

Analysis of Factors Affecting the Welfare of Rice Farming in Kota Datar Village Hamparan Perak Sub-District

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DOI: <https://doi.org/10.52403/ijrr.20250231>

ABSTRACT

The purpose of this study was to analyze the factors affecting the welfare of rice farming in Kota Datar Village, Hamparan Perak District. The specific target of this research is to analyze the influence of variables as indicators of farm welfare such as land area, total production, education level, number of workers, capital, government policies, technology and price levels. So that it can show how much these factors affect the welfare of farming, especially rice farmers in Kota Datar Village, Hamparan Perak District. The hypothesis in this study is that variables such as land area, total production, education level, total labor, price level, capital, government policy and technology are relevant to affecting the welfare of farming in Kota Datar Village, Hamparan Perak District. And these relevant factors have a significant effect on the welfare of farming in Kota Datar Village, Hamparan Perak District. The materials that will be used in this research are: Quantitative Material, where the Quantitative Material in this study relates to data describing the estimated indicators of land area, total production, education level, total labor, price level, capital, government policy and technology. The data analysis used is: Confirmatory Factor Analysis (CFA) and Multiple Linear Regression. The results of this study explain that in the CFA test it is known that of the eight factors, it is feasible to influence the welfare of rice farming there are three factors, namely price, production and land

area. The results of the partial hypothesis test show that price, production and land area have a significant effect on the welfare of rice farming in Kota Datar Village, Hamparan Perak District, Deli Serdang Regency.

Keywords: Factors, Welfare, Farm Business, Kota Datar Village

INTRODUCTION

Discussing progress, especially in agrarian countries, cannot be separated from the agricultural sector. Most of the population in agrarian countries live in rural areas where most of them fulfill their daily needs from the agricultural sector. Until now, Indonesia is really still considered a strong country in the agricultural sector, tending to be seen from the agricultural sector in Gross National Product (GNP). The development of the agricultural sector itself has long been a stimulus for economic development that has the ability to overcome poverty, associated with the cost of food prices, labor and the development of developed regions. Nevertheless, one of the thorny problems in developing the agricultural sector is limited capital.

Limited capital causes farmers' activities not to run as expected, in fact without the rotation of economic policy, the course of capital collection also cannot occur. Capital is vital for farmers in increasing their agricultural yields, increasing production and meeting their daily needs. Capital is also

expected to achieve normal results, with sufficient capital, the need for seeds, compost, Farmers also face many problems in producing food. Currently, most of the farmers are 60 years old or 70 years old and the age of 30 years old and below is decreasing due to the lack of desire to become a farmer.

There are factors that can affect the welfare level of farmers, including land area, production, price, education, labor, capital, food security and technology. Usually, the daily rice production cost budget incurred by farmers is related to the cost of purchasing seeds, fertilizers, plowing, planting wages, grass cleaning wages, and harvesting wages. Efforts to increase farmers' income through production factors not only require a technology but must also be accompanied by the development of a mindset of farmer behavior, each human being has different skills, knowledge, mindset and creativity (Efendi, 2019).

In addition to the factors above, technology is also part of the factors that can save time and costs incurred by farmers in cultivating agricultural land. Buffaloes used as technology for plowing rice fields require time and drain a lot of energy when compared to modern technology such as tractors which are more effective and efficient. Efforts to increase farmers' income through production factors not only require a technology but must also be accompanied by the development of the mindset of farmer behavior, each human being has different skills, knowledge, mindset and creativity.

Welfare is defined as a condition in which a person is able to fulfill all needs and is able to have a good relationship with the surrounding environment. Welfare can be seen from several aspects, namely sufficient income, education and health that are fulfilled. Welfare is a condition where a person is safe, prosperous, safe from various kinds of problems or difficulties and so on (Adi, 2015).

Meanwhile, according to Law Number 11 of 2009, welfare is a condition of fulfilling the material, spiritual and social needs of citizens

in order to live properly and be able to develop themselves so that they can carry out their social functions.

Land is part of an important factor of production for farmers, in addition to the production factors of capital and labor, especially for farmers who only have one source of income, land is one of the factors of production that has an important role in the agricultural sector because land is where farmers' products are produced. According to (D. I. LAHAN & TELLULIMPOE, n.d.) land is land used as an agricultural business, not all land is agricultural land but conversely all agricultural land is land. Land and soil are the main elements in agriculture because not all types of land can be used as agricultural businesses.

According to (Ritohardoyo, 2013), land is the landscape of the earth's surface that can benefit humans both already and not yet managed. The meaning of land above shows that land is one of the natural resources that is very important for human life, both for survival and socio-economic and socio-cultural activities.

