

Socio-economic changes in agriculture in the Kaballokang Pakkabba village community, Takalar

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Abstract

This research examines the socio-economic transformations of the farming community in Kaballokang Pakkabba Village, Takalar Regency. The shift from traditional farming systems toward modernization and commercialization has triggered significant changes in the local social structure. Economically, these changes are evident in increased productivity through the adoption of modern agricultural machinery (alsintan) and high-yield seed varieties, which have reshaped household income patterns. Socially, however, modernization has led to a shift in traditional values, where the long-standing communal practices of sipakatau and sipalele are increasingly replaced by contractual, wage-based labor relations. Furthermore, reliance on chemical inputs and market price fluctuations poses new challenges to farmers' welfare. The findings indicate that while there is an improvement in material living standards, there is also a growing social vulnerability as traditional cohesion fades. This study concludes that the socio-economic changes in Kaballokang Pakkabba represent an adaptive response to agricultural modernization, which demands efficiency at the expense of local cultural values.

Abstrak

Penelitian ini mengkaji perubahan sosial ekonomi masyarakat petani di Desa Kaballokang Pakkabba, Kabupaten Takalar. Peralihan dari sistem pertanian tradisional ke arah modernisasi dan komersialisasi telah memicu transformasi signifikan pada struktur masyarakat lokal. Secara ekonomi, perubahan terlihat pada peningkatan produktivitas melalui penggunaan teknologi alat mesin pertanian (alsintan) dan bibit unggul, yang mengubah pola pendapatan rumah tangga petani. Namun, secara sosial, modernisasi ini berdampak pada pergeseran nilai gotong royong dalam sistem sipakatau dan sipalele yang mulai tergantikan oleh hubungan kerja upahan yang bersifat kontraktual. Selain itu, ketergantungan pada input kimia dan fluktuasi harga pasar menjadi tantangan baru bagi kesejahteraan petani. Hasil penelitian menunjukkan bahwa meskipun terjadi peningkatan taraf hidup secara material, terdapat kerentanan sosial berupa memudarnya kohesi sosial tradisional. Studi ini menyimpulkan bahwa perubahan sosial ekonomi di Desa Kaballokang Pakkabba merupakan respon adaptif masyarakat terhadap arus modernisasi pertanian yang menuntut efisiensi namun menggerus nilai-nilai lokal.

Keywords

socio economic change; agricultural modernization, farmers

1. Introduction

Important and strategic sectors within a country must be managed in a balanced, harmonious manner, and optimally, so that the country can be considered a good nation. A nation capable of standing on its own two feet. Because the important and strategic sectors a country possesses, consciously or unconsciously, contribute and can be used as a framework to minimize the poverty of the underprivileged, which largely encompasses rural farming families (Long, 1992).

One way to minimize this is by properly developing the agricultural sector and rural development. It is undeniable that the agricultural sector and rural development can indirectly contribute to improving the national economy, although some sources still view the agricultural sector as a secondary factor (Ahmadin, 2013). Given the current state of affairs, most people do not yet realize the importance of rural development and the agricultural sector, which is far more than just a secondary factor. Rural areas and the agricultural sector can contribute to other sectors, particularly the industrial sector, which has a deep roots and has been named a leading sector in overall economic development. It should also be noted that without integrated rural development, industrial growth will not proceed smoothly. Instead, it will create severe internal imbalances within the economy, exacerbating problems of poverty, income, and unemployment (Hutajulu, 2023).

Indonesia is an agrarian country where the agricultural sector plays a crucial role in the overall national economy. This results in a large portion of the population and workforce depending on or working in the agricultural sector or on national products derived from it. With its agrarian economic character, agricultural land is a crucial factor of production for farmers (Israti, 2016). The growth of the agricultural sector in Indonesia's modern history has actually recorded a relatively modest performance. The agricultural sector grew by an average of 3.73 percent per year between 1968 and 2001 (Arifin, 2013). This indicates that the growth rate of the agricultural sector in Indonesia is not particularly low. Agricultural activities have been ongoing since humans began living sedentary lives. Efforts to preserve food supplies were carried out by growing foodstuffs that could be stored for long periods, at least until the next harvest season. Before the advent of technology and machinery, agricultural activities were largely carried out through collective work. Over time, and with the increasing diversity of economic activities, farmers began to utilize animal power for plowing their fields. After the invention of the tractor, the innovation of using tractors for soil cultivation was slowly adopted by farmers. While hoeing and plowing a hectare of rice fields typically takes a week, a tractor can be completed in relatively a day. This situation will slowly but surely begin to shift the need for human labor, as machines begin to replace it (Supriatna, 2000). Technological advances have created more sophisticated tools and can support the farming community's economy.

