



## The Role of Catch Fisheries in Creating Food Security: A Sociological Study

### Peran Perikanan Tangkap dalam Mewujudkan Ketahanan Pangan: Suatu Kajian Sosiologis

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#### ABSTRACT

The existence of marine fish in Indonesian waters is very abundant and will continue to provide benefits as long as it is managed properly. Marine fish that act as a source of animal protein can be utilized through the fishing process. The agriculture, forestry, and fisheries sectors are the main pillars of Gross Regional Domestic Product (GRDP) at 23.01%. The East Coast region contributed the most, namely 74.73% or around 717.04 trillion rupiah to the Gross Regional Domestic Product (GRDP) of North Sumatra. Bagan Percut is one of the potential areas in North Sumatra for efforts to develop the non-port fisheries subsector. Therefore, the social capital of fishing fishermen to be able to realize food security at the local level is important to be studied. This study aims to analyze the role of capture fisheries in realizing food security with sociological theory. This research uses a qualitative approach. The results showed that capture fisheries play a role in realizing food security in three pillars, namely availability, affordability, and utilization. Fishermen play an important role in fish production, agents play a role in distributing catches, and households play a role in food utilization. During the lean season, fishing households can maintain food security by utilizing social capital through the Society for Mutual Aid (STM), perwiridan, and cooperatives. In conclusion, from the economic side, capture fisheries contribute to regional income and fishermen's source of income. From the social side, fishermen and agents/distributors must have social capital to support capture fisheries activities in realizing food security.

**Keyword:** *Catch Fisheries, Food Resilience, Social Capital*

#### ABSTRAK

Keberadaan ikan laut di perairan Indonesia sangat melimpah dan akan terus memberikan manfaat selama dikelola dengan baik. Ikan laut yang berperan sebagai sumber protein hewani ini mampu dimanfaatkan melalui proses penangkapan ikan. Sektor pertanian, kehutanan, dan perikanan menjadi penopang utama Produk Domestik Regional Bruto (PDRB) sebesar 23,01%. Kawasan Pantai Timur berkontribusi paling besar, yakni 74,73 % atau sekitar 717,04 triliun rupiah untuk Produk Domestik Regional Bruto (PDRB) Sumatera Utara. Bagan Percut menjadi salah satu daerah di Sumatera Utara yang potensial untuk upaya pembangunan subsektor perikanan nonpelabuhan. Oleh karena itu, modal sosial nelayan penangkap ikan untuk mampu mewujudkan ketahanan pangan tingkat lokal menjadi penting untuk diteliti. Penelitian ini bertujuan untuk menganalisis peran perikanan tangkap dalam mewujudkan ketahanan pangan secara sosiologis. Penelitian ini menggunakan pendekatan kualitatif. Hasil penelitian menunjukkan bahwa perikanan tangkap berperan dalam mewujudkan ketahanan pangan dalam



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tiga pilar, yaitu ketersediaan, keterjangkauan, dan pemanfaatan. Nelayan berperan penting dalam produksi ikan, agen berperan dalam pendistribusian hasil tangkapan, dan rumah tangga berperan dalam pemanfaatan pangan. Pada saat musim paceklik, rumah tangga nelayan dapat mempertahankan ketahanan pangan dengan memanfaatkan modal sosial melalui Serikat Tolong Menolong (STM), perwiridan, dan koperasi. Kesimpulannya, Dari sisi ekonomi, perikanan tangkap berkontribusi terhadap pendapatan daerah dan sumber pendapatan nelayan. Dari sisi sosial, nelayan dan agen/distributor harus memiliki modal sosial untuk menunjang kegiatan perikanan tangkap dalam mewujudkan ketahanan pangan.

**Keyword:** Perikanan Tangkap, Ketahanan Pangan, Modal Sosial

## 1. Introduction

The existence of marine fish in Indonesian waters is very abundant and will continue to provide benefits as long as it is managed properly. Marine fish that act as a source of animal protein can be utilized through the fishing process. Fishing at sea is a way that fishermen do as an effort to meet the needs of life and increase income from day to day. Fisheries is a sector that plays an important role as a source of income. The fisheries sector is one of the important resources as the main driver of the national economy (Daryanto, 2007).