According to Roger, technology is a design or design for an action tool that reduces uncertainty with a causal relationship in achieving a desired result (Syukur, 2021).

Gary J Anglin argues that technology is the application of behavioral and natural sciences and other knowledge in a systematic and systematic manner to solve problems (Arifin & Setiyawan, 2012). Meanwhile, according to Vaza in (Arifin & Setiyawan, 2012) technology is a process that is carried out in an effort to realize something rationally.

From the opinions of experts, it can be concluded that technology is a design or design through processes or stages that have added value to produce a product and are characterized by efficiency in every human activity. Technology can be said to be science that is transformed into products, processes, services and practical structures.

MATERIALS & METHODS

Research Method

This research approach is quantitative research is research that aims to determine the relationship between two or more variables. In this research, a theory can be built that functions to explain, predict and control a symptom (Sugiyono, 2015). This research discusses the welfare of rice farming in Kota Datar Village, Hamparan Perak District, Deli Serdang Regency with Confirmatory Factor Analysis including: land area, production, price, education, labor, capital, government policies and technology.

Research Procedure

The research was conducted in several stages, namely the observation stage, data analysis, data interpretation and drawing conclusions, which can be described as follows:

1. The observation stage is carried out by collecting data and then recognizing the phenomenon in the study.
2. The second stage is the data analysis stage by analyzing through a quantitative approach.
3. The third stage is data interpretation by interpreting the results of the predicted values of each research indicator.
4. The stage of drawing conclusions is to conclude the results achieved and recommend to related parties.

Types and Scope of Research

The scope of this research is focused on indicators that discuss the welfare of farm businesses in Kota Datar Village, Hamparan Perak District, Deli Serdang Regency.

Population and Samples

1. Population

Population is an object or subject that has certain characteristics set by researchers to study and draw conclusions (Sugiyono, 2015). From the definition of population above, it can be concluded that the population is the total number of samples used in this study, namely rice farmers in Kota Datar Village, Hamparan Perak

District, Deli Serdang Regency, which totals 470 farmers.

2. Sample

The sample is part of the number and characteristics possessed by the population (Sugiyono, 2015). Sampling must be taken into account correctly, so as to obtain a sample that truly represents the true picture of the population. The sampling technique in this study was the Nonprobably Sampling technique. Nonprobably Sampling is a sampling technique that does not provide equal opportunities for each element or member of the population to be selected as a sample. In Nonprobably Sampling there are various ways of sampling, one of which is Accidental Sampling. Accidental Sampling is a sample selection from anyone who happens to exist or is encountered by researchers in the object of research, namely farmers in Kota Datar Village, Hamparan Perak District, Deli Serdang Regency. The person chosen as a member of the sample is anyone who happens to be found or who is easy to meet or reach without any consideration.

$$\begin{aligned}n &= \frac{N}{1 + Ne^2} \\n &= \frac{470}{1 + 470(0,05)^2} \\n &= \frac{470}{2,175} \\n &= 216,09 \\n &= 216\end{aligned}$$

Description:

n: Size / Size of the sample

N: Size / Size of Population

Operational definition is a guide to how a variable is measured operationally in the field. Operational definitions should come from theoretical concepts and definitions or a combination of both, which exist in the field.

Data Collection Techniques

Data collection technique is a systematic and objective way to obtain or collect information that is both oral and written. The

data collection techniques used in this study are as follows:

1. Interview Study

Conducted by determining direct questions and answers between the interviewer and the interviewee about everything the interviewer knows.

2. Questionnaire

Questionnaires are forms of questions/statements submitted to respondents, namely rice farmers in Kota Datar Village who are the object of research.

Data Analysis Methods

1. Confirmatory Factor Analysis (CFA)

Factor analysis is a model, where there are no independent and dependent variables. Factor analysis does not classify variables into independent and dependent variable categories but rather looks for interdependence relationships between variables in order to identify the dimensions or factors that compose them. Factor analysis was first conducted by Charles Spearman, with the main purpose of factor analysis is to explain the relationship between many variables in the form of several factors, these factors are random quantities that can be observed or measured directly.