In any farming society, we can find different groups of people, and in practice there are horizontal differences between one group and another. The existence of these layers of groups gives rise to social stratification. Social stratification is a system of differentiating individuals or groups within a society that classifies them into different social classes and grants different rights and obligations between individuals in one layer and another. The application of the modernization paradigm that prioritizes the principle of efficiency in the implementation of agricultural development has brought changes to the social structure of rural farming communities (Zid & Alkhudri, 2016). Various development processes, especially industrialization, in the medium and long term have caused changes in the structure of agricultural land ownership, employment patterns and job opportunity structures, as well as the structure of farmer incomes in rural areas. In terms of land ownership structure, these changes have resulted in the formation of a social stratum consisting of upper-class farmers who are farmers who are able to access land resources, capital, and are able to respond well to technology and markets, and produce profit-oriented products and lower-class farmers as the majority in rural areas are relatively poor farmers (in terms of land and capital), with only labor as a factor of production. To meet production needs, the two layers of farming society are

trapped in an unbalanced working relationship (Ibrahim, 2019).

Advances in agricultural technology, which impact changes in the use of production facilities and instant everything in rural communities, will cause changes in social interactions that reflect dynamic social relations between people. Advances in agricultural technology can shape farmers' independence and often have implications for their indifference to other farmers, resulting in changes in interactions. In modern life, almost no one is free from technological services. The greater the number of people who use technological services, the greater the dependence on these tools. The direct impact of technological progress is the ease of carrying out activities. Indeed, the purpose of creating science and technology is to provide all kinds of convenience and reduce the burden of human work that was previously tiring. However, the negative impact of advances in science, technology, and art will make people more relaxed because they are almost unaware that they have been living a consumptive, hedonistic, and materialistic lifestyle (Soetomo, 2018). Moving from the above problems, the author is interested in conducting research related to socio-economic changes in Kaballokang Pakkabba Village, in a scientific paper entitled "Socio-Economic Changes in Agriculture in the Kaballokang Pakkabba Village Community, Takalar Regency."

2. Method

This research employs a qualitative approach with an ethnographic method (Ahmadin, 2022) to deeply understand the socio-economic changes in Kaballokang Pakkabba. By using an anthropological lens, the study focuses on the daily lives, beliefs, and social interactions of the villagers. Data collection is conducted through participant observation and in-depth interviews with key informants, including traditional farmers, local leaders, and youth. This approach allows the researcher to capture the nuanced shift from communal traditions, such as *sipakatau*, to more individualistic, modern agricultural practices, providing a holistic view of the community's adaptation to modernization (Djumaty et al., 2025).

Furthermore, the study utilizes thematic analysis to interpret the cultural meanings behind economic transitions. The researcher spends extended time in the field to build rapport and observe the subtle transformations in social hierarchy and labor relations that quantitative data might overlook (Ridha et al., 2024). By analyzing the "thick description" of village life, this anthropological framework reveals how global market pressures and technological advancements intersect with local Takalar customs. Ultimately, this method ensures that the findings reflect the authentic voices and lived experiences of the people in Kaballokang Pakkabba.

3. Results and Discussion

3.1. Coceptual Study

As explained above, advances in agricultural technology represent a shift in agricultural production from traditional to more advanced methods using new technologies. The emergence of modernization can be driven by the development of science and technology (Jhingan, 2016). Whether we realize it or not, we inevitably experience various socio-cultural changes occurring within our communities. Changes such as lifestyles, social systems, social norms, and other factors can lead to social problems arising from technological advancements (Polanyi, 2003).

