INTERNATIONAL JOURNAL OF FINANCIAL ECONOMICS (IJEFE) e-ISSN: 3063-3648
Vol. 2 No. 2 August 2025, page 343-361

THE ROLE OF INSTITUTIONAL SUPPORT IN FARMERS' WELFARE IN DENPASAR CITY

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Abstract
This study aims to analyze the influence of the role of government, farmers' groups, and subak institutions on farmers' welfare in Denpasar City, both simultaneously and partially. The research method employed is quantitative with an associative approach. The population of this study includes all active farmers who are members of farmers' groups and subak institutions in Denpasar City, while the sampling technique used is purposive sampling. Data were collected through questionnaires that had undergone validity and reliability testing, and were subsequently analyzed using multiple linear regression analysis. The results indicate that simultaneously, the roles of government, farmers' groups, and subak institutions significantly affect farmers' welfare in Denpasar City. Partially, each of these three variables also has a positive and significant effect on farmers' welfare. These findings underscore the importance of synergy between the government, farmers' groups, and traditional institutions such as subak in supporting the improvement of farmers' welfare in urban areas.
Keywords: government role, farmers' groups, subak, farmers' welfare, Denpasar

INTRODUCTION

Agriculture is one of the strategic sectors in Indonesia's economy, making a significant contribution to the National Gross Domestic Product (GDP). According to data from Statistics Indonesia (BPS), the agricultural sector is the third-largest contributor after the manufacturing industry and wholesale and retail trade sectors. BPS data indicate that agriculture contributed approximately 12.53 percent to Indonesia's GDP in 2023, making it one of the main pillars in supporting food security and community livelihoods, particularly in rural areas. Although the sector's contribution has fluctuated due to global and domestic challenges, agriculture remains a crucial foundation for economic development, especially in rural areas that depend heavily on agricultural outputs for their livelihoods (BPS Bali Province, 2024).

The agricultural sector plays a vital role in the Balinese economy, being the second-largest contributor to Bali's Gross Regional Domestic Product (GRDP) (Winasari & Budhi, 2023). Agriculture holds a unique and essential position in supporting food security and community livelihoods in the Province of Bali. Despite Bali's global recognition as a leading tourist destination and its economy being dominated by tourism, agriculture continues to

play a key role in maintaining local economic, social, and cultural balance while supporting food security and livelihoods.

Bali's economic growth in 2023 returned to a five-percent level, similar to the pre-pandemic period, marking a crucial recovery moment after the COVID-19 pandemic. The economic recovery is also reflected in the increase in per capita GRDP in 2023, which exceeded the pre-pandemic level. This year, Bali's economic structure remained dominated by three main sectors: Category I (accommodation and food service activities), Category A (agriculture, forestry, and fisheries), and Category H (transportation and warehousing). The total value added by these three sectors accounted for 43.75 percent of Bali's overall economy (BPS Bali Province, 2024).

Table 1. Distribution of Gross Regional Domestic Product at Current Prices by Business Sector Category in Bali Province, 2019-2023

Business Field	Distribution of GRDP Based on Current Prices (%) (Percent)				
	2019	2020	2021	2022	2023
A. Agriculture, Forestry and Fisheries	13.45	15.09	15.77	14.67	13.73
B. Mining and Quarrying	0.87	0.95	0.97	0.94	0.89
C. Manufacturing/Processing Industry	6.04	6.44	6.68	6.58	6.24
D. Electricity and Gas Procurement	0.23	0.22	0.21	0.23	0.23
E. Water Supply, Waste Management, Sewage,	0.17	0.19	0.19	0.17	0.16
F. Construction	9.53	10.52	10.97	10.65	9.77
G. Wholesale and Retail Trade; Automobile and Motorcycle Repair	8.57	9.04	9.22	9.19	8.97
H. Transportation and Warehousing	9.79	6.95	5.64	7.70	10.08
I. Provision of Accommodation and Food and Beverages	23.25	18.33	16.60	17.98	19.93
J. Information and Communication	5.31	6.36	6.73	6.13	5.66
K. Financial Services and Insurance	3.99	4.25	4.39	4.68	4.84
L. Real Estate	3.89	4.43	4.58	4.35	4.03
M. Corporate Services	1.04	1.15	1.15	1.17	1.15
N. Government Administration, Defense, and Compulsory Social Security	4.93	5.89	6.21	5.56	5.06
O. Educational Services	5.15	5.88	6.10	5.55	4.98
P. Health Services and Social Activities	2.18	2.58	2.83	2.64	2.48
Q. Other services	1.62	1.74	1.76	1.80	1.79

