources with certain considerations [18]. For example, people who are used as informants are people who are considered to know the most about the expected information, or these people can be said to be people who have high power so that they are able to provide extensive information to researchers related to the object to be studied. The key informant in this research is the cadre of Gili Ree.

The main informants in this study are those who are directly involved in the social interactions under study. Thus the main informant here is a person who knows technically and in detail about the research problem to be studied. In this study, the main informants are residents, traders and fishermen in Gili Ree Hamlet. Additional informants are those who can provide information even though they are not directly involved in the social interactions studied. Additional informants in this study are the Head of Paremas Village.

The informants in this study are presented in the **Table 1**.

Table 1 Informant Characteristics

No	Code	Informant Name	Gender (L/P)	Age	Informant Status	Description
1	IK01	Sukur Ismail	L	43	Key	Head of Gili Ree Hamlet
2	IU01	Hj. Nurasirah	P	49	Primary	Trader
3	IU02	IU02	P	50	Primary	Trader
4	IU03	IU03	P	15	Primary	Student
5	IU04	IU04	L	15	Primary	Student
6	IU05	IU05	L	25	Main	Fisherman
3	IU06	Abdurrahman	L	49	Main	Fisherman
8	IT01	Sahman	L	54	Additional	Paremas Village Head

From the data above, there is one key informant, namely (IK01) as the Head of Gili Ree Hamlet. The main informants consisted of six people, namely Hj. Nurasirah (IU01) and IU02 (IU02), both of whom are traders in Gili Ree, then there are IU03 (IU03) and IU04 (IU04) who are junior high school students from Gili Ree, there are also IU05 (IU05) and Abdurrahman (IU06) who work as fishermen in Gili Ree. Then for additional informants there is one person, namely Sahman (IT01) who is the Head of Paremas Village, Jerowaru District. The total number of informants in this research is 8 informants.

3.2 Research Findings

The differences felt before and after in social and economic terms with the construction of the bridge. Based on these data collection activities, the researcher obtained the following research results.

1. Business Development

Regarding the development of the business carried out by the people of Gili Ree hamlet after the construction of the bridge, the data obtained shows that there was no change in business development that occurred before the construction of the bridge, the residents continued to work as fishermen and likewise after the construction of the bridge. This is in line with the results of an interview with IK01 who stated that.

"If the business problem remains as usual, there will be no changes."(IK01-1)

Based on this, it can be seen that there was no business development after the bridge in Gili Ree was built as stated by IK01. This is as stated by IU01 that

"There is no change in the business, it's the same as trading for me."(IU01-1)

Similarly, IU01, IU05, IU06, IT01 said the same thing that there was no business development after the construction of the bridge. Data reduction, by looking back through this statement, it can be compared between before the construction of the bridge and after the construction of the bridge that there were no changes related to business development both before and after the bridge was built.

This is also in accordance with the results of observations made by researchers who did not find changes in business development after the construction of the bridge in Gili Ree as evidenced by the absence of changes in the professions of Gili Ree residents after the construction of the bridge, most of the people continue to work as fishermen, traders and migrants. In contrast to the findings of research conducted by Puspitasari et al. [19] who found that the existence of the Rumpiang Bridge in Barito Kuala Regency had an impact on the opening of business opportunities for people who have sufficient expertise and capital.

2. Increase in Labor Absorption

Regarding the additional labor absorption that occurred in the Gili Ree hamlet community after the construction of the bridge, it was found that there was no additional labor absorption that occurred after the construction of the bridge. This is in line with the results of an interview with IU06 who stated that

"If it's the same now, there is no increase in workforce absorption." (IU06-1)

Based on this, it can be seen that there was no additional employment after the bridge in Gili Ree was built as said by IU06. This is as stated by IU02 that

"There is no increase in workforce, it's all the same." (IU02-1)

Similarly, IU01, IU05, IK01, and IT01 said the same thing that there was no increase in employment after the bridge construction. Data reduction, in the field of additional labor absorption felt before and after the bridge construction by the residents of Gili Ree hamlet, is said to have not changed, the conditions are the same both before and after the bridge construction.

