
**Analysis of the Impact of the Earthquake on the Economy of Wirotaman Village,
Ampelgading District, Malang Regency****M. Rihal Irsyada¹⁾, Sukron Rochmat Romadlon²⁾**^{1,2)}STIE Widya Dharma Malang

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Abstract

The impact of an earthquake on the economic sector is very large. Mainly what happens in the economy of society with insufficient human resource capacity and invalid capital. This is like what happened in the 2021 Earthquake in Ampelgading District, Malang Regency. With the greatest damage impact occurring in Wirotaman Village. This research used qualitative descriptive methods with a research period of 3 months from 1 April - 1 July 2022. Data collection methods used interviews, observation and documentation techniques while the data analysis tool used was Multiple Linear Regression. The results of the research show that there is an impact due to the earthquake disaster on the economy of village communities. Because there is an obstacle in the production and distribution sectors. This results in widespread unemployment and poverty

Keyword : Earthquake and Community based Economics

INTRODUCTION

Earthquake disasters in Indonesia are inevitable. Earthquakes not only occur in areas that are known to frequently experience them, but now they also occur in areas that were previously thought to be relatively safe. These conditions are controlled by Indonesia's tectonic configuration in the past and in the present. Many earthquakes have claimed thousands of lives and suffered enormous property losses (Salahuddin, 2016). So the impact is that the community's economy is not running properly. As a result, people are afraid to carry out economic activities.

Earthquakes are genuine vibrations from within the earth, originating within the earth which then propagate to the surface due to cracks in the earth breaking and shifting violently. The causes of earthquakes can be earth dynamics (tectonics), volcanic activity, falling meteors, landslides (under sea level), and subsurface nuclear bomb explosions. Tectonic earthquakes are the most common earthquakes that occur in various parts of the earth. A technical earthquake is a vibration resulting from a rock breaking event due to the gradual collision of two plates whose energy accumulates beyond the strength of the rock, causing the rock beneath the surface to crack (Nur, 2010).

An earthquake is a natural disaster that is not known when it will occur. Even though there are earthquake detection tools, these tools cannot provide certainty when an earthquake occurs. Therefore, to minimize the occurrence of casualties caused by disasters, community awareness and readiness is needed in facing a disaster (Zulkifli & Moranain, 2019).

One of the biggest earthquake disasters that hit Malang Regency occurred in 2021. According to the Regent of Malang, Sanusi, Ampelgading District, which is located on the southern coast of Malang, was the area most severely affected by the earthquake with the greatest damage occurring in Wirotaman Village (Mualifu R. A. , 2021).

Earthquakes have a large correlation with the economy of the community where the disaster occurs. This is what happened to the people in Wirotaman Village, most of whom earn their living as farmers, laborers and other entrepreneurs. With the damage caused by the Earthquake, unemployment and poverty have indirectly increased sharply. Because all economic activities have to stop, such as production and distribution activities.

In Wirotaman Village, this condition is very real, where the economic problems above have a bias towards lowering the quality of human resources, further increasing the inability to produce quickly. This condition is further exacerbated by the general situation in society, where almost all people live in a situation of "invalid capital" or without any capital at all.

In the following year, economic development appeared to improve. Even though we still rely on assistance from the government, which from time to time intervenes with the affected communities in Wirotaman Village. With assistance from the government, it is hoped that society can improve the economy for each individual.

Therefore, analysis is needed regarding the impact of earthquakes on the economy to find out how much damage was caused and its effect on the economy. While disasters cannot be predicted when they will come, to anticipate the more severe effects of disasters and to find out strategies for economic recovery that can run properly.

1. Community based Economics

Economics is a science that studies human behavior in carrying out economic activities with or without money; there are scarce resources, but there are alternative uses (scarcity); and there are goods and/or services that are produced and then distributed to the community. This basis is the basic concept of economics.

Meanwhile, society is a group of people who associate with each other, in scientific terms, that is, communicate with each other. A human entity can have infrastructure through its citizens and can interact with each other. Another definition, society is a unity of human life which interacts according to a certain system of customs which is sustainable and which is bound by a sense of shared identity. Continuity is a unitary society that has four characteristics, namely interaction between its citizens, customs, continuity of time, a strong sense of identity that binds all citizens.

The economy of society is a collection of human groups that have a life structure, norms and customs that are experienced in their living environment (Arifin, 1997). In general, the definition of community economy is economic activities carried out by the community. This economic activity is a national activity that originates from the potential and strength of society at large to carry out their own economic activities. The meaning of improving an economy is improving the level of the economy through productive independent business by paying attention to management in a business.

The community based economics is a series of activities that take place continuously and is often referred to as a continuous process. Economic processes generally run naturally if there is no earthquake. The natural process is that those who produce (production) must be enjoyed (consumed), and vice versa, those who enjoy must be the ones who produce.