Gross domestic product	100.00	100.00	100.00	100.00	100.00

Source: BPS Bali Province, 2024

From the recorded data, the agricultural sector in Bali is the second largest contributor sector with a distribution rate of 13.73 percent after the accommodation and food and beverage provision sector with a distribution rate of 19.93 percent. During the pandemic, the contribution of the agricultural category had increased in the range of 15 percent. In 2020, its contribution was recorded at 15.09 percent and increased again in 2021 to 15.77 percent. The increase in contribution occurred because the impact of the Covid-19 pandemic had made agriculture a "safety net" for the Balinese economy. However, along with the increase in tourism activity in Bali, the contribution of agriculture has continued to decline. In 2023, the contribution of this category was recorded at 13.73 percent, down compared to 2022, which was 14.67 percent. This condition was caused by a decrease in food crop production, especially rice, seasonal plantations, annual horticulture, and annual plantations caused by the El Nino phenomenon which caused a decrease in rainfall and drier conditions than usual.(BPS Bali Province, 2024).

Welfare is the amount of satisfaction that a person has obtained from the results of consuming the income that has been received, however, the level of welfare itself is something that is relative because it depends on the size of the satisfaction obtained from the results of consuming income.(Heldayanti et al., 2022). According to researchJulian et al. (2022) Farmer welfare can be known through the farmer's ability to meet their needs. Farmers must be able to meet the needs of their families, both clothing, food, and shelter. Farmer welfare can also be known from the farmer's ability to meet the health needs of their families. Prosperous farmers will be able to maintain their family's health through regular health checks from their farming income. In addition, farmer welfare can be known from the farmer's ability to meet the educational needs of their families. Prosperous farmers will be able to finance their children's education.

Table 2. Average Price Index Received by Farmers (It), Price Index Paid by Farmers (Ib) and Farmer Exchange Rate Index (NTP) of Bali Province, 2020-2023

No	Description	Year			
		2020	**2021**	**2022**	**2023**
1	Average price index received by farmers (It)	99.03	99.89	106.73	116.50
2	Average price index paid by farmers (Ib)	105.05	107.59	111.84	117.09
3	Farmer Exchange Rate Index (NTP)	94.27	92.84	95.43	99.50

Source: BPS Bali Province, 2023

The concept of Farmer Exchange Rate has been used as a benchmark in determining farmer welfare since long ago (Nurasa and Rachmat, 2013). Research according toEdiwijoyo et al. (2023)stated that one of the indicators of why farmers are still not prosperous is the unstable Farmer Exchange Rate (NTP) which is still far from import prices. When viewed from the annual value, the NTP of Bali Province in 2020 decreased in 2021 to 92.84. The NTP of Bali Province in 2022 to 2023 increased from the following year. In 2023 it was recorded at 99.50, higher than the NTP in 2022 which reached 95.43 or an increase of 4.26 percent. The low level of farmer welfare can be seen from the results of the NTP index figures for Bali Province in 2020 to 2023 which were below 100, indicating that the exchange rate of agricultural products produced by farmers has not been able to meet household consumption needs and production costs and the cost of adding capital goods for their agricultural businesses. Based on this information, this figure is not enough to describe their overall welfare. Many farmers still face difficulties, such as fluctuating selling prices for their crops, high production costs, and limited market access.(Statistics Indonesia, 2023).

Farmers' welfare is also related to the area of land owned. According to researchHeldayanti et al. (2022) states that there is a positive relationship between land area and the level of farmer welfare. The wider the agricultural land owned, the more prosperous the farmers are because it increases their income. According to Hernanto (1993) inHartati et al. (2017)mentioned, the area of farmland determines the income, standard of living and welfare of farmer households. The area of land control will affect adoption and innovation, because the wider the farmland, the higher the production results will be, thus increasing farmer income. Research conducted byHartati et al. (2017)also stated that the area of cultivated land has a positive and significant effect on the welfare of sweet corn farmers in Denpasar City, so that the wider the land owned, the more prosperous the life of the farmers.