This is also in accordance with the results of observations made by researchers who did not find additional labor absorption after the construction of the bridge in Gili Ree as evidenced by the community who did not experience additional professions. In contrast to the research findings conducted by Abdurrahman (2017) who found a negative impact of the existence of the Rumpiang Bridge in Barito Kuala Regency, the negative impact was the loss of jobs and livelihoods of people engaged in transportation services and crossing klotok and ferry.

3. Revenue

Regarding changes in the income of the Gili Ree hamlet community after the construction of the bridge, the data shows that there is no change in community income that occurred after the construction of this bridge. This is also in accordance with the results of an interview with IU05 who said that

"There is no change in income, it's the same". (IU05-1)

Based on this, it can be seen that there was no change in income after the bridge in Gili Ree was built as said by IU05. This is as stated by IU01:

"It's still the same, when I shop, I also go to Telong-elong by boat". (IU01-2)

Similarly, IU02, IU06, IK01, and IT01 said the same thing that there was no change in the income of the people of Gili Ree hamlet after the construction of the bridge. Data reduction, the level of income is said not to increase if seen from the statement that occurred before and after the construction of the bridge.

This is in accordance with the results of observations made by researchers who did not find changes in income after the construction of the bridge in Gili Ree as evidenced by the unchanged community income due to bridge construction. In contrast to the research conducted by Anderson [20] which found the impact of the construction of the bridge in Bintan Regency had an impact on reducing the income of some people, especially those who work as pokcai miners so that they lost their jobs.

4. Prices of Goods and Services

Regarding the price of goods and services in Gili Ree hamlet after the construction of the bridge, it was found that there were no changes in the price of goods and services in Gili Ree hamlet that occurred after

the construction of this bridge. This is also in accordance with the results of an interview with IU01 who said that

"It's the same if the price of the item doesn't change." (IU01-3)

Based on this, it can be seen that there was no change in the price of goods and services in Gili Ree hamlet after the bridge was built as said by IU01. This is as stated by IK01

"Nothing, it's just as stable". (IK01-3)

Similarly, IU02, IU06, IU05, and IT01 said the same thing that there was no change in the price of goods and services in Gili Ree hamlet after the bridge construction. Data reduction, there was no change in the price of goods and services felt before and after the construction of the bridge by the residents of Gili Ree hamlet. In accordance with the results of observations made by researchers who did not find changes in the prices of goods and services after the construction of the bridge in Gili Ree, it was proven that the price of Pop Ice remained Rp. 2,000 without change before and after the bridge was built. In contrast to the results of research conducted by Dixit and Saurabh [21], the observation results from the construction of the Youtefa Bridge have a positive impact on the social conditions of the Holtekamp village community so that there is an increase in the income sector.

5. Distribution of Goods and Services

Regarding the distribution of goods and services in Gili Ree hamlet after the construction of the bridge, the data obtained shows that there are changes in the distribution of goods and services in Gili Ree hamlet that occurred after the construction of this bridge. This is in accordance with the results of an interview with IU01 who said that

"In the past, before the bridge existed, I used to go to land to grind rice to make flour or to Gili Belek by boat. Now, I can just go to Gili Belek via the bridge, which is close and fast, so I don't need to use a boat." (IU01-4)

Based on this, it can be seen that there is an impact of bridge construction on the distribution of goods and services in Gili Ree hamlet as stated by IU01. The same statement was also conveyed by IU02

"I sold fish to Tanjung Luar after the bridge was built. There were 2 or 3 people from Gili Belek who left their fish with me, so I could sell them to Tanjung Luar even though the profit wasn't much, just a little." (IU02-2)