The development and advancement of science and technology can spur people to discover new things and drive change in various areas of life. Agricultural management mechanisms are an example of the modernization process. With advances in science and technology, people no longer use traditional methods to manage their farmland. Now they utilize modern technology in agriculture, namely through agricultural intensification, including the use of superior seeds, irrigation systems, fertilizers, pest control, and advanced agricultural technologies such as tractors (Permana, 2016). However, on the other

hand, technology also has negative impacts. Social problems caused by technological progress include socioeconomic inequality, a social condition in which some people enjoy high levels of prosperity and well-being, while others enjoy low levels. A person's economic well-being is determined by their ability to meet basic needs such as food, clothing, and shelter, as well as their ability to participate in development. The existence of socioeconomic inequality indicates differences in the level of prosperity in society (Yustika & Baks, 2015).

According to William F. Ogburn, social change encompasses both material and non-material cultural elements, emphasizing the significant influence of material cultural elements on non-material elements. Material culture is the primary source of progress (Wijayanto, 2019). Non-material cultural aspects need to adapt to developments in material culture, and the gap between the two becomes a social problem. According to Ogburn, technology is a mechanism that drives change; humans always strive to maintain and adapt to nature, which is constantly being updated by technology. Ogburn focused on technological development and became famous for developing the idea of cultural lag and the inevitable adaptation of cultural factors to technology (Digdoyo, 2015).

The Materialist Theory put forward by William F. Ogburn essentially states: (a) The cause of change is societal dissatisfaction with prevailing social conditions that affect their personalities. (b) Although social elements are interrelated, it appears that with change, some still experience change, while others remain static (Kaplan, 2002). This is also known as culture lag, and lag creates a gap between elements that change rapidly and those that change slowly. This gap will cause social unrest in society. Cultural lag explains how some elements of culture are left behind by changes that originate from creation, discovery, and diffusion. According to Ogburn, technology changes first while culture changes last (Mudana, I, 2015). In other words, we try to keep up with technological changes by adapting our habits and lifestyles to technological needs. Technology causes rapid social change that is now sweeping the world. Technological change will be faster than changes in culture, thoughts, beliefs, values, and norms, which will become tools for regulating human life. Therefore, change often causes social upheavals that in turn give rise to new behavioral patterns, even though they conflict with traditional values (Tumanggor et al., 2017).

3.2. Social Change in Agricultural Technology

Change in society is a normal phenomenon; every individual or community will inevitably experience what is called continuous change. This occurs because each individual and member of a community group has thoughts and abilities that continue to develop over time. Changes in society can take the form of social values, social interactions, organizational behavior patterns, social norms, social strata, the structure of social institutions, and so forth. To understand the social changes that have occurred due to advances in agricultural technology in Kaballokang Pakkabba Village, researchers conducted interviews with several farming communities. As expressed by Hartawan Dg Opa, one of the informants in this study, namely:

In 2001, there were hand tractors for plowing the rice fields that entered this village, owned by people from outside the village who rented them to the farmers of Kaballokang Pakkabba village. Previously, we only used harrows and hoes to loosen the soil before planting rice. Now they have been replaced with power tillers (hand tractors) and also rotavators (large tractors) which are more sophisticated and also rice transplanters (rice planters). Then, when the rice harvest is over, there are tools such as sickles and *pakkatto* (ani-ani) to cut the rice from the stalks and *patta'bassang* (gebotan) to thresh the rice. But now the farmers no longer use these tools, there are combine harvesters.

From the results of the informant interviews above, Kaballokang Pakkabba village farmers initially used traditional tools to manage their agricultural land, including in processing their agricultural products. However, with increasingly advanced technological developments, the technology used by farmers has gradually become more modern. In 2001, hand tractors were already known to the Kaballokang Pakkabba village farmers, owned by outsiders and rented by the Kaballokang Pakkabba village farmers. Before being introduced to agricultural technology, the community only relied on tools that were

worked or operated by humans. Such as hoes and rakes to loosen the soil then replaced by power tillers (hand tractors) and also rotavators (large tractors, then when planting rice only using human power then replaced by rice transplanter machines. Furthermore, when harvesting rice before the farmers of Kaballokang Pakkabba village knew agricultural technology they only used sickles or *pakkatto* (ani-ani) to cut rice from the stalks and *patta'bassang* (gebotan) to thresh the rice, then replaced by combine harvester machines. With agricultural machines used to ease inhumane work such as hoeing very large areas of land with human power. with agricultural machines, the work can be done quickly and efficiently, it can also ease the burden on farmers so that farmers can work on other jobs in the process of producing agricultural products. Then the interview from the informant on behalf of Abd Rahim Dg Nguntung is:

Agricultural technology first arrived in this village in 2001. The first people brought it were outsiders, not from Kaballokang Pakkabba. They rented out their plowing equipment. Back then, it was still a hand-pushed plow, but now, as time goes by, more sophisticated ones like large tractors are available, which can be operated simply by steering them like a car."