2. Multiple Linear Regression

a. Classical Assumption Test

The classical assumption test is a test of statistical assumptions that must be met in linear regression analysis based on ordinary

least square (OLS). To get an unbiased and efficient value (Best Linear Unbiased Estimator / BLUE) of a multiple regression equation with the Least Squares method, it is necessary to test to find out the resulting regression model by fulfilling the classical assumption requirements.

b. Hypothesis Test (Suitability)

c. Coefficient of Determination (R^2)

RESULT

Description of Respondent Characteristics

In this study, primary data were collected from 216 respondents to find out their responses to land area, production, price, education, labor, capital, government policies, technology and welfare of rice farming in Kota Datar Village, Hamparan Perak District, Deli Serdang Regency. The characteristics of respondents that will be described below reflect how the respondents studied include gender, age and latest education.

Confirmatory Factor Analysis (CFA) Results

Table 1. KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.695
Bartlett's Test of Sphericity	Approx. Chi-Square	293.366
	Df	28
	Sig.	.000

Table 2. Anti-Image Matrices

		Land Area	Production	Price	Education	Labor	Capital	Government Policy	Technology
Anti-image Covariance	Land Area	.931	-.032	.040	-.090	-.053	-.064	.009	.142
	Production	-.032	.761	.141	-.183	-.149	.179	.022	.014
	Price	.040	.141	.589	-.233	-.055	.025	-.179	-.171
	Education	-.090	-.183	-.233	.537	-.167	-.001	-.058	.013
	Labor	-.053	-.149	-.055	-.167	.647	.022	-.142	-.080
	Capital	-.064	.179	.025	-.001	.022	.921	-.006	.080
	Government Policy	.009	.022	-.179	-.058	-.142	-.006	.765	.065
	Technology	.142	.014	-.171	.013	-.080	.080	.065	.867
Anti-image Correlation	Land Area	.583 ^a	-.038	.054	-.127	-.069	-.069	.010	.158
	Production	-.038	.587 ^a	.211	-.286	-.212	.214	.029	.018
	Price	.054	.211	.653 ^a	-.414	-.088	.034	-.267	-.240
	Education	-.127	-.286	-.414	.703 ^a	-.283	-.002	-.090	.019
	Labor	-.069	-.212	-.088	-.283	.787 ^a	.029	-.201	-.107
	Capital	-.069	.214	.034	-.002	.029	.659 ^a	-.007	.090
	Government Policy	.010	.029	-.267	-.090	-.201	-.007	.778 ^a	.079
	Technology	.158	.018	-.240	.019	-.107	.090	.079	.626 ^a

a. Measures of Sampling Adequacy(MSA)

Table 3. Communalities

	Initial	Extraction
Land Area	1000	.582
Production	1000	.703
Price	1000	.707
Education	1000	.683
Labor	1000	.596
Capital	1000	.624
Government Policy	1000	.513
Technology	1000	.558

Table 4. Total Variance Explained

Comp onent	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.530	31.629	31.629	2.530	31.629	31.629	2.308	28.856	28.856
2	1.274	15.931	47.560	1.274	15.931	47.560	1.401	17.515	46.370
3	1.163	14.538	62.098	1.163	14.538	62.098	1.258	15.728	62.098
4	.813	10.160	72.258						
5	.757	9.466	81.724						
6	.592	7.403	89.127						
7	.515	6.440	95.567						
8	.355	4.433	100.000						

Extraction Method: Principal Component Analysis.

Based on the results of the total variance explained in the initial Eigenvalues, it is known that there are only 3 variable components that are factors influencing welfare. The eigenvalues show the relative importance of each factor in calculating the variance of the 8 variables analyzed. It can be

seen that only three factors are formed. Because the three factors have a total value of eigenvalues above 1, namely 2.530 for factor 1, 1.274 for factor 2, 1.163 for factor 3. So, the factoring process stops at 3 factors that will participate in further analysis.

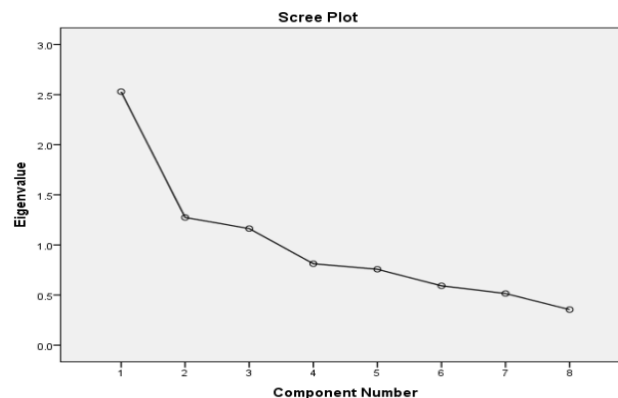


Figure 1. Scree Plot Component Number

Table 5. Component Matrix

	Component		
	1	2	3
Education	.811	.130	.091
Labor	.760	.139	.002
Price	.709	-.378	.247
Government Policy	.612	-.117	.353
Land Area	.137	.663	.352
Technology	.340	-.607	-.271
Production	.452	.521	-.477
Capital	-.280	-.036	.738

Extraction Method: Principal Component Analysis.
a. 3 components extracted.