Similarly, IU06, IK01, IU05, and IT01 said the same thing that there were changes in the distribution of goods and services in Gili Ree hamlet after the construction of the bridge. Data reduction, the distribution of goods and services is said to have increased when viewed from this statement. This can certainly be used as an improvement in the household economy. This is in accordance with the observations made by researchers in Gili Ree who found that there were changes in the distribution of goods and services as evidenced by the observation of residents from Gili Belek who passed the bridge to sell their fish to fish collectors who were residents of Gili Ree. Similar to the findings of research conducted by Al Refaie et al. [22], the results of observations from the construction of the Youtefa Bridge have a positive impact felt by the community in the form of economic activity and the occurrence of smooth transportation traffic and goods and services.

6. Business Turnover

Regarding the business turnover in Gili Ree hamlet after the construction of the bridge, the data obtained shows that there are changes in business turnover in Gili Ree hamlet that occurred after the construction of this bridge. This is in accordance with the results of an interview with IU02 who said that

"Before there was a bridge, I only received fish from the residents of Gili Ree, but now it has increased from the residents of Gili Belek after the bridge was built, but the profit is small, son, if the fish are cheap now from selling fish for Rp. 60,000-Rp. 70,000 I only get a profit of Rp. 5,000, if I sell it for Rp. 100,000 I get a profit of Rp. 10,000, but if the price of fish is expensive, thank God the profit is big." (IU02-3)

Data reduction, business turnover is said to increase if seen from this statement. This is in accordance with the observations made by researchers in Gili Ree who found that there was a change in business turnover as evidenced by the observation of residents from Gili Belek who passed the bridge to sell their fish to IU02 who is a fish collector in Gili Ree Hamlet. Similar to research conducted by Barman [23], the results of research from the youtefa bridge can have a positive impact felt by the community in the form of economic activity.

7. Change of Use of Boat Assets

Regarding changes in the use of assets in the form of boats in Gili Ree hamlet after the construction of the bridge, the data obtained shows that there are changes in the use of boat assets in Gili Ree hamlet that occurred after the construction of this bridge. This is in accordance with the results of an interview with IU06 who said that

“In the past, in the morning and afternoon we had to take the children to and from school, so it was a bit of a hassle, but after the bridge was built, thank God, we as parents don't need to take them by boat anymore.” (IU06-1)

Based on this, it can be seen that there is an impact of bridge construction on changes in the use of boat assets in Gili Ree hamlet as said by IU06. The same statement was also conveyed by IK01:

“Thank God, now we don't need to use a boat to take our children to school. In the past, when we came home from fishing in the morning, we also had to take our children to school in the morning.” (IK01-3)

Data reduction, changes in the use of boat assets are said to be true if seen from this statement. This is in accordance with observations made by researchers in Gili Ree who found that there was a change in the use of boat assets as evidenced by the observation that residents from Gili Ree no longer take their children to school by boat to Gili Belek. Currently, there is no related research that examines changes in the use of boat assets after the construction of the bridge.

8. Community Mobility

Regarding community mobility in Gili Ree hamlet after the construction of the bridge, the data obtained shows that there are changes in community mobility in Gili Ree hamlet that occurred after the construction of this bridge. This is also in accordance with the results of an interview with IT01 who said that

“More to the social where there are facilities for the community, children can go to school safely who previously crossed by swimming and boating after the bridge is certainly very easy. Interaction between residents is also getting closer, for example if there is a dhikr, Gili Ree residents can come and strengthen the relationship with Gili Belek residents”. (IT01-2)

Based on this, it can be seen that there are changes in community mobility in Gili Ree hamlet after this bridge was built as said by IT01. This is as conveyed by Angeli Veronikal

“After the bridge was built, it became safe for me to go to school, I no longer had to use a boat and I could also go and play freely at my friend's house in Gili Belek.” (IT01-3)