2. Economic Activity

The main economic activities in society consist of production, distribution and consumption. In economic concepts, production, distribution and consumption cannot be separated.

- Production is an activity carried out to add use value or create new objects that are useful for meeting human needs. The party carrying out production is called the producer (Inung O. S., 2022). Production activities have objectives including fulfilling human needs for goods and/or services, seeking profit or profit, maintaining company continuity, improving the quality of goods and services, and increasing prosperity.
- Distribution is an activities that connect producers and consumers are related to distribution. So distribution is the activity of distributing production results in the form of goods and services from producers and consumers. The party who carries out the distribution is called the distributor. (Inung O. S., 2022).
- Consumption is the activity of reducing or spending the value and benefits of goods and services to meet needs. The party who consumes is called the consumer. The goals of human consumption include fulfilling spiritual and physical needs, obtaining maximum satisfaction, and gaining appreciation from other people (Inung O. S., 2016).

RESEARCH METHODS

Data Analysis Techniques

This type of research is descriptive qualitative research which aims to describe the condition or value of one or more variables independently. This kind of research is hereafter called descriptive research (Sigit, 2008). The period of the research is 3 months from 1 April - 1 July 2022 in Wirotaman Village, Ampelgading district, Malang.

Data analysis is the process of systematically searching and compiling data obtained from interviews, field notes and documentation, by organizing the data into categories, describing it into units, synthesizing it, arranging it into patterns, choosing what is important and draw conclusions so that they are easily understood by yourself and others

RESULTS AND DISCUSSION

Damage Caused by Earthquakes

The earthquake occurred on Saturday, April 10 2021, at 14.00 WIB, precisely in Wirotaman Village, Ampelgading District, Malang Regency. With a strength of 6.1 magnitude and an earthquake depth of 80 km. The epicenter of the earthquake was at sea 96 km south of Kepanjen, Malang Regency, East Java, Indonesia. This earthquake shock was felt in almost all of the provinces of East Java, Yogyakarta and parts of Central Java, Bali and West Nusa Tenggara.

The earthquake resulted in casualties, destroyed houses and damaged public facilities.

A. The Data of Destroyed Houses and Damaged Public Facilities

Numb.	Buildings	Quantity	Conditions
	Houses	325	The condition of the buildings was

			slightly damaged, 82 houses had some walls cracked and tiles scattered.
			The condition of the buildings was moderately damaged. 125 houses had walls cracked and tiles scattered around.
			Building conditions were heavily damaged. 98 houses had walls and roof tiles damaged and could not be occupied.
			20 houses were completely damaged
	Mosques	3	Cracked wall
	Islamic Prayer Room (Mushollah)	5	Cracked wall
	Village Hall	1	Roof tiles fell
	Preschool	2	Cracked wall
	Kindergarten	1	Cracked wall
	Village road		2 km of cracked road
	Chip production place	2	Roof tiles fell and walls cracked badly
	Brown sugar production place	1	Cracked wall
	Farmers group building	1	Cracked wall

B. This earthquake caused casualties with 100 people evacuated, 3 people suffered minor injuries, 2 people suffered serious injuries and 1 person died.

The Impact of Earthquakes on the Community's Economy

Wirotaman Village is a village where most of the people work as gardeners, farmers and produce chips almost every day. Apart from that, there are also many home businesses such as making banana chips, taro, cassava, crackers and many other micro businesses which are part of the economic activities of the community in Wirotaman Village.

After the earthquake, the community economy in Wirotaman village stopped, starting from the production and distribution system. This causes loss of income and sources of income. When people lose their income and the production and distribution process does not occur, this will definitely lead to widespread unemployment and poverty. The further impact of an earthquake is hampered economic growth, disruption of development plans that have been prepared and so on (Abdu, 2019).

Post-Earthquake Community Economic Recovery Strategy

Damage to the assets of business actors and MSMEs causes economic growth to be hampered by the government. So, the recovery efforts carried out by the government in the economic sector cover various sub-sectors including MSMEs, agriculture and plantations.

In the MSME sector, the government provides more assistance to business actors. In this case, the government collaborates with non-government parties to provide training to MSME

business actors in managing and increasing the productivity of their businesses by managing existing resources.

In the agricultural sector, post-earthquake recovery is carried out by distributing aid from fertilizers, seeds, plants, agricultural and plantation equipment through cooperatives and farming business units, as well as providing land management training to increase the resource capacity of farmers in managing land more effectively as well as training and assistance for sustainable agricultural businesses by collaborating with Cooperatives, BUMDES, BUMD, Government and Private to increase the productivity of agricultural products and have high selling value.