The component matrix shows a correlation above 0.5. on factor 1, namely:

- Education has a factor loading of 0.811.
- Labor has a factor loading of 0.760
- Price has a factor loading of 0.709.
- Government policy has a factor loading of 0.612.

In factor 2, the variables that show a correlation above 0.5 are:

- Land area has a factor loading of 0.663
- Production has a factor loading of 0.521

While in factor 3, namely variables that show a correlation above 0.5, namely capital has a factor loading of 0.738.

The extraction is still difficult to determine the dominant item included in the factor because of the almost the same correlation value of several items. To overcome this, a rotation is carried out which is able to explain the distribution of variables more clearly and clearly.

Table 6. Rotated Component Matrix

	Component		
	1	2	3
Price	.790	-.080	-.276
Education	.761	.305	.103
Government Policy	.710	-.092	.010
Labor	.679	.361	.074
Production	.166	.791	.225
Capital	.033	-.725	.313
Land Area	.179	.055	.740
Technology	.282	.094	-.686

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 5 iterations.

The Component Matrix resulting from the rotation process (Rotated Component Matrix) shows a clearer and more real distribution of variables. Determination of variable input to a particular factor is based on the amount of correlation between the variable and the factor, which is based on a large correlation.

Based on the results of the component matrix value, it is known that of the eight factors, the

ones that are feasible to influence welfare are three factors derived from:

- The largest component 1: price
- 2nd largest component: production
- 3rd largest component: land area

So that a new dimension of multiple linear regression is formed with the following conceptual framework:

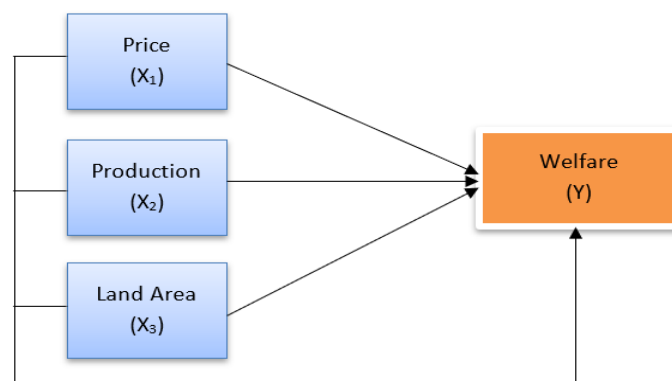


Figure 2. Linear Multiple Regression

Furthermore, the multiple linear regression equation model in this study is formulated:

$$Y = a + b_1x_1 + b_2x_2 + b_3x_3 + e$$

Where:

Y = Welfare
 X_1 = Price
 X_2 = Production

X_3 = Land area
 e = Error term

Multiple Linear Regression Analysis Results

Classical Assumption Test

1. Data Normality

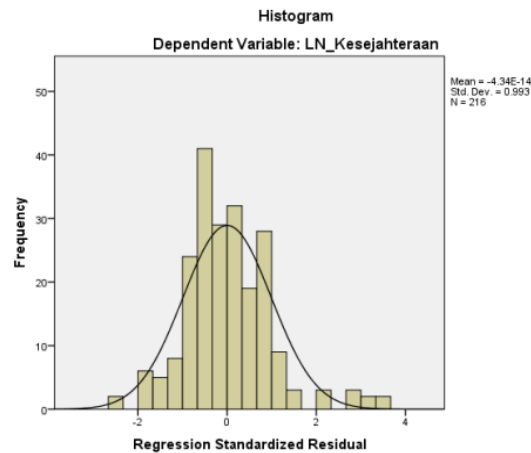


Figure 3. Histogram of Normality Test

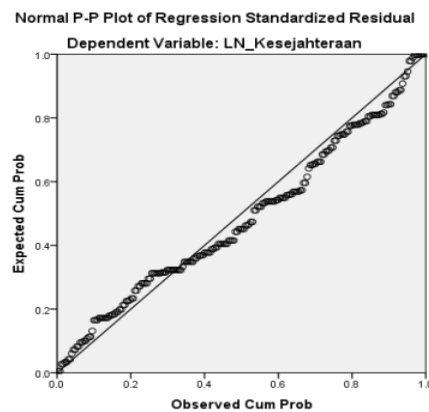


Figure 4. Normal P-P Plot Regressions Standarized Residual

2. Multicollinearity Test

Table 7. Multicollinearity Test

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	1.721	.042		40.857	.000		
Price	.026	.003	.512	9.933	.000	.999	1.001
Production	.008	.003	.147	2.830	.005	.988	1.012
Land Area	.020	.003	.375	7.235	.000	.989	1.011