Similarly, IK01 said that

“Alhamdulillah after the existence of this bridge, the relationship between Gili Ree and Gili Belek has become closer, for example if there is a work or death in Gili Belek, we from the Gili Ree community can come quickly to strengthen the relationship. Especially for school children, now, thank God, they no longer need to swim in wet uniforms and books to go to school in Gili Belek, parents are also no longer worried about letting their children go to and from school.” (IK01-4)

Similarly, IU02, IU01, IU05, IU04, and IU06 said the same thing that there were changes in community mobility in Gili Ree hamlet after the construction of the bridge. Data reduction, with the construction of a bridge which aims to make it easier for the people of Gili Ree if they want to cross to Gili Belek without using boat moorings. In addition, it also strengthens the relationship between neighboring villages to be closer than before.

This is in accordance with observations made by researchers in Gili Ree who found that there were changes in community mobility as evidenced by direct observation of school children passing through the bridge to Gili Belek. Based on the above, the results of interviews and observations show that no changes have occurred related to business development, additional labor absorption, community income and changes in the prices of goods and services in the Gili Ree hamlet, but significant changes have occurred in the distribution of goods and services and community mobility where Gili Ree residents easily come to Gili Belek to use grinding/roller services and vice versa, Gili Belek residents easily leave fish to be sold by traders in Gili Ree, School children can go to school safely without the need to swim and use a song boat, and the relationship between Gili Ree and Gili Belek is getting closer, as evidenced by the begawe or zikiran event, Gili Ree residents will come easily and quickly to Gili Belek.

Based on the results of the research above, it is stated that there is a change in mobility in accordance with what was conveyed by IK01 who said that

“Alhamdulillah, after the existence of this bridge, the relationship between Gili Ree and Gili Belek has become closer, for example, if there is an incident or death in Gili Belek, we, the residents of Gili Ree, can come quickly to strengthen the relationship. Especially for school children, now, thank God, they no longer need to swim in wet uniforms and books to go to school in Gili Belek, parents are also no longer worried about letting their children go to and from school.”. (IK01-5)

This is in accordance with the observations of researchers who made direct observations on the bridge connecting Gili Ree and Gili Belek where children cross the bridge to go to school.

3.3 Community Response to Bridge Construction

The following is the explanation of informant 1 in an interview by IK01 as the Head of Gili Ree Hamlet on January 2, 2024

“Thank God, I'm happy to feel very helped of course”. (IK01-6)

Data reduction, the best support from the procurement of bridge construction is one of the positive responses from the community. This is an important factor in the next development plan. Furthermore, the explanation of informant 2 as a trader, namely IU01 in an interview on January 2, 2024

“Happy, school children's books are no longer damaged, now they just have to chase each other with their friends, it is no longer difficult to pick up children from school, especially if the wind is strong, children can miss school first.” (IU01-5)

Data reduction, according to Todaro's development goals, is to expand the range of availability of individual and community needs through improvements in work patterns and prevent people from pressure and misery of life. Furthermore, the explanation of informant 3 as a trader, namely IU02 in an interview on January 2, 2024.

“Thank God, we are very grateful that the government helped us build this bridge.” (IU02-3)

Data reduction, a positive response from the community is needed for the development of an infrastructure. Furthermore, the explanation of informant 4 as a student, IU03, in an interview on January 2, 2024.

“I am very happy, because I don't have to take a boat to school anymore”. (IU03-1)

Data reduction, a positive response from the community is very important for the development of an infrastructure that is needed by the community. Furthermore, the explanation of informant 5 as a student, namely IU04 in an interview on January 2, 2024.

“ I'm happy, if you used a boat before you would sink, now that there is a bridge you can just walk.” (IU04-1)

Data reduction, bridge construction has the aim of shortening the time given to road users to make it more efficient. Furthermore, the explanation of informant 6 as a fisherman, namely IU05 in an interview on January 2, 2024.

