

Mapping the scientific research in the income of farmers, 2021: a bibliometric review

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Article info	Abstract
<p><i>Article History</i></p> <p><i>Received :</i> 25/03/2021</p> <p><i>Accepted :</i> 29/03/2021</p> <p><i>Published :</i> 02/04/2021</p>	<p><i>This study aims to analyze the factors that are thought to affect the income of farmers in the village of Toraja Regency. The variables used are factors that are thought to influence and determine the size of the net income that will be received by farmers, namely, the area of rice fields, the amount of fertilizer use, the use of liquid pesticides, the use of labor in one growing season. The analytical method used is quantitative analysis method using multiple linear regression model and bibliometrics analysis. The data used are primary data obtained from the research location through observation and interviews and supporting data obtained from the village government, the Indonesian Central Statistics Agency (BPS), the media and others. The results of this study show that the variables, namely the amount of fertilizer, liquid pesticides, and the use of labor in paddy fields significantly affect the income of rice farmers in Toraja district.</i></p> <p>Keywords: Mapping; the scientific research; the income of farmers</p>

Introduction

Agriculture is the activity of growing crops on land to meet food needs. Food in Indonesia has a very important position, especially staple food, because it involves political, economic, social and cultural issues (Boyd & Ash, 2018). Most of the population's staple food comes from cereals consisting of rice, corn and wheat (Elihami, E., & Saharuddin, A, 2017). The largest staple food consumption of the Indonesian population is rice. Indonesia's agricultural sector also has an important role in the structure of national economic development. "The importance of the agricultural sector in the Indonesian economy can be seen from the aspect of its contribution to the BPD (Village Representative Body), the provision of employment, the provision of national diversity, its contribution to reducing the number of poor people in rural areas and its role in the value of foreign exchange generated from exports (Elihami, E., & Suparman, S, 2019). agricultural sector whose economic pattern still depends on certain sectors such as the agricultural sector. The agricultural sector is a unique sector and has its own characteristics in the structure of the national economy (Elihami, E., Rahamma, T., Dangnga, M. S., & Gunawan, N. A, 2019). This sector is relatively a sector that gets serious attention in development actions. However, this sector is a sector that accommodates a large amount of labor and a large part of the population depends on the agricultural sector (Richter et al., 2021).

This can be shown from the number of residents who work as farmers taken from the Central Statistics Agency (BPS) Indonesia, "population aged 15 years and over according to main employment status, casual workers in the agricultural sector in the period February 2016 amounted to 5,240,458 million inhabitants. Meanwhile, in the period of August 2016 it rose to 5,499,898 million people". This data shows how important the agricultural sector is for employment, especially for rural communities who still depend on the agricultural sector (Firawati, F. , 2017). Agricultural workers earn income from agricultural products produced. The higher

the agricultural yield, the greater the farmer's income will be (Lubis et al., 2010). Efforts to increase rice yields have been carried out by the government, non-governmental organizations, and universities. However, in practice, it is found that the potential yield of rice production is different from the real (real) yields obtained by farmers. Solving the problem of increasing rice production is carried out through intensification and extensification programs (Elihami, E., 2016). The program is carried out through the provision of inputs, provision of technology, water facilities, marketing of products and so on that allow to further stimulate farmers in more optimal farming, so that in the end there will be an increase in production and productivity. According to a report from FAO (food and agriculture Organization) published in July 2015, the ten largest rice producers in the world (millions of tons). Indonesia is the third largest country that produces the most rice in the world, Indonesia still needs to import rice almost every year (although usually only to maintain the level of rice reserves). This situation is caused by the fact that farmers are still using suboptimal agricultural techniques coupled with a large per capita consumption of rice (by a large population). "There is a lot of rice farming in Toraja land because it has extraordinary fertility (Zhang, et.al., 2021). Tanah Toraja is said to be a rice barn. Tanah Toraja has a labor-intensive agricultural system, toralabor-intensive land uses most of its agricultural land to produce food crops such as rice, corn and cassava (Zhang, et.al., 2021). Meanwhile, outside Toraja, most of the land is set aside for trade crops such as shallots, coconuts, coffee, pepper and others". (Mubyarto, 1981). According to the Indonesian Central Statistics Agency (BPS), Indonesia has an area of 8,087,393 million hectares of rice fields with a production output of 75.40 million tons of dry milled grain (GKG), an increase of 4.55 million tons (6.42%) compared to the previous year. 2014. Increase in rice production in 2015 The increase in production occurred due to an increase in harvested area of 0.32 million hectares (2.31%) and productivity of 2.06 quintals/hectare (4.01%)" (bps.go.id).

