

4. Prosiding
Internasional_2021_Fahmid_IO
P_Conf._Ser._Earth_Environ._S
ci._681_012092
by Hayati Hayati

Submission date: 12-Apr-2023 10:50PM (UTC-0500)

Submission ID: 2063158919

File name: I_2021_Fahmid_IOP_Conf._Ser._Earth_Environ._Sci._681_012092.pdf (500.56K)

Word count: 1909

Character count: 10141

PAPER · OPEN ACCESS



3

Production and farm business income comparative analysis on rice fields in watersheds with non-watersheds at Lanna Village, Parangloe sub-district, Gowa Regency

5

To cite this article: I M Fahmid *et al* 2021 *IOP Conf. Ser.: Earth Environ. Sci.* **681** 012092

View the [article online](#) for updates and enhancements.

 <p>The Electrochemical Society Advancing solid state & electrochemical science & technology 2021 Virtual Education</p> <p>Fundamentals of Electrochemistry: Basic Theory and Kinetic Methods Instructed by: Dr. James Noël Sun, Sept 19 & Mon, Sept 20 at 12h–15h ET</p> <p>Register early and save!</p>	
--	--

Production and farm business income comparative analysis on rice fields in watersheds with non-watersheds at Lanna Village, Parangloe sub-district, Gowa Regency

I M Fahmid¹, Y Lumoindong¹, N Lanuhu¹, E D Sahara¹ and Hayati²

¹Agribusiness Study Program, Department of Social Economic of Agriculture, Faculty of Agriculture, Hasanuddin University

²Faculty of Agriculture, Universitas Mataram

Email: yopielumoindong@gmail.com

Abstract. Natural resources, which optimally and rationally utilized, aims to increase the people's welfare. Nevertheless, the wise use of natural resources is part of the maintenance in the watersheds area (DAS). This study wants to: 1) identifying the rice farmers' income and how much cost they spend, which located in watersheds or non-watersheds areas; 2) to discover the comparative of farm business income in watersheds or non-watersheds area. This study conducted in Lanna Village, Parangloe Sub-district, Gowa Regency. The population used in this study is all farmers involved in watersheds and non-watersheds area, and 30 farmers have chosen to be the sample. This study used the income analysis and independent sample t-test. The income analysis result shows that the farmer's income in the watershed area is Rp23.833.435,72. Meanwhile, farmer's income in the non-watershed area numbered at Rp 22.867.569,71. The assumed T-Equal Variance value is 0,848 with Sig. (2-tailed) is 0,404 or greater than 0,05. In conclusion, there's no income difference between farmers in the watershed and non-watershed area.

1. Introduction

The increasing agriculture products, especially food, are one of the government's agendas to develop the agricultural to be a tough sector, which caused by its necessary role in people's lives and income, especially for farmers. A tough agricultural sector to build security food guides to fulfill the needs of food by people, which supports by production capability [1].

Farmers' income level, in general, is impacted by several components, such as total production, selling price, and production costs. Paddy is one of the good prospectus products which can increase farmer's income. This can motivate farmers to develop and boost their production in expect to obtain a maximum selling to fulfill their daily needs [2].

Optimization of rice productivity in paddy fields is one of the opportunities to increase national grain production. This is possible when associated with rice yields in this agroecosystem is still diverse between locations and not optimal. The average rice production is 4.76 - 7 t / ha. Not yet optimal rice productivity in paddy fields, partly due to: a) low fertilizer efficiency; b) ineffective pest control has not been effective; c) the use of poor-quality seeds and selected varieties are less adaptive; d) Kalium nutrient deficiency and microelements; e) physical properties of the soil are not optimal; f) weed control is less optimal [3].



² Content from this work may be used under the terms of the Creative Commons Attribution 3.0 licence. Any further distribution of this work must maintain attribution to the author(s) and the title of the work, journal citation and DOI.