3. Heteroscedasticity Test

Table 8. Heteroscedasticity Test

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	.035	.019		1.909	.058
Land Area	.060	.085	.112	.705	.482
Production	-.120	.104	-.207	-1.151	.251
Price	.023	.284	.017	.082	.934

Multiple Linear Regression

Table 9. Output Multiple Linear Regression

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	1.721	.042		40.857	.000		
Price	.026	.003	.512	9.933	.000	.999	1.001
Production	.008	.003	.147	2.830	.005	.988	1.012
Land Area	.020	.003	.375	7.235	.000	.989	1.011

Hypothesis Test

1. T-test (Partial Test)

Table 10. T-Test Result

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	1.721	.042		40.857	.000		
Price	.026	.003	.512	9.933	.000	.999	1.001
Production	.008	.003	.147	2.830	.005	.988	1.012
Land Area	.020	.003	.375	7.235	.000	.989	1.011

2. F-test (Simultaneous)

Table 11. Uji-F Result

ANOVA^a

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	.470	3	.157	54.634	.000 ^b
Residual	.607	212	.003		
Total	1.077	215			

a. Dependent Variable: LN_Kesejahteraan

b. Predictors: (Constant), Luas_Lahan, Harga, Produksi

3. Coefficient of Determination

Table 12. Coefficient of Determination Result

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.660 ^a	.436	.428	.05353

a. Predictors: (Constant), Luas_Lahan, Harga, Produksi

b. Dependent Variable: LN_Kesejahteraan

DISCUSSION

Analysis of Confirmatory Factor Analysis (CFA) Results

The results of the analysis on Confirmatory Factor Analysis (CFA) show that the variance Explained there are only 3 factors formed. The factor derived from the largest component 1 is price, the largest component 2 is production and the largest component 3 is land area. Meanwhile, research conducted by (Asa, 2021) states that the factors affecting welfare are land area and institutions which state that the higher the

institutional value and the more land area cultivated, the welfare will increase. (Marpaung et al., 2021) stated that the factors affecting welfare are health that the better a person's health, the more his welfare will increase. (Hartati et al., 2017) state that the factors that affect the welfare of farmers are land area and capital. In the results of his research stated that the more extensive the farming land, the higher the production yield so as to increase the income of farmers, then capital ownership is an absolute thing for a

farmer, this is because agricultural businesses require a lot of financing.

The results of this study are in line with research conducted by Mohammad Wahed (2018) which states that land area, production and price have a significant influence on the welfare of farmers. The results of this study are in accordance with the theory put forward (P. L. LAHAN & GABAH, 2018), the harvest area is one of the determinants in increasing the production of agricultural products so that it will improve welfare.

The price of paddy has a great influence on economic life. If the price of paddy is low then farmers' income is low and they become victims. If it is too expensive then consumers are the victims (Wahed, 2018:39).

Paddy production basically depends on the size of the harvest, assuming that producers always strive to achieve maximum profit and thus automatically increase welfare (Wahed, 2015).

The results of Confirmatory Factor Analysis (CFA) show that education is not a factor affecting farm welfare. High and low education does not affect the level of income in improving farm welfare. Education is related to the level of skills and attitudes of a farmer applied in the world of work. With higher education, farmers have more knowledge and good attitudes. But farmers who are educated only up to elementary, junior high, and high school have not been able to master and develop technology.

The results of Confirmatory Factor Analysis (CFA) show that labor is not among the factors affecting the welfare of rice farming. The labor used in one harvest comes from the family and outside the family. This additional labor does not affect the welfare of farming. Labor that comes from the family is not given a wage so that labor costs are not calculated. The result of Confirmatory Factor Analysis (CFA) is that capital is not a factor that affects the welfare of rice farming. In addition, there are other factors, namely the low quality of labor in the area, which results in not maximizing productivity and

contribution so that it can cause a decrease in farm welfare.

The results of Confirmatory Factor Analysis (CFA) show that capital is not a factor influencing the welfare of rice farming. This is because the average farmer uses capital from cooperative loans. Capital is an expenditure used to buy agricultural equipment, fertilizers and pesticides needed during the treatment of rice production plants. This is the higher the capital spent by farmers, the lower the amount of income received by farmers and reduce the level of welfare of farmers so that capital is not a factor that affects the welfare of farming.