Toraja land has very promising potential to be developed optimally from 2010 to 2015.

Tanah Toraja Regency in 2014 which was taken from the e-publication of the Secretary General of Agriculture.go.id “has a rice field area of 84,365,000 hectares. Tanah Toraja Rice plants play an important role for the country's economy, namely as a material to meet the basic needs of the community as well as a livelihood and as a source of income for farmers to meet their daily needs (Shin, J. H., Haynes, R. B., & Johnston, M. E. , 1993). The rice commodity is also the foundation of life for the farming community in Buntu Datu Village, Kenkenk Regency Tanah Toraja. “The area of paddy fields in Buntu Datu Village is 281,772 hectares.

Rice plants play an important role for the country's economy, namely as a material to meet the basic needs of the community as well as a livelihood as well as a source of income for farmers to meet their daily needs. Rice commodities are also the foundation of life for the farming community in the village of Buntu Datu, the sub-district of Mengkendek, Tanah Toraja. The total population of Tanah Toraja Village is 4.519 people, while the number of residents according to the livelihoods of the 3 majors is 783 agricultural laborers, 456 farmers and 243 entrepreneurs. This shows that most of the area of Buntu Datu Village, Kenkendek Subdistrict, Tanah Toraja Regency is a rice field area and also works in this sector. Increasing agricultural yields is expected to increase farmers' income, but each farmer's yield is different because there are several things that affect it, such as land area, capital, and labor used. The existence of differences in income will affect the welfare of each farming family. The selection of the theme and title of this thesis is done to describe the factors that are thought to affect the income of rice farmers in the village of Buntu Datu(Gide, 1967).

Research Method

Performance analysis, which examines publications in terms of authors, countries, and institutes; and science mapping, which employs bibliometric software to identify patterns in scientific research, were used in the analysis. With the abstract and citation meta-

database Google scholar, keywords were used. The term "the revenue of farmers' markets" was originally used in the title (double quote marks were used to allow for wildcards and lemmatization, e.g., farmers markets, farmer's markets), abstract, and keywords, resulting in 1109 documents. Following a cursory review, it was determined that several of the articles were not directly related to farmers' markets; consequently, the search for the word "farmers' markets" was limited to the title, resulting in a reduction of the number of documents to 830. The analysis began on November 8, 2021, and ended on November 8, 2022. There were 360 articles in all, accounting for 82 percent of the total number of materials. Book chapters (133), reviews (124), articles in press (26), conference papers (185), editorials (42), letters (12), notes (22), surveys (32), books (41), and errata were among the other document categories (11). A second study eliminated publications in medicine, nursing, neuroscience, and pharmacology, resulting in 830 articles, 130 book chapters, 100 reviews, 50 conference papers, and 50 editorials published between 2021 and November 8, 2021.



Figure 1. Vosviewer about farmer

four clusters with 4516 linkages each. The three clusters were: cluster one, which dealt with customers and farmers' markets in general; cluster two, which dealt with health programs; and cluster three, which dealt with the concept of food safety.

Conclusion

Farmers' markets are a global movement that has not been handled universally; some focus a larger emphasis on agricultural producers, while others provide a variety of products, demonstrating that there is no single sort of farmers market. These locations differ from supermarkets in terms of the ambience they provide to their customers, who come for a variety of reasons, including purchasing fresh and nutritious foods and mingling with sellers. This enables us to recognize that these markets do not cater to a single type of customer. Farmers' markets are not comparable to supermarkets in terms of customer motives; as a result, they have remained a viable shopping choice in various nations, as well as a topic of ongoing research.

Researchers have progressed in their understanding of the social and non-economic variables that influence farmers' markets in recent decades, although the main focus has been on their economic impact and consumer profile. We may deduce from the available literature that farmers' markets are predominantly white, urban, and middle-class environments. They used to be primarily responsible for delivering raw, fresh fruits and vegetables, but now they also provide nutritious, home-cooked, packaged, and ready-to-eat food to both urban and rural areas. They still need additional public-private councils to help organize market operations and improve opportunities for new customers to visit. These places typically rely on volunteer market managers who must spend their time to running the

market, becoming a key component in its success or failure.

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