The optimal and rational use of natural resources aims to improve the welfare of the community. The wise use of natural resources in accordance with the rules of sustainability will not only improve the welfare of the community but will also get sustainable benefits. Therefore, the wise use of natural resources is part of the watershed management effort [3].

Watershed (DAS) in spatial perspective is part of the face of the earth, the water flowing into the river in question when it rains. A watershed (DAS) is a place with a physical barrier in the form of mountains where rainwater that falls precisely is in an area bordered by mountains and gives an impact on the use of the surrounding land. In the watershed, there are characteristics obtained from rainwater that falls on land use. This is characterized in the Jeneberang River Basin in Gowa Regency, South Sulawesi. The most striking characteristic, of course, is agricultural land where water is needed in this activity. In addition to providing water for the surrounding community, the river can also be used as a transportation infrastructure as well as a source of water for agriculture and life around it. This is because the geological and geomorphological conditions allow for water storage and the continuation of agricultural activities [4].

Gowa Regency is one of the regencies that has a fairly extensive watershed, one of which is located in the Parangloe District, namely the Jeneberang River. The Jeneberang watershed is used as farming land by the surrounding community, which is a source of community income. In addition to the Watershed farming in Parangloe District, there are also non-watersheds paddy farming. The reason for choosing the Jeneberang watershed location as a research site is because this location is quite unique, where farmers use the Watershed as a place of business if the water is receding.

2. Methodology

This research was conducted in the Lanna Village, Parangloe District, Gowa Regency. The selection of the place of this research was carried out deliberately (purposive) with the consideration that in the Village Lanna, District Parangloe, Gowa Regency, there are rice farmers in the watershed and non-watershed areas. This research was conducted for a month, namely from April to May 2019.

The population in this study were all farmers in Parangloe District, Gowa Regency, which were divided into farmers in the watershed area and farmers in the non-watershed area. While the sampling in this study was done deliberately (purposive) using a simple stratified sampling system (stratified sampling). The population of farmers is divided into two populations, which are based on farmers in the watershed and non-watershed areas. Then from each population, 15 samples were taken, bringing the total sample to 30 people.

Data analysis was carried out qualitatively and quantitatively. Qualitative analysis is used to find out the general description of paddy farming and farming production processes in the study area, while quantitative analysis is carried out to find out the amount of production and income of paddy rice farming. This study uses three analytical tools, which are as follows:

a. Normality test

Testing data normality using the Shapiro-Wilk Test of Normality in the SPSS program. According to [5] the basis for decision making can be based on probabilities (Asymptotic Significance), namely:

1. If the probability is > 0.05 , then the distribution of the regression model is normal.
2. If the probability is < 0.05 , then the distribution of the regression model is not normal.

b. Independent-Sample T-Test

Hypothesis testing with the help of SPSS is Independent Sample T-Test. Independent Sample T-Test is used to test the significance of the difference between the two groups' averages. This test is also used to test the effect of independent variables on the dependent variable. The basis for decision making from this test [5] is:

- a. If the sig two value is > 0.05 , then H_0 is accepted
- b. If the sig two value is < 0.05 , then H_0 is rejected

3. Results and discussion

3.1. Normality Test with Shapiro-Wilk

To determine the data used normally distributed using Shapiro-Wilk. Based on the normality test using the SPSS application, data are found in Table 1.

Table 1. Normality Test with SPSS of DAS and Non-DAS farmers in Lanna Village, Parangloe District, Gowa Regency, 2018.

	Tests Of Normality					
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	df	Sig.
DAS	.215	15	.061	.889	15	.065
Non Das	.156	15	.200	.964	15	.760

Source: Processed primary data, 2019.

Table 1 shows that the Sig. in the Shapiro-Wilk column, the value for watershed farmers is 0.065, which means the value is more than 0.05, so it can be said that the data is normally distributed. Likewise, with non-watershed farmers, Sig. in the Shapiro-Wilk column greater than 0.05, that is equal to 0.760, so it is said that the data is normally distributed, or that means receiving Ho.