“My opinion about the construction of this bridge is very-very useful because this is a transportation system for children to get an education, to seek knowledge. Before this bridge there were many things that we didn't want to happen such as stationery getting wet, boats capsizing and all sorts of things, well after this bridge, now it's the opposite of the things we don't want, thank God, more or less like that”. (IU05-1)

Data reduction, according to Todaro's development goals, is to improve living standards (level of living), including an increase in better education and great attention to human values. Furthermore, the explanation of informant 7 as a fisherman, namely IU06 in an interview on January 2, 2024.

“Well, with the construction of the bridge now, at first Gili Ree and Gili Belek were a bit strained, now after this bridge was built, communication between the Gili Ree and Gili Belek communities is connected, that's the first one. Then the second one is related to school children, so at first yesterday it could be said to be detrimental to the community, meaning that it was detrimental to the community, every time the children crossed yesterday before the bridge was built, their books, clothes, and so on were always wet, especially the most important thing there was that the children's homework or lessons could not be repeated, right? So after this bridge was built, now my children, especially as guardians of students here, are very grateful to the government that built it.” (IU06-1)

Data reduction, this is in accordance with the theory of infrastructure according to Astutik et al. [1] infrastructure is a physical system that provides transportation, irrigation, drainage, buildings, and other public facilities, which are needed to meet basic human needs, both social and economic needs. Furthermore, the explanation of informant 8 as the head of Paremas Village, namely IT01 in an interview on December 28, 2023

“Yes, our goal is that the constraints there are school children who are about to give birth, because we plan to build a health post and polindes in Gili Belek because there is no connection to the mainland of Paremas Village”. (IT01-4)

Data reduction, the current condition becomes the main reference for taking action and planning. Conclusion, the majority of the community gave a very positive response to the procurement of the construction of this bridge, besides that the community also felt greatly helped by the existence of this bridge.

3.4 Discussion

In this discussion, several discussions will be presented in accordance with the results of the research and the theory described in the previous chapter. The role of the researcher here is to conduct an interview with the original inhabitants of Gili Ree Hamlet and the village head as a representative of the Paremas Village government. In addition, field observations or research locations were made to traders, fishermen and students around the bridge construction site to obtain valid data.

According to the opinion of Mottahedi et al. [24], impact is something that arises as a result of something that is being done, and impact can be said to be two possibilities, namely positive impact and negative impact or a strong influence that can have consequences (both positive and negative). According to Fatihin et al. [15], the term impact broadly is everything that is caused by the existence of “*sesuatu*”. Impact can also be said to be severe, the consequences before and after the existence of”. Starting with the events or changes that occurred between before the development and after the development activities. Regarding the existence of this cycle of change, the community has experienced the impact of social changes and economic changes that have been felt by some elements of society, especially the people of Gili Ree Hamlet. The changes that are felt are also different from one community to another.

The positive impact of bridge construction on economic conditions such as the smooth distribution of goods and services. The smooth distribution of goods and services is very important to facilitate the community and business actors in distributing goods and services more effectively and efficiently. In addition, the impact of the construction of this bridge greatly facilitates the access of the people of Gili Ree Hamlet to Gili Belek for children who go to school and the familiarity of the two Gili is getting closer. From the results of this study, the positive impacts caused are as follows:

1. Smooth distribution of goods and services

Through the results of this study, the economic impact that is currently felt is a smooth distribution of goods and services. Before the construction of the bridge, the people of Gili Ree got huller or rice and coffee milling services by using a boat to Gili Belek or to the mainland first, while after the bridge, of course, access to Gili Belek is faster and more efficient to use huller or milling services do not need to use a boat anymore, of course this is more effective and cost-effective. There is also the sale of fish, which before the bridge, fish collectors or traders only sold fish from the Gili Ree community, while after the bridge fish traders sold fish from the Gili Belek community as well which was then marketed to the outer cape market.