The results of Confirmatory Factor Analysis (CFA) show that technology is not a factor that affects the welfare of rice farming. Farmers' dependence on traditional technology is very high, because farmers' areas are seasonal so they need traditional technology to carry out production activities. Technological advances will tend to increase labor productivity. The use of modern technology can provide convenience to farmers in carrying out production activities. Technology is one of the production factors used in the process of agricultural crop production. The use of technology in agricultural land management can make it easier for farmers to manage agricultural land. Then the use of technology can help farmers save time and energy used in managing agricultural land. However, the high cost of buying modern technological equipment will reduce the receipt of income from rice farming, so technology is not a factor that affects the welfare of rice farming.

Analysis of Multiple Linear Regression Results

1. The Effect of Price on Farm Welfare

Based on the partial hypothesis test conducted, the tcount value is $9.933 > t_{table} 1.652$ and significance $0.000 < 0.05$. Thus, H_a is accepted, which means that price has a significant effect on the welfare of rice farming in Kota Datar Village, Hamparan Perak District, Deli Serdang Regency. In addition, it also has a beta coefficient of

0.026, which means that if the price level increases by one unit, the welfare of farming will increase by 0.026 percent. Thus it can be concluded that price has a positive and significant effect on farm welfare. The results of this study are in line with research (Sepri, 2021) which states that price affects the welfare of farmers.

Price is an important factor in farmers' income. When the price of rice falls, the burden of farmers' expenses for maintenance costs will be heavier. Because with the same amount of production but the price of rice goes down, the income earned by farmers will automatically decrease, as well as if the amount of production produced is the same but the price of rice is high, the income that farmers will get will also increase. With the increase in farmers' income, farmers will be able to meet the operational costs of rice maintenance and be able to meet the needs of farmers' lives so that farmers will prosper.

2. The Effect of Production on Farm Welfare

Based on the partial hypothesis test conducted, the tcount value is $2.830 > t_{table}$ 1.652 and significance $0.005 < 0.05$. Thus, H_a is accepted, which means that production has a significant effect on the welfare of rice farming in Kota Datar Village, Hamparan Perak District, Deli Serdang Regency. In addition, it also has a beta coefficient of 0.008, which means that if the amount of production increases by one unit, the welfare of farming will increase by 0.008 percent. Thus it can be concluded that production has a positive and significant effect on farm welfare. The results of this study are in line with research (Wahed, 2015) which states that production affects the welfare of farmers.

3. Effect of Land Area on Farm Welfare

Based on the partial hypothesis test conducted, the tcount value is $7.235 > t_{table}$ 1.652 and significance $0.000 < 0.05$. Thus, H_a is accepted, which means that land area has a significant effect on the welfare of rice farming in Kota Datar Village, Hamparan

Perak District, Deli Serdang Regency. In addition, it also has a beta coefficient of 0.020, which means that if there is an increase in the area of land cultivated, the welfare of farming will increase by 0.020 percent. Thus it can be concluded that land area has a positive and significant effect on farm welfare. The results of this study are in line with research (Musthofa & Nurjali, 2024) which states that land area affects the welfare of farmers.

Farmland area is the entire area of land that farmers cultivate either owned, rented, or tapped. The size of farmland determines the income, standard of living and degree of welfare of farmers. The more extensive the farmland, the higher the production yield so as to increase the income of farmers.

With the land area that farmers have will be able to produce a number of outputs, with the increase in land area planted with rice, the ability of farmers to produce production will also increase and vice versa. This means that the size of the farmer's land area will affect the amount of production produced. If the land area owned by farmers is large, the amount of production will also increase. This is because land area is a factor that plays an important role in the production process to produce the amount of production that will affect the increase in the amount of income earned by farmers.

With the optimal use of fertilizers in caring for rice plants, it can maintain the quality and maximum production of rice, which will increase farmers' income and welfare in Kota Datar Village, Hamparan Perak District. With the increase in income, the welfare of farmers in Kota Datar Village, Hamparan Perak District also increases.

CONCLUSION

Based on the analysis and discussion of the data on the analysis of the welfare of rice farming in Kota Datar Village, Hamparan Perak Subdistrict, Deli Serdang Regency, it can be concluded, in the CFA test it is known that of the eight factors, it is feasible to influence the welfare of rice farming there are three factors, namely price, production

and land area. The results of multiple linear regression tests show that if there is an increase in price then the welfare of the farmer will increase, if there is an increase in the amount of rice production then the welfare of the farmer increases and if the addition of land area occurs then the welfare of the farmer will increase. The results of partial hypothesis testing show that price, production and land area have a significant effect on the welfare of rice farming in Kota Datar Village, Hamparan Perak District, Deli Serdang Regency. The higher the selling price of rice, the increase in the amount of production and the increase in the area of land cultivated will increase the welfare of farming. Vice versa, if the price decreases, the amount of production decreases and the land area is narrow, the welfare of the rice farming business is low.