The economy of North Sumatra is supported by the Gross Regional Domestic Product (GRDP) of various regencies/cities in North Sumatra. In 2022, Medan City with a GRDP value (29.20%) or around 280.16 trillion rupiah. Then followed by Deli Serdang Regency with a GRDP of 127.55 trillion rupiah (13.29%). Then followed by Langkat, Simalungun, Asahan, Labuhanbatu, and Batubara (above 4%). Quoted from the Central Statistics Agency (BPS) of North Sumatra Province, the agriculture, forestry, and fisheries sectors are the main pillars of GRDP of 23.01 percent. The East Coast region contributed the most, namely 74.73% or around 717.04 trillion rupiah to the GRDP of North Sumatra. The East Coast region is a body of water that has abundant fish resource potential, such as demersal fish (snapper, grouper, and pomfret), pelagic fish (mackerel, cob, and tuna), shrimp, and so on. The East Coast region consists of (districts/cities) Langkat, Serdang Bedagai, Deli Serdang, Asahan, Labuhanbatu Selatan, Batu Bara, Tebing Tinggi, Medan, Tanjungbalai, and Binjai (Badan Pusat Statistik Provinsi Sumatera Utara, 2023).

Indonesia has enormous capture fisheries potential. Indonesia's vast waters and rich in marine life are the main capital in the development of the fisheries sector. According to (Wati & Primyastanto, 2018) As a maritime country, the reality is that only 10% of fishery resources can be managed by Indonesian human resources. Nevertheless, the amount of production in the fisheries sector continues to increase every year. Sakti Wahyu Trenggono, Minister of Maritime Affairs and Fisheries, said that in 2023 Indonesia's fisheries production was recorded at 24.74 million tons. These achievements include capture fisheries, aquaculture fisheries, and seaweed (Antara, 2024).

This abundant production was not balanced with the low consumption of fish in Indonesia. Research conducted by Djunaidah (2017) shows that the level of fish consumption in Indonesia is relatively lower than the potential of fishery resources owned. This low fish consumption rate varies from tribe to tribe in Indonesia according to culture and economic needs. The Bugis consume more fish than the Sundanese despite being in the same location. In Central Maluku, fish consumption is lower than production because fishermen prefer to sell their caught fish rather than consume it to sufficient living needs.

The poverty of fishermen is a complex issue. The majority of fishermen live in poverty which manifests in economic, socio-cultural, and political dimensions. Dependence on middlemen, unfair share of catches, and Fish Auction Place (TPI) or fish traders (in some cases) contribute to impoverishing fishing communities (Imron, 2003). Therefore, the social capital of fishing fishermen to be able to realize food security at the local level is important to be studied.

Food security is the condition of food availability and the ability of individuals to access sufficient, safe, and nutritious food to meet nutritional needs. A household is said to have food security if its residents are not in a state of hunger or haunted by the threat of famine (FAO, 2024). Food security consists of 3 pillars, namely food availability, affordability, and utilization. Food security is a major milestone in national development and is often referred to as national security. This is also contained in the 1945 Constitution (Constitution of the Republic of Indonesia 1945) so that state administrators provide guarantees to their citizens to be able to live a prosperous life.

There are several studies that have similarities with this study. First is the research conducted by (Damayanti, 2012) with the title "Contribution of Capture Fisheries to Fish Food Provision in Supporting Food Security in Jambi Province". Second is the research conducted by (Delly et al., 2019) with the title

“Food Security Level of Fishermen Households in Sukajaya Lempasing, Teluk Pandan District, Pesawaran Regency”. This study and the two studies both discuss the food security of the fisheries sector but the methods, approaches, and locations used are different. This research uses qualitative research methods while previous research uses survey methods. The location of this research was carried out in dusun Bagan Percut, Percut Village, Percut Sei Tuan District, Deli Serdang Regency, North Sumatra Province while the previous research was carried out in Jambi Province and in Sukajaya Lempasing Village, Teluk Pandan District, Pesawaran Regency, Lampung Province. The two previous studies focused more on analysing the level of food security while this study focused more on the social capital of capture fishermen in realising food security. This research is important to show that there is strong social capital owned by the community in Bagan Percut Village as their effort to maintain food security during the lean season that threatens food availability. Thus, social capital plays a major role in efforts to maintain food security in an area.