Table 3. Total Area of Rice Fields in Bali Province, 2020-2023

Regency/City	Area of Rice Fields (Ha)			
	2020	**2021**	**2022**	**2023**
Jembrana	13,318	6,721	6,636	6,553
Tabanan	37,075	20,199	20,036	19,991
Badung	18,608	9,495	9,229	9,099
Gianyar	29,003	13,446	11,450	10,847
Klungkung	5,019	3,771	3,735	3,719
Bangli	4,897	2,854	2,781	2,139
Karangasem	10,663	7,236	7,237	7,184
Buleleng	19,359	9,017	8,862	7,349
Denpasar	3,417	1,915	1,871	1,680
BALI	**141,359**	**74,657**	**71,837**	**68,561**

Source: Bali Province Agriculture and Food Security Service, 2023

Data from the Bali Province Agriculture and Food Security Service states that the area of rice fields in Bali Province has always decreased for four consecutive years. A drastic land conversion occurred in 2021, which decreased by 66,702 hectares from the total area of rice fields that decreased. In 2022, the total area of rice fields was 71,837 hectares, decreasing in 2023 by 68,581 hectares. The land conversion is certainly a big problem in dealing with the sustainability of agriculture in Bali Province. It is recorded that Denpasar City has the smallest land area compared to other regencies in Bali Province, even in 2023 it only reached 1,680 hectares.

Table 4. Area of Agricultural Land in Denpasar City, 2020-2024

No	Subdistrict	Agricultural Land Area (Ha)				
		2020	**2021**	**2022**	**2023**	**2024**
1	Denpasar Barat	217	208	195	149	137
2	Denpasar Selatan	536	536	535	449	447
3	Denpasar Timur	616	584	562	552	548
4	Denpasar Utara	589	587	579	529	526
Amount		**1,958**	**1,915**	**1,871**	**1,680**	**1,658**

Source: Denpasar City Agriculture Service, 2024

Based on the data, it is recorded that in Denpasar City, the availability of land area as a means of agriculture has begun to decrease over the past four years. The reduction rate is quite high, occurring in 2023, decreasing by around 191 hectares. The continuous reduction in agricultural land area will certainly threaten the sustainability of agriculture and eliminate the agrarian cultural heritage that is the identity of the Balinese people. Land conversion has caused the loss of natural habitat and decreased environmental quality, such as decreased water absorption and increased flood risk. From these data, it can be concluded that the welfare of farmers in Denpasar City is still in doubt because they have limited land area.

According toSuparta (2009:50)stated that increasing farmers' income is important because the rational actualization of farmers today is the acquisition of benefits (adventage) if they remain as farmers (farming). If it is considered not providing enough benefits, then farmers will leave their jobs. The next negative impact is the forced sale of land, so that land conversion is increasingly widespread because selling land is considered more profitable financially or functionally.

To overcome this problem, the role of institutions in the agricultural sector is very important. Farmer institutions must be able to continue to improve and provide influence on farmer welfare.(Winasari and Budhi, 2023). Based on the results of previous research according toSuardi et al. (2016)conclude that according to the results of brainstorming by experts through expert meeting forums with focus group discussion (FGD) techniques,

agricultural institutions are determined to include: agricultural agencies; agricultural kiosks; credit institutions; farmer cooperatives; farmer groups; and subak. Institutions play a very important role in improving farmer welfare. Farmer institutions have a strategic point in driving the agribusiness system(Dinar, 2017).

The existence of agricultural institutions, both in the form of government roles, farmer groups, and subaks, can provide support in terms of access to capital, protection from land conversion, technology, and marketing of agricultural products. In the background of the problems that arise, the government also plays a very important role in suppressing land conversion. The government's contribution in the Denpasar City Agriculture Service in collaboration with the academic team and related SKPDs to form Subak Lestari. With the existence of Subak Lestari, it is also expected to increase food security, maintain farmer welfare, and maintain the sustainability of subak culture so that the ecological balance of the traditional irrigation system remains sustainable amidst urban development.