Declaration by Authors

Acknowledgement: None

Source of Funding: None

Conflict of Interest: No conflicts of interest declared.

REFERENCES

- Adi, I. R. (2015). Kesejahteraan sosial. Jakarta: PT RajaGrafindo Persada.
- Ali, F., & Muhidin, N. (2012). Studi Kebijakan Pemerintahan, Heteronom dan Otonom. PT. Refika Aditama. Bandung
- Arifin, Z., & Setiyawan, A. (2012). Pengembangan pembelajaran aktif dengan ICT. Yogyakarta: Skripta Media Creative, 7, 201.
- Asa, A. I. I. (2021). Faktor-Fakator Yang Mempengaruhi Kesejahteraan Petani Di Desa Nanaet Kabupaten Belu Nusa Tenggara Timur. Skripsi.
- Assauri, S. (2014). Manajemen Pemasaran, Jakarta: PT. RajaGrafindo Persada.
- Efendi, B. (2019). Efektivitas Kebijakan Makroprudensial Terhadap Stabilitas Sistem Keuangan Di Indonesia. JEpa, 4(2), 72-78.
- Ghozali, I. (2018). Aplikasi analisis multivariate SPSS 25. Semarang: Universitas Diponegoro.
- Hartati, G. A. R., Budhi, M. K. S., & Yuliarmi, N. N. (2017). Analisis faktor-faktor yang mempengaruhi kesejahteraan petani di Kota Denpasar. E-Jurnal Ekonomi Dan Bisnis, 6(4), 1513–1546.
- LAHAN, D. I., & TELLULIMPOE, K. D. I. D. K. K. (n.d.). PROGRAM STUDI AGRIBISNIS FAKULTAS PERTANIAAN UNIVERSITAS MUHAMMADIYAH MAKASSAR.
- LAHAN, P. L., & GABAH, P. D. A. N. H. (2018). Journal of Economics Development Issues (JEDI).
- Marpaung, M. R. H. B., Marliyah, Hasinuan, R. R. A., & Sugiharto, B. (2021). Faktor-Faktor Yang Mempengaruhi Kesejahteraan Petani Padi Muslim Desa Tanjung Kubah Batu Bara Di Masa Covid-19. JURNAL STINDO PROFESIONAL, Vol. 7(No. 6), 43.
- Marufah, A. (2020). ANALISIS PEMAHAMAN PETANI TEMBAKAU TERHADAP KEBIJAKAN CUKAI ROKOK (STUDI EMPIRIS PETANI TEMBAKAU DI DUSUN GAYAM). Universitas Muhammadiyah Ponorogo.
- Musthofa, M. A., & Nurjali, N. (2024). Analysis of the Welfare Level of Palm Farmers at Sungai Sayang Village. Zabags International Journal Of Economy, 2(1), 66–76.
- Nasution, L. N., Rangkuty, D. M., & Putra, S. M. (2024). The Digital Payment System: How Does It Impact Indonesia's Poverty?. ABAC Journal, 44(3), 228-242.
- Nasution, L. N., Suhendi, S., Rusiadi, R., Rangkuty, D. M., & Abdiyanto, A. (2022). Covid-19 Pandemic: Impact on Economic Stability In 8-Em Muslim Countries. Atestasi: Jurnal Ilmiah Akuntansi, 5 (1).
- Nurhapsa, N., Sriwahyuningsih, A. E., & Ismayanti, I. (2021). HUBUNGAN FAKTOR-FAKTOR YANG MEMPENGARUHI TINGKAT KESEJAHTERAAN PETANI PADI DI KABUPATEN SIDENRENG RAPPANG. Prosiding Seminar Nasional Politeknik Pertanian Negeri Pangkajene Kepulauan, 2, 737–744.
- Onibala, A. G., & Sondakh, M. L. (2017). Analisis faktor-faktor yang mempengaruhi produksi padi sawah di Kelurahan Koya, Kecamatan Tondano Selatan. Agri-Sosioekonomi, 13(2A), 237–242.
- Putri, I. C. K. (2013). ANALISIS PENDAPATAN PETANI KAKAO DI KABUPATEN PARIGI “MOUTONG. Jurnal EMBA: Jurnal Riset Ekonomi, Manajemen, Bisnis Dan Akuntansi, 1(4).