The capture fisheries subsector is expected to provide welfare for fishermen and improve the regional economy. Bagan Percut is one of the potential areas in North Sumatra for efforts to develop the non-port fisheries subsector. Based on this background, this study aims to analyze the role of capture fisheries in realizing food security with sociological theory.

## 2. Method

This research uses a qualitative approach. The location of the study was conducted in Bagan Percut hamlet, Percut Village, Percut Sei Tuan District, Deli Serdang Regency, North Sumatra Province. The determination of the location of the study was carried out purposively (deliberately) taking into account that the majority of the population made a living as fishermen. The time for data collection and research was carried out in March 2024. The type of data used in this study consists of primary and secondary data. Primary data is data collected directly by researchers, while secondary data is data collected previously by other parties. Primary data were obtained through observations at the observation site and interviews with an individual fisherman, a labor fisherman, and an agent/distributor. Secondary data are obtained through literature studies and review of documents relevant to the research objectives.

This research uses a theory in sociology, namely Social Capital Theory. Coleman in Social Capital in the Creation of Human Capital (1988) introduces social capital as a conceptual means of understanding the theoretical orientation of social action by linking components from sociological and economic perspectives. In this way he used principles in economics to analyze social processes. Coleman discusses how social capital is formed and highlights social capital in three different forms. Pierre Bourdieu (1986), in his book *The Forms of Capital* distinguishes three forms of capital, namely economic capital, cultural capital, and social capital. He defined social capital as the actual or potential aggregate of resources associated with the ownership of a durable network of more or less institutionalized relationships of mutual relations and recognition. Bourdieu sees social capital as an asset that is owned and utilized collectively. Such social capital provides direct benefits to network members and helps make up for the lack of other resources. Networking is a valuable resource. In a group or organization there are potential resources that can connect actors with other actors for a long time that are institutionalized.

## 3. Result and Discussion.

### 3.1. Fishermen and Fishing in Bagan Percut

Bagan Percut is a hamlet located in Percut Village, Percut Sei Tuan District, Deli Serdang Regency, North Sumatra. Bagan Percut is located on the east coast of North Sumatra, precisely on the edge of the Strait of Malacca. The region has a long coastline and is dotted with dense mangroves. The majority of the population of Bagan Percut are Melayu and Batak who make a living as fishermen, pond farmers, and traders. In the past, Bagan Percut was just a small village inhabited by several fishing families. Along with the development of time, Bagan Percut began to develop into a crowded coastal area and became one of the fisheries centers in North Sumatra.

Based on the results of interviews with informants (labor fishermen), information was obtained that fishermen in Bagan Percut can be distinguished according to the ownership of fishing gear, namely *toke* fishermen, labor fishermen, and individual fishermen. *Toke* fishermen are fishermen who have their own fishing gear operated by others. Labor fishermen are fishermen who work with other people's fishing gear. And individual fishermen are fishermen who have their own fishing gear and are operated without involving others. Fishing efforts typically use fleets, fishing gear, and fishing aids.



**Figure 1.** Types of fishing boats: individual fishing boats and group fishing boats

Individual fishermen in Bagan Percut usually fish in the morning and return in the afternoon then leave in the afternoon and return in the evening. Fishermen must travel at least about 10 to 15 minutes to be able to start looking for shellfish and it takes longer and farther locations to be able to get fish. Fish catches include dencis, bedukang, beletong, cencaru, gulama, swordfish, mackerel, selar, grouper, sembilang, mayung, octopus, kepah, shrimp, squid, cuttlefish, clams, and others.



**Figure 2.** Fish catch in fish trader Fish Auction Place (TPI) Percut

### 3.2. Agent and Handling of Fishery Products

As one of the fisheries centers in North Sumatra, fish catches in Bagan Percut are marketed to various regions in North Sumatra and outside North Sumatra. Fresh fishery products are usually marketed through the Fish Auction Place Bagan Percut. According to agents / distributors who have been interviewed, the majority of fishermen prefer to sell their catch to agents because it is considered more practical, although there are some fishermen who market their own catches on boats. Agents are instrumental in distributing fresh capture fisheries production, either distributed to traditional markets or to fish processing plants. Before sending fishery products for export, handling fishery products is first carried out to keep them fresh, both through preservation and freezing. On a normal day, the catch of fish that has been deposited with the agent can reach 150kg. However, during the famine season the fish catch will not reach 150 kg.