In an interview, M. Arif Dg Na'ga also revealed the technology that first arrived in Kaballokang Pakkabba village:

I first used a plowing machine around 2010. It was my own, but I rented it from someone else. At first, it was just a hand-pull tractor, but then more sophisticated tractors appeared, including large tractors. There are also rice planters, rice harvesters, grass cutters, and knapsack power sprayers.

An interview with Kaballokang Pakkabba village secretary, Sulaeman, S.Sos, stated:

The Kaballokang Pakkabba village community has experienced significant progress in agricultural technology over the years, with 232.96 hectares of rice fields and 8.5 hectares of dry land. Then, around 2017 and 2018, the government provided assistance in the form of five hand-held plowing machines (hand tractors) and five harvesting machines. We distributed these tools to farmer groups in the area, where such equipment is lacking.

Based on the results of interviews with Abd. Rahim Dg Nguntung, M. Arif Dg Na'ga and the secretary of Kaballokang Pakkabba village Surahman S, Sos above, agricultural technology was first introduced by people outside Kaballokang Pakkabba village in 2001 then over time there were already Kaballokang Pakkabba village residents who had the tools that helped farmers from the plowing process to the rice harvesting process. These tools were in the form of hand tractors, large tractors, rice planting machines, rice harvesting machines, grass cutting machines and pesticide spraying machines. Then the local government provided assistance in the form of 5 units of rice field plowing machines and 5 units of rice field harvesting machines in 2017 and 2018. The agricultural transformation that occurred in the Kaballokang Pakkabba village farming community cannot be separated from the relationship that occurred with the outside world. Various agricultural development programs implemented by the government have changed the agricultural conditions of the Kaballokang Pakkabba village farming community. The process of contact with the outside world allows the Kaballokang Pakkabba village community to be familiar with various new technologies that have developed previously. The entry of new technology is the result of the open mindset of the Kaballokang Pakkabba village farming community. With the emergence of agricultural technology that makes it easier for farmers to manage their rice fields, researchers also wanted to determine whether there had been changes in interactions between farmers. In an interview with an informant named M. Yunus Dg Jarung, he said:

Regarding personal relationships between farmers, they have decreased somewhat since the introduction of tools that make it easier for farmers to manage their rice fields, compared to when we used manual labor, where we worked together. With machines, two or three people were sufficient, so interaction among farmers is somewhat reduced.

Meanwhile, informants Syfaruddin and Maddeng stated:

After the introduction of rice field management machines, farmers are actually closer because they don't require much manpower, the work gets done quickly, and we have more free time to socialize outside the rice fields.

From the statements of the two informants above regarding relationships between farmers after the introduction of agricultural technology, farmers have experienced changes in interactions with each other in the rice fields due to the

reduction in the number of workers due to the replacement of human labor by machines. Outside the rice fields, farmers have more free time to interact because the time spent working in the rice fields has decreased since the introduction of agricultural technology. Furthermore, the results of the interview with informant M. Arif Dg Na'ga regarding relationships with fellow farmers after the advent of agricultural technology:

The agricultural technologies that farmers use today emerged after the formation of what are called farmer groups. With these farmer groups, we often meet fellow farmers and there we also get to know about rice field management machines that were introduced by the agricultural service during extension activities.

According to the interview with the informant above, farmers in Kaballokang Pakkabba Village, Galesong Utara District, learned about agricultural technology through the presence of a farmer group. From this group, several agricultural technologies have gradually emerged that can ease their burdens. Farmers who previously cultivated their land using traditional tools now use modern equipment such as tractors and other tools. The farming community in Kaballokang Pakkabba Village is very grateful for the introduction of agricultural technology. Furthermore, an interview with an informant named Syafaruddin Dg Sewang stated:

In our farmer group, we often attend extension sessions on seedling cultivation, pesticide use, and many other agricultural topics. We also attend these extension sessions and share them with other farmers who couldn't attend. The farmer group acts as a conduit for information to the community regarding extension activities and results from the agricultural office, agricultural extension workers, seed centers, and so on. So, we share information with each other about rice field management processes that can benefit us as farmers.