19. Rangkuty, D. M., & Hidayat, M. (2021). Does Foreign Debt have an Impact on Indonesia's Foreign Exchange Reserves?. *Ekuilibrium: Jurnal Ilmiah Bidang Ilmu Ekonomi*, 16(1), 85-93.
20. Ritohardoyo, S. (2013). *Penggunaan dan tataguna lahan. ombak (anggota IKAPI)*. Yogyakarta.
21. Rusiadi, R., Adivia, A., Yusuf, M., & Rangkuty, D. M. (2024, February). The Impact Of The Green Economy On Sustainable Development In The Abri Countries. In *International Conference on Humanity Education and Society (ICHES)* (Vol. 3, No. 1).
22. Sari, W. I., Nasution, L. N., & Novalina, A. (2021). Analisis leading indicator kebijakan moneter dalam mengatasi kemiskinan di 5 negara Asia Tenggara. *JEpa*, 6(2), 610-618.
23. Sarwono, J. (2012). *Metode Riset Skripsi Pendekatan Kuantitatif (Menggunakan Prosedur SPSS): Tuntunan Praktis dalam Menyusun Skripsi*.
24. Sembiring, N. A. B. (2020). *Upaya Meningkatkan Hasil Belajar Siswa Pada Mata Pelajaran IPS Materi Pemanfaatan Sumber Daya Alam Melalui Model Picture And Picture Di Kelas IV MIS Az-Zuhri Tanjung Morawa*. Universitas Islam Negeri Sumatera Utara.
25. Sepri, M. (2021). *Pengaruh Fluktuasi Harga Terhadap Kesejahteraan Petani Karet Desa Rokan Timur Ditinjau Dari Ekonomi Syariah*. UNIVERSITAS ISLAM NEGERI SULTAN SYARIF KASIM RIAU.
26. Subiantoro, R. (2013). *Metode Penelitian: Manajemen, Akuntansi dan Ekonomi Pembangunan*. Medan: USU Press.
27. Sugiyono, P. (2015). Metode penelitian kombinasi (mixed methods). *Bandung: Alfabeta*, 28, 1–12.
28. Suharto, E. (2009). *Membangun masyarakat memberdayakan rakyat*.
29. Sutejo, D., Kusmanto, H., Warjio, W., & Lubis, A. A. (2020). Implementasi Undang-Undang Tentang Administrasi Kependudukan Di Dinas Kependudukan dan Pencatatan Sipil Kabupaten Aceh Timur. *Strukturasi: Jurnal Ilmiah Magister Administrasi Publik*, 2(2), 162–167.
30. Suhendi, S. (2023). Analisis Pembentukan Bumdes Dalam Mendukung Pembangunan Desa Mandiri Di Desa Lae Gambir Kecamatan Simpang Kanan Kabupaten Aceh Singkil. *NUSANTARA: Jurnal Ilmu Pengetahuan Sosial*, 10(6), 3136-3147.
31. Syukur, F. (2021). Model strategi pemasaran jasa pendidikan islam pada SD Nasima Semarang. *Jurnal SMART (Studi Masyarakat, Religi, Dan Tradisi)*, 7(01), 1–14.
32. Tumoka, N. (2013). Analisis Pendapatan Usaha Tani Tomat di Kecamatan Kawangkoan Barat Kabupaten Minahasa. *Jurnal EMBA: Jurnal Riset Ekonomi, Manajemen, Bisnis Dan Akuntansi*, 1(3).
33. Wahed, M. (2015). Pengaruh luas lahan, produksi, ketahanan pangan dan harga gabah terhadap kesejahteraan petani padi di Kabupaten Pasuruan. *Jurnal Ekonomi Dan Studi Pembangunan*, 7(1), 68–74.
34. Yusuf, M., & Ichsan, R. N. (2019). Analisis Efektifitas Penggunaan Cadangan Devisa, Utang Luar Negeri dan Ekspor Terhadap Stabilitas Nilai Tukar. *Jurnal Penelitian Pendidikan Sosial Humaniora*, 4(2), 544-561.

How to cite this article: Anggia Ramadhan, Ahmad Fadlan, Muhammad Handoko Tarigan. Analysis of factors affecting the welfare of rice farming in Kota Datar Village Hamparan Perak sub-district. *International Journal of Research and Review*. 2025; 12(2): 272-283. DOI: <https://doi.org/10.52403/ijrr.20250231>