The price list is the standard market price of fish in general in Bagan Percut Village. Since fish from Bagan Percut is the central fishery in North Sumatra, any spike in fish prices in the area will also affect most other areas in North Sumatra. If there is an increase in the selling price of fish and other marine animals, it is usually caused by several factors, one of which is weather. For this reason, weather conditions are very influential on market stability in Bagan Percut.





**Figure 3.** Fishermen sell the catch to agents



**Figure 4.** The agent stores the catch before distribution

### *3.3. The Role of Capture Fisheries in Creating Food Security*

Food production, demand, supply, and trade are key determinants of food security at national, regional, and local levels. Meanwhile, the main determinants at the household level are access to food, food availability, and risks associated with access and availability of that food (Rachman & Ariani, 2002).

#### **Availability**

Food availability is the condition of food availability from domestic production and sufficient National Food Reserves to meet the needs of the entire population, both in quantity and quality. If these two main sources cannot meet the needs, then import becomes the next choice. Food availability must be safe for consumption, free from contamination and harmful substances, and contain nutrients needed by the body.

Every fishing household needs basic food in the form of rice obtained from purchasing rice in stores or markets. The need for rice is also obtained from government assistance. Rice is not the largest expenditure in household expenditure, but rather non-food expenditure. According to informants, the biggest expenses were cigarettes, pocket money, and fuel. Fishermen's families can reduce expenses by utilizing unsold catches for family consumption.

In the famine season, the availability of animal food decreases because fishermen cannot go to sea, making fishermen's families vulnerable in the famine season. In order to still be able to make ends meet, fishing families usually take advantage of social relationships to get loans. However, in some situations, not all fishing families are able to make good use of their social capital.

#### **Affordability**

Food affordability is the stability of the supply and price of staple foods that aims to protect the income and purchasing power of farmers, fishermen, fish farmers, and micro and small food businesses. Food should be easily accessible to everyone, both geographically and economically. All fishing households do not have direct access to staples because they do not produce rice, but have direct access to animal food in the form of fresh fish because they carry out fishing business activities.

For other foodstuffs and non-food ingredients obtained by buying or giving. Easy access to food and non-food markets and points of sale reflects affordability. The availability of food prices at affordable prices

in markets, shops, and stalls in Bagan Percut also reflects affordability. At the beginning of March 2024, rice prices have increased, but now they have begun to stabilize.

Table 1. Fish Market Price Table at Fish Auction Place Pantai Labu, Rantau Panjang, and Bagan Percut.

Fish Name (Indonesian)	Price
Bedukang Fish	Rp 8.000
Beletong Fish	Rp 25.000
Cencaru Fish (medium)	Rp 25.000
Dencis Fish	Rp 30.000
Gegerup Fish	Rp 45.000
Gulama Fish	Rp 15.000
Kembung Fish (medium)	Rp 32.000
Kembung Fish (delicate)	Rp 30.000
Lidah Fish (rough)	Rp 42.000
Lidah Fish (delicate)	Rp 15.000
Lidah Fish (medium)	Rp 30.000
Bawal Tambak Fish	Rp200.000
Senangin Fish	Rp 50.000
Tamban Fish	Rp 10.000
Tongkol Fish	Rp 18.000
Tongkol Sisik Fish	Rp 35.000
Kembung Kuring Fish	Rp 45.000
Selar Fish (rough)	Rp 35.000
Selar Fish (medium)	Rp 30.000
Selar Fish (delicate)	Rp 25.000
Selar Fish (yellow)	Rp 20.000
Alu-Alu Fish	Rp 40.000
Kerapu Fish	Rp 85.000
Jenahar Fish	Rp 85.000
Sembilang Fish	Rp 40.000
Mayung Fish	Rp 28.000
Wantasik Fish (Tasik)	Rp 30.000
Gerpu Fish	Rp 35.000
Kerisi Fish	Rp 35.000
Pari Fish	Rp 40.000
Tuka-Tuka Fish	Rp 25.000
Pinang-Pinang Fish	Rp 40.000
Nila Fish	Rp 30.000
Tanda Fish	Rp 55.000
Octopus	Rp 35.000
Scabbard (skin)	Rp 12.000
Mussels (contents)	Rp 35.000
Shells (skin)	Rp 18.000
Mackerel (A)	Rp 90.000
Mackerel (B)	Rp 60.000
Mackerel (C)	Rp 40.000
Cuttlefish	Rp 35.000
Fine prawns	Rp 15.000
Camci prawns	Rp 35.000
Prawns (swish)	Rp 25.000
Prawns (kelong)	Rp130.000
Prawns (swallow)	Rp 65.000
Prawns (tiger)	Rp180.000
Prawns Vanname	Rp 60.000
Squid	Rp 50.000
Prawns Gala	Rp180.000
Kepiting Bakau	Rp 90.000