In addition, agricultural institutions such as the role of government, subak are also expected to be able to develop economic functions based on the concept of agribusiness systems and efforts. The role of government also provides double opportunities for agricultural institutions including farmer groups and subak where subak is not only used as a manager of the irrigation system, but can also be an opportunity to form a legal entity economic and business unit at the business level.(Suparta, 2009:51). Thus, the role of farmer groups and the role of subak with support from the role of government can be used as a business model as a way to achieve more added value to increase farmers' income and welfare. Several studies have shown that farmers who are members of institutions tend to have higher productivity and more stable income compared to farmers who are not members of institutions so that increased income will affect farmers' welfare. One of the studiesSetiawan et al. (2023)stated that farmers who are members of KUD institutions generate higher incomes compared to farmers who do not participate in KUD institutions so that agricultural institutions have an impact on farmer welfare.

The importance of farmer institutions is recognized in agricultural development, both in industrialized countries and developing countries such as Indonesia. However, the reality shows a tendency for farmer institutions to still be weak in developing countries, as well as the large obstacles in developing institutions in farming communities. Many obstacles still hinder the success of agricultural institutions in Denpasar City. In addition to the low farmer exchange rate index and the increasing land conversion in urban areas, it raises the question of whether the role of institutions in their involvement can help improve the welfare of farmers in Denpasar City.

The new contribution of this study lies in the in-depth analysis of the role of institutions in improving farmer welfare in urban areas such as Denpasar. Unlike previous studies that focused more on the agricultural sector in rural areas, this study will provide insight into how institutions can adapt and function well in an increasingly changing urban environment. This study aims to determine the extent to which the role of institutions in

Denpasar City has contributed to improving farmer welfare. Therefore, it is hoped that this study will provide practical recommendations for policy makers and related parties in improving farmer welfare, especially in Denpasar City.

RESEARCH METHODS

This study is a quantitative research employing an associative approach, aimed at examining the influence of several independent variables on a dependent variable. The independent variables include the role of government (X1), the role of farmer groups (X2), and the role of *subak* (X3), while the dependent variable is farmers' welfare (Y). The research was conducted in Denpasar City, which has experienced rapid urbanization resulting in the conversion of agricultural land. This condition provides a significant background for investigating how institutional factors can contribute to improving farmers' welfare.

The research subjects are farmers in Denpasar City who are involved in agricultural institutions such as farmer groups, *subak*, or recipients of government support. The total population comprises 4,858 individuals. Using Slovin's formula with a 10% margin of error, a sample of 98 farmers was determined. The sampling technique employed is stratified random sampling, with proportional distribution across sub-districts. The number of samples in each sub-district was determined based on the proportion of farmers to the total population, ensuring the representativeness of the research findings.

This study utilizes quantitative data collected through Likert-scale questionnaires to obtain numerical data suitable for statistical analysis. In addition, qualitative data were also gathered as a complement to reinforce the results of the analysis. The operational definitions of each variable have been specified based on relevant indicators, such as the farmers' welfare indicators, which encompass eight aspects of life, as well as contextually adapted indicators for the roles of government, farmer groups, and *subak*. This combined approach is expected to provide a comprehensive overview of the factors influencing farmers' welfare amidst the challenges of urbanization.

RESULTS AND DISCUSSION

Validity Test Results

Table 5. Results of the Validity Test of Research Instruments

No.	Variables	Instrument Code	Correlation Coefficient	Significance	Information
1.	Role of Government (X1)	X.1.1	0.828	0,000	Valid
		X.1.2	0.798	0,000	Valid
		X.1.3	0.802	0,000	Valid
		X.1.4	0.800	0,000	Valid
2.	The Role of Farmer Groups (X2)	X.2.1	0.620	0,000	Valid
		X.2.2	0.638	0,000	Valid
		X.2.3	0.524	0,000	Valid
		X.2.4	0.686	0,000	Valid

		X.2.5	0.693	0,000	Valid
3.	The Role of Subak (X3)	X.3.1.	0.663	0,000	Valid
		X.3.2	0.663	0,000	Valid
		X.3.3	0.673	0,000	Valid
		X.3.4	0.686	0,000	Valid
		X.3.5	0.815	0,000	Valid
4.	Farmer Welfare (Y)	Y.1	0.813	0,000	Valid
		Y.2	0.752	0,000	Valid
		Y.3	0.794	0,000	Valid
		Y.4	0.544	0,000	Valid
		Y.5	0.599	0,000	Valid
		Y.6	0.476	0,000	Valid
		Y.7	0.724	0,000	Valid
		Y.8	0.275	0.006	Valid

Source: SPSS Data Processing Results, 2025 (Appendix 3)

From table 5, the results of the validity test show that the research instrument consisting of question items on the role of government (X1), the role of farmer groups (X2), the role of subak (X3), and farmer welfare (Y) has a significance value = 0.00 <0.05 and a correlation coefficient greater than r table, where the value of r table is 0.199. So, it can be concluded that the results of the question indicators have met the data validity requirements.