3.2. Independent-Sample T-Test

The independent t-test, in principle, compares the averages of two groups that are not related to each other with the goal of whether the two groups have the same average or not. An Independent t-test can be seen in Table 2.

Table 2. Comparative Analysis of T-Tests for Watershed and Non-Watershed Farmer Income in Lanna Village, Parangloe District, Gowa Regency, 2018.

		Independent Sample T-Test		
		Income		
		Equal Variances Assumed	Equal Variances Not Assumed	
Levenes' Test for Equality of Variances	F	.475		
	Sig.	.504		
t-test for Equality of Means	T	.848	.848	
	Df	28	27.235	
	Sig. (2-tailed)	.404	.404	
	Mean Difference	9658666.0087	9658666.0087	
	Std. Error Differences	1139117.882	1139117.882	
	95% Confidence Interval of the Difference	Lower	-1367511.20	-1370469.06
	Upper	3299243.214	3302201.078	

Source: Primary Data, 2019.

Table 2 shows that there are two values of t, and the significance level is Equal Variance assumed, and Equal Variance not assumed. Equal Variance assumed means that the two population variants are identical, and Equal Variance is not assumed that the two population variants are not identical. To determine this the F test was used. F is 0.475; it means that Ho is accepted that the two population variants are identical (Equal Variance assumed). Because sig F has the Equal Variance assumed

decision, then the t-test uses the Equal Variance assumed. T value of Equal Variance assumed is 0.848 with Sig. (2-tailed) is 0.404 or greater than 0.05, so it is decided that there is no difference in income between DAS farmers and Non-DAS farmers.

4. Conclusions

Based on the results of the independent t-test, it was decided that there was no difference in income between watershed farmers and non-watershed farmers.

References

- [1] Muzdalifah 2011 Analisis Produksi dan Efisiensi Usaha tani Padi di Kabupaten Banjar, Jurnal Agribisnis Pedesaan. **01** 256-266.
- [2] Roidah I S 2015 Analisis pendapatan usahatani padi musim hujan dan musim kemarau (studi kasus di Desa Sepatan Kecamatan Gondang Kabupaten Tulungagung) *J. Agribis* **11** 45–55
- [3] Sari D, Barchia F and Hermawan B 2012 Karakteristik Biofisisk Dan Sosial Ekonomi Yang Mempengaruhi Produktivitas Lahan Sawah Pada Kawasan Daerah Aliran Sungai Padang Guci Kabupaten Kaur *Nat. J. Penelit. Pengelolaan Sumber Daya Alam dan Lingkungan*. **1** 29–34
- [4] Fahmi 2016 *Pengelolaan Daerah Aliran Sungai Jeneberang Kota Makassar-Sulawesi Selatan. Makassar. Diakses pada tanggal 09 Desember 2018.* (Makassar)
- [5] Silalahi U 2010 *Metode Penelitian Sosialil.* (Bandung: PT. Reflika Aditama.)

4. Prosiding

Internasional_2021_Fahmid_IOP_Conf._Ser._Earth_Environ._...

ORIGINALITY REPORT

20%

SIMILARITY INDEX

%

INTERNET SOURCES

%

PUBLICATIONS

20%

STUDENT PAPERS

PRIMARY SOURCES

1	Submitted to Universitas Hasanuddin Student Paper	6%
2	Submitted to Universitas Airlangga Student Paper	3%
3	Submitted to Botswana Accountancy College Student Paper	2%
4	Submitted to Universitas Jenderal Soedirman Student Paper	2%
5	Submitted to Aston University Student Paper	2%
6	Submitted to University of St Andrews Student Paper	2%
7	Submitted to Academic Library Consortium Student Paper	1%
8	Submitted to Universitas Pelita Harapan Student Paper	1%
9	Submitted to UIN Maulana Malik Ibrahim Malang	<1%

Exclude quotes Off

Exclude matches Off

Exclude bibliography On