Source: Deli Serdang Fisheries Service

## Utilization

Food utilization is the use of food to meet the nutritional needs and human health. Food utilization is seen from the efforts of households to consume food in sufficient quantities, nutritious, and balanced. Including processing, food must be processed and stored in the right way so that the nutritional content is not lost. During the lean season, fishing households use assistance from the government to make ends meet or by utilizing social networks.

### 3.4 Social Capital of Fisheries Fishermen Catch in Creating Pangan Resilience

Bourdieu's idea of social capital suggests that social relationships allow individuals to access resources within a community. According to Bourdieu (Lubis, 2014), those with economic capital and cultural capital tend to have high social capital. They tend to make close connections and relationships with others. Social relationships created from these interactions become social glues that maintain the unity of community members.

Individual fishermen who are not active in the Society for Mutual Aid (STM) and are not included in the fishermen group generally only rely on fish location information through decades of experience as fishermen. While fishermen in groups get a lot of information through fellow group members and other groups in one toke. Fishermen in groups generally do not have their own boats so they have to rent toke property and work together. It can be seen that social capital in this case a strong network is only owned by fishermen who go to sea in groups because of the strength of solidarity.

In the book *Foundations of Social Theory* published in 1990, Coleman said, among other things, that social capital, like economic capital, is also productive. Without social capital, a person will not be able to obtain material benefits and achieve other successes optimally. Like other capitals, such as physical capital and human capital, social capital does not always benefit in all situations, but only feels useful in certain situations. A form of social capital can be useful to make it easier for someone to take action in one situation, but in other situations it is useless and can even cause harm (Syahra, 2003)

Fishermen who have gone to sea and get the catch will immediately sell their catch to the agent. This is because fishermen's catches will not last long if they are not directly sold to agents. That is, fishermen do not carry out techniques for handling fishery products before landing so they must immediately sell their catches to keep them fresh. Fishermen have a reciprocal relationship with agents in whose development fishermen become dependent on agents. Agents do not force fishermen to sell their catch to agents, but due to the limitations of fishermen's social networks to market fish production, fishermen rely heavily on agents.

Fishermen communities rarely have savings or emergency funds so that in times of famine, many individual fishermen who do not have qualified social capital are unemployed because they only rely on marine potential in the form of fish and shellfish. Not all fishermen can diversify their work. Meanwhile, fishermen who fish in groups turn to other people's assistance or debt which in the process requires social capital to meet the family's economic needs.

Social capital can be a strength for fishing families not to depend on one resource. Through strengthening cooperation, social capital can increase existing capacity in society. With a strong social network, people can remind each other and help each other when difficulties occur. Social capital that has worked well can be the glue or internal coherence of socio-culture in society.

Social capital is the force that forms a social network in society to help each other by utilizing social solidarity to overcome financial limitations. Fishermen and fishermen's wives get around this by taking advantage of social networking opportunities in the form of cooperatives, Society for Mutual Aid (STM), and perwiridan. Thus, fishing families strategically utilize the potential of social capital in the socio-community environment so as to realize family food security.

## 4. Conclusion.

Capture fisheries is a potential fisheries sector as a sector that is able to realize food security. Capture fisheries are an important source of protein for the people of Indonesia. In terms of economy, capture fisheries contribute to regional income and fishermen's source of income. The non-port capture fisheries sector is the main source of livelihood for many small-scale and traditional fishermen. This contributes to efforts to improve the living standards of fishing families which has the potential to reduce poverty. From the social side, fishermen and agents/distributors must have social capital to support capture fisheries activities in realizing food security. Thus, the non-port capture fisheries sector can help improve food security by providing access to fresh and affordable protein sources, especially for people in coastal

areas.