From the results of interviews with the two informants above, M. Arif Dg Na'ga and also Hartawan Dg Opa, with the emergence of agricultural technology in Kaballokang Pakkabba village, a farmer group was formed which is a place to strengthen the work of fellow farmers in farmer groups and between farmer groups and other parties. With the existence of farmer groups, farmers often communicate with each other, one of which is by attending seminars or extension events regarding agriculture by the local agricultural service and also among farmers they share information related to agricultural problems that they get from the results of extension. This was also expressed by Sulaeman, S.Sos, the village secretary of Kaballokang Pakkabba:

In Kaballokang Pakkabba Village, there are five hamlets with 20 farmer groups, each consisting of 25 people. Farmer groups also serve as a learning platform for organization and collaboration among farmers. Those who frequently attend agricultural extension services receive more information, which is crucial for the success of their harvests. Agricultural extension activities also educate farmers to transform their knowledge, skills, and attitudes, enabling them to embrace new ideas and transform traditional farmers into more modern and dynamic ones.

Based on the interviews above, there are 20 farmer groups, each comprising 25 members, in Kaballokang Pakkabba village. These groups serve as learning centers for farmers to gather information to develop and meet their farming needs. The participation of farmer group members in extension activities organized by the Department of Agriculture significantly impacts rice productivity. The extension team acts as advisors, providing guidance, and assisting farmers through demonstrations or examples of farming practices, as well as solving common problems.

The latest agricultural technology will undoubtedly produce sophisticated and modern tools for agricultural activities. Farmers' skills will automatically change, as the availability of modern tools places new demands on their use and utilization. Therefore, farmers must be able to adapt to current agricultural technology developments. Based on the interviews above, it can be concluded that the social change resulting from advances in agricultural technology in Kaballokang Pakkabba village involves a transformation from traditional to modern farming tools, making it easier for farmers to manage their land. Then, a change in interaction occurred. When farmers were still working in the rice fields, when they were still using manual labor to manage the fields, they interacted more frequently with each other because they worked collaboratively. However, after the introduction of agricultural technology, farmers now only need two or three

people to manage their fields, resulting in less interaction with other farmers.

Meanwhile, farmer interactions outside the rice fields have increased due to reduced work time in the fields with the help of machinery. The formation of farmer groups has led to more frequent sharing of knowledge about more efficient rice field management methods. Farmers also gather and interact with each other during extension events held by the agricultural service.

According to William F. Ogburn's theory of social change, the cause of change is community dissatisfaction with prevailing social conditions, which influence their personal lives. In relation to the research findings above, social change in the farming community of Kelemandalle Village has been characterized by manual labor in rice field management. After the introduction of agricultural technology in 2001, farmers began to use machinery, either privately owned or rented. The use of agricultural machinery has significantly lightened and simplified the workload for farmers compared to manual labor. Then, there was a change in the interaction between farmers in the rice fields. Previously, they worked cooperatively. Then, with the introduction of agricultural technology, farmers managed their land with only two or three people, leading to a reduction in interaction. William F. Ogburn also stated that although social elements are interconnected, some appear to change, while others remain static. This includes the shift in the use of traditional to more modern agricultural equipment, which also influences the cooperative attitude of farmers.

4. Conclusion

The form of change that occurred due to technological advances is that the Kaballokang Pakkabba village farming community, which previously only used traditional tools to cultivate rice fields, now uses modern tools. The entry of agricultural technology was initially introduced by outsiders and also by extension from the agricultural service. Then there was a change in the interaction of farmers when they were in the rice fields where they interacted less because with the presence of machines to cultivate rice fields, the habit of working together has disappeared and all work is paid in cash or grain. However, the interaction of farmers in the community is getting closer because their time working in the rice fields is not so long and they can spend time interacting and exchanging information with fellow farmers through the activities of farmer groups and also participating in extension held by the agricultural service. An interesting thing about the Kaballokang Pakkabba village community is that on the one hand they accept the presence of technology in agriculture, but on the other hand they still hold fast to the traditional values they adhere to, such as the appakaramula tradition before planting rice and also anngalle ulu ase before harvesting rice.

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