The recovery process in the economic sector in post-disaster areas must be adjusted to BNPB regulation Number 11 of 2008. This regulation explains the guidelines for post-disaster rehabilitation and reconstruction, along with the indicators as will be explained later. In the scope of implementation of rehabilitation and reconstruction, post-disaster recovery, especially in the economic sector, includes:

1. What is meant by socio-economic and cultural recovery is an effort to re-function the social, economic and cultural activities and/or institutions of the community in the disaster area.
2. Economic activities and institutions are social activities and/or relationships in the economic sector which include the processes of production, distribution and consumption of economic goods.
3. Social, economic and cultural recovery activities are aimed at reviving the social, economic and cultural activities and institutions of the community in disaster areas as they were before the disaster occurred (Sri, Iga, & Faezal, 2019).

Indicators of the rehabilitation and reconstruction recovery process are urgently needed to know the results and achievements that have been carried out, especially in the economic sector, namely as follows:

1. Carrying out production and distribution activities of goods of economic value to both individuals and institutions.
2. Implementation of economic transactions both in the market and outside the market, both individuals and institutions.
3. Increase the amount of production and distribution of goods of economic value to both individuals and institutions.
4. Increase the number of community members and/or economic institutions involved in the production and distribution of economic goods (Sri, Iga, & Faezal, 2019).

Community empowerment is also one of the recovery strategies after the earthquake disaster. Empowerment of groups in the community is a program that involves and increases participation in village economic growth so that it can improve welfare and eradicate poverty.

Group empowerment actions in an effort to strengthen the village's economic base can be carried out by strengthening capacity. Strengthening the capacity in question includes:

1. Human Resources Development (HR) Development of Village groups or communities so that quality human resources can be realized through increasing awareness and self-confidence, increasing income, increasing welfare, improving social, political and cultural so that they are able to reach natural resources, capital, technology, and markets. So, they are able

to meet basic needs for clothing, food, education, health, legal, environmental and social politics. Human resource development must be supported by the availability of agricultural land, forestry and other forms of natural wealth that can be processed with the aim of finding and obtaining potential local raw materials.

2. Capacity Development in Capital

Empowerment is expected to be able to help people eliminate dependency and grow alert in obtaining and managing capital incorrectly, as well as trying to enter the market system to obtain and manage capital. Strengthening business capital can be provided in the form of grants or loans from various sources, for example: the Department of Cooperatives and MSME which every year provides grant funds in the form of light loan activities such as People's Business Credit (KUR), and the development of this capital assistance can be further expanded and more evenly. It is hoped that these funds can be managed by community groups for joint use with the aim of creating business land so that it can support the economy of households affected by the earthquake. Capital is the main obstacle, so if there are facilities provided to disaster victims, it will be better in efforts to encourage economic recovery.

3. Development of People's Economic Institutions

The development of people's economic institutions grows from, by and for the benefit of the people based on the principle of kinship which can be carried out through coaching the community in groups. From this activity, it is hoped that people can get to know each other, trust and have the same interests through the formation of groups, so that good and harmonious cooperation will grow so that they can increase awareness and independence (Abdu, 2019).

The government also needs to provide training on entrepreneurship to communities affected by disasters as a form of strategy for community economic recovery. In entrepreneurship, it is necessary to understand the meaning of entrepreneurship. Zimmerer defines entrepreneurship as a process of applying creativity and innovation in solving problems and finding opportunities to improve life (Dr, 2013).

An entrepreneur always thinks about looking for opportunities, taking advantage of opportunities, and creating business opportunities that can provide benefits in starting a business. There are many ways for someone to start a business, either as a group or individually.

The usual way to start a business is as follows:

1. Establish a new business

Someone starts a business by establishing a new company. In this case, what must be done is to take care of everything related to the business entity. Apart from that, another task is to find the right location and provide equipment that suits the business.

2. Buy a company

This business is carried out by buying an existing or previously running company. Business purchases can be made to companies that are currently running or companies that are inactive, but still have a business entity.

3. Management cooperation with the franchise system

This model was developed using the name and management of another company.

4. Develop existing businesses

Entrepreneurs develop existing businesses, whether in the form of branches or adding larger capacity. Usually activities like this are carried out by family companies (Joniy, 2008).

Building entrepreneurs is an effective strategy in rebuilding the economy of communities affected by disasters. The government's role in this matter is very important to provide training to prospective new entrepreneurs

CONCLUSION

The conclusion of this research is that the earthquake had a major impact on the economic sector in the community of Wirotaman village, Ampelgading sub-district, Malang district. The main impact is the loss of production and distribution processes in economic activities. Thus, it results in unemployment and poverty in society, considering that the main occupation of the average person is micro-enterprise, agriculture and plantations. Therefore, the government's role is needed to overcome the economic problems of residents affected by disasters. In this case, this can be done by providing entrepreneurship training and assistance in the agricultural and plantation sectors.

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