Figure 1 Gili Belek residents sell fish to fish collectors in Gili Ree

2. Business turnover increases

Before the construction of the bridge, IU02 as a fish collector only received fish that was ready to be sold from Gili Ree residents, along with the construction of the bridge, this had an impact on the turnover of the fish selling business carried out by IU02, whose business turnover was said to increase even though the turnover earned was not too much depending on the price of fish on the market. The turnover earned for fish sales is Rp5,000 for 60-70 fish sales while for 100 fish the turnover earned amounts to Rp10,000.

3. Change of use of boat assets

Before the bridge was built, parents took their children to school to Gili Belek by boat and also took relatives to Gili Belek for the use of rice and coffee heuller services. after the bridge, parents no longer use boats to take their children to school or take relatives to use heuller services. This can certainly be utilized for parents who also work as fishermen to get enough rest after being tired of fishing at night.

4. Easy accessibility of school children's education

Before the existence of the bridge, school children risked their lives to pursue their educational needs where children needed to swim and use small boats to cross to Gili Belek and even then if the weather was good and supportive if the weather was not favorable school children would cancel themselves for their safety. The risk of crossing by swimming is certainly very dangerous, moreover their clothes and school books can also get wet, but this condition does not dampen their enthusiasm for studying and pursuing education. After planning for several years, the bridge was finally officially established and built in 2021, which of course greatly facilitated the access of children to study and pursue a better education. The bridge provides a faster and easier transportation route between hamlets that were previously difficult to reach. This can reduce travel time for school children, allowing them to more easily reach school without difficulty. With the bridge, the distance between home and school can be shortened, reducing the time required for travel. This can provide opportunities for children to use their time more efficiently, both for studying and participating in extracurricular activities.

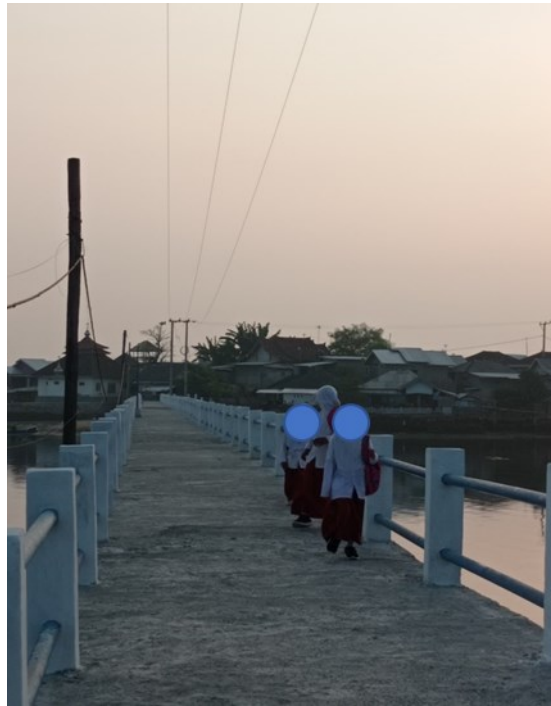


Figure 2 School children from Gili Ree cross the bridge to Gili Belek

Better accessibility can reduce barriers to transportation and thus improve school attendance. Thus, the opportunity to get a better education can be increased. With more children able to access schools easily, the potential for improving the quality of education in an area is greater. With a larger number of students, schools can have more resources to improve facilities and teaching quality.

5. Increasing solidarity between Gili Ree Hamlet and Gili Belek Hamlet

Before the construction of the bridge connecting Gili Ree Hamlet with Gili Belek Hamlet, there were challenges and obstacles that could affect solidarity between the two hamlets, including isolation and limited access. Limited means of transportation or difficult access between the two hamlets can lead to social isolation. This inhibits social exchange and cooperation between the residents of the two hamlets. This results in the need to fulfill the needs of life of its citizens will depend on the land area or village alone, even if to Gili Belek you have to use a boat first, of course this will hamper the interaction between the two hamlets. When there is news of death, begawe, religious activities such as zikiran before the bridge, the people of Gili Ree will find it difficult to visit and come to these activities and vice versa, the people of Gili Belek are also difficult to come to Gili Ree so that the solidarity between the two hamlets is very lacking.