## References

- Amalia, A. D. (2015). Modal Sosial dan Kemiskinan. *Sosio Informa*, 1(3).310-323
- AshShidqi, M. H., & Puspitasari, D. (2023). Studi fenomenologis modal sosial warga masyarakat nelayan di daerah pesisir. *Journal of Psychological Research*, 3(2), 264–256.
- Damayanti, Y. (2012). Kontribusi Perikanan Tangkap Terhadap Penyediaan Pangan Ikan Dalam Mendukung Ketahanan Pangan Di Provinsi Jambi. *BULETIN PSP*, 20(1), 81–86.
- Delly, D. P., Prasmatiwi, F. E., & Prayitno, R. T. (2019). Tingkat Ketahanan Pangan Rumah Tangga Nelayan Di Desa Sukajaya Lempasing Kecamatan Teluk Pandan Kabupaten Pesawaran. *Jurnal Ilmu Agribisnis*, 7(2). <https://doi.org/http://dx.doi.org/10.23960/jiia.v7i2.3373>
- Djunaidah, I. S. (2017). Tingkat Konsumsi Ikan di Indonesia: Ironi di Negeri Bahari. *Jurnal Penyuluhan Perikanan Dan Kelautan*, 11(1), 12–24. <https://doi.org/10.33378/jppik.v11i1.82>
- Fyka, S. A., Batoa, H., Limi, M. A., Syarni, P., & Karlina, A. (2023). *Strategy analysis to realize food security of Bajo fishers in Wangi – Wangi District during the covid 19 pandemic*. 100033. <https://doi.org/10.1063/5.0119701>
- Heriza, B., & Mulianingsih, F. (2023). Peran Modal Sosial Dalam Kesejahteraan Masyarakat Nelayan Tambak Lorok Semarang Utara. *Sosiolium: Jurnal Pembelajaran IPS*, 5(1). <https://doi.org/https://doi.org/10.15294/sosiolium.v5i1.58745>
- Imron, M. (2003). Kemiskinan Dalam Masyarakat Nelayan. *Jurnal Masyarakat Dan Budaya*, 5(1). <https://doi.org/https://doi.org/10.14203/jmb.v5i1.259>
- Lubis, A. Y. (2014). *Postmodernisme: Teori dan Metode*. Rajawali Pers.
- Menteri Trenggono ungkap produksi perikanan 2023 capai 24,74 juta ton. (2024). Antaranews. <https://www.antaranews.com/berita/3909501/menteri-trenggono-ungkap-produksi-perikanan-2023-capai-2474-juta-ton>
- Praga, Z. S., Kawung, E. J. R., & Mumu, R. (2023). Modal Sosial Nelayan Dalam Meningkatkan Ekonomi Keluarga Di Kelurahan Tuminting Kota Manado. *Jurnal Ilmiah Society*, 3(3).
- Ross, S. A., Westerfield, R. W., & Jordan, B. D. (2009). *Corporate Finance Fundamentals* (8th ed.). Salemba Empat.
- Susanto, A., Hamzah, A., & Irnawati, R. (2020). Peran Sektor Perikanan Tangkap Dalam Mendukung Ketahanan Pangan Perikanan Di Provinsi Banten. *Journal of Local Food Security*, 1(1), 9–17. <https://doi.org/10.37818/leuit.v1i1.6900>
- Syakra, R. (2003). Modal Sosial: Konsep dan Aplikasi. *Jurnal Masyarakat Dan Budaya*, 5(1). 1-22. <https://doi.org/https://doi.org/10.14203/jmb.v5i1.256>
- Waode, S. F. R., Hos, J., & Anggraini, D. (2020). Modal Sosial Masyarakat Nelayan Dalam Pengelolaan Sumber Daya Pesisir Di Kelurahan Lakorua Kecamatan Mawasangka Tengah Kabupaten Buton Tengah. *Gemeinschaft: Jurnal Masyarakat Pesisir Dan Pedesaan*, 2(2).159-166. <https://doi.org/http://dx.doi.org/10.52423/gjmp.v2i2.15394>
- Wati, L. A., & Primyastanto, M. (2018). *Ekonomi Produksi Perikanan dan Kelautan Modern: Teori dan Aplikasinya*. Universitas Brawijaya Press.