After the bridge, access between Gili Ree Hamlet and Gili Belek Hamlet became easier. This can ease social isolation and open up opportunities for more active exchanges between residents. With better access, the people of the two hamlets can engage in more intense cultural and social exchanges. This can strengthen social ties and increase understanding between residents. The availability of the bridge can strengthen community solidarity between Gili Ree Hamlet and Gili Belek Hamlet. Residents of both hamlets can feel a greater sense of togetherness and interdependence. In this context, the construction of the bridge not only facilitates physical movement but can also be an important catalyst for strengthening social and cultural relations between the two hamlets, increasing overall community solidarity.

Considering the results of interviews, observations and documentation, researchers did not find any negative impacts from the bridge construction in Gili Ree Hamlet, Paremas Village, Jerowaru Sub-district. Although the construction of the bridge in Gili Ree has many positive impacts, it is important to note that the analysis of impacts can be highly dependent on various factors, including project planning and impact management.

Here are some reasons explaining why no significant negative impacts were found:

- a. Good Project Planning:

If bridge construction is well planned, including careful environmental and social impact studies, it is likely that negative impacts can be minimized. A good planning process can identify potential problems and provide solutions before the project begins.

b. Continuous Monitoring and Evaluation:

If the government or relevant parties conduct ongoing monitoring and evaluation of the project's impacts, they can identify potential problems that may arise after the bridge construction is completed. Corrective actions can be taken over time.

c. Implementation of Environmental and Social Policies:

Effective environmental and social policies, as well as enforcement of violations, can help avoid negative impacts that may arise from bridge construction.

d. Long-term Maintenance and Management Planning:

If there is a long-term maintenance plan and strategy for the bridge, it can help address potential negative impacts over time, such as safety concerns or environmental changes. Although it is impossible to guarantee that there will be no negative impacts at all, by taking into account the above factors, negative impacts can be minimized and positive impacts can be enhanced, creating sustainability in the development of the area after the construction of the bridge.

The difference between the results of my research and previous research is that my research found that after the construction of the bridge there were changes in the economic conditions of the Gili Ree Hamlet community in the indicators of the distribution of goods and services only, changes in business turnover and changes in asset use but in other indicators such as business development, additional labor absorption, changes in community income and changes in the price of goods and services did not change. However, other positive impacts found were related to social impacts after the construction of the bridge. This is because this bridge is a link between hamlets, not a link with the village or mainland, which of course has a shorter reach and there are differences in the time and location of the research. As for the previous research, it produced research results that the impact of bridge construction was very influential on the economic conditions of the community. There is a relationship between the addition of labor absorption and the impact of bridge construction. There is a relationship between additional changes in community income and the impact of bridge construction.

4. CONCLUSION

Based on the research results previously described, it can be concluded that the construction of the bridge in Gili Ree Hamlet, Paremas Village, Jerowaru Sub-district has a significant impact on the economic conditions of the local community. One of the main impacts is the increased distribution of goods and services, which facilitates access to services such as rice and coffee mills. Previously, such access could only be done via boat, but with the bridge, access has become more efficient and cost-effective. In addition, the construction of the bridge also increased business turnover in the fish sales sector, as fish collectors can now receive fish from the Gili Ree area and a wider market.

Significant changes have also occurred in the use of boat assets, where previously boats were used to take children to school and access milling services, but now access can be done more easily through the bridge. In addition to facilitating children's accessibility to school by reducing travel time, the construction of the bridge also facilitated more intense cultural and social exchanges between Gili Ree Hamlet and Gili Belek Hamlet. In this context, the changes that occur must be used as innovations for the community to anticipate the growing social and economic changes. Communities need to be ready to accept change and develop creative and innovative thinking in designing new businesses that can improve their welfare.

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