Reliability Test Results

Table 6. Results of Research Instrument Reliability Test

No.	Variables	Cronbach's Alpha	Information
1.	Role of Government (X1)	0.821	Reliable
2.	The Role of Farmer Groups (X2)	0.618	Reliable
3.	The Role of Subak (X3)	0.734	Reliable
4.	Farmer Welfare (Y)	0.778	Reliable

Source: SPSS Data Processing Results, 2025 (Appendix 3)

From the results of the reliability tests presented in table 6 shows that the Cronbach's Alpha value of each variable is > 0.60. This indicates that the statements in this research questionnaire are reliable and suitable for use.

Factor Analysis Results

Table 7. KMO Test Results

No.	Factor	KMO	Sig Chi-Square
1.	Role of Government (X1)	0.791	0,000
2.	The Role of Farmer Groups (X2)	0.621	0,000
3.	The Role of Subak (X3)	0.714	0,000
4.	Farmer Welfare (Y)	0.701	0,000

Source: SPSS Data Processing Results, 2025 (Appendix 4)

The test results shown in Table 7 show that the Kaiser Meyer Olkin Measure value is > 0.50 and the value of Bartlett's Test of Sphericity (Sig.) is 0.000 < 0.50, so the analysis

results show that factor analysis can be continued because it meets the first requirement in this study.

Measures of Sampling Adequacy (MSA) is used to determine the feasibility of factor testing for each variable. The results of the MSA test of each variable of the role of government (X1), the role of farmer groups (X2), the role of subak (X3) and farmer welfare (Y), where the indicator value of each variable is greater than 0.5 which means that each model is feasible to use in the analysis.

Government role variable with indicator pThe government mediates rice farmers when there is conflict in meeting production factors, irrigation, and difficulties in marketing products.(X1.4) is 0.811. This shows that the government's role is fulfilledMotivate farmers to be more capable of developing themselves by holding discussions with farmer groups to help with the problems they face.mediating farmers when there is a conflict in fulfilling several factors is the most dominant indicator that influences farmer welfare. The two variables of the role of farmer groups have the highest MSA value, namely the indicatoras the provision of equipment to support agricultural output (X2.2) is0.718. This shows that the role of farmer groups as providers ofextension so that it can help in increasing knowledge in farming efforts to becomethe most dominant indicator influencing farmer welfare. The subak role variable that has the highest MSA value is the indicatorSubak provides easy access to irrigation to meet agricultural needs on managed land (X3.4) with a value of 0.752. This shows that the role of subak as an intermediary in providing government subsidies is the most dominant indicator influencing farmer welfare. The farmer welfare variable with the highest MSA value is the indicator of minimal conflict in farmer groups (Y6) which is 0.892. This shows that minimal conflict in farmer groups is the dominant indicator influencing farmer welfare. The results of the analysis can be seen in table 8.

Table 8. Results of Measures of Sampling Adequancy (MSA)

No.	Variables	Indicator	MSA Value
1.	Role of Government (X1)	X1.1	0.770
		X1.2	0.797
		X1.3	0.790
		X1.4	0.811
2.	The Role of Farmer Groups (X2)	X2.1	0.590
		X2.2	0.718
		X2.3	0.623
		X2.4	0.627
		X2.5	0.584
3.	The Role of Subak (X3)	X3.1	0.655
		X3.2	0.729
		X3.3	0.712
		X3.4	0.752
		X3.5	0.741

4.	Farmer Welfare (Y)	Y1	0.652
		Y2	0.756
		Y3	0.661
		Y4	0.819
		Y5	0.720
		Y6	0.892
		Y7	0.676
		Y8	0.528

Source: SPSS Data Processing Results, 2025 (Appendix 4)

All indicators studied can explain the factor or not. The variable is considered capable of explaining the factor when the Extraction value is > 0.50. It can be concluded from the results that the variable value is capable of explaining the factor because the Extraction value is > 0.50.

Table 9. Communalities

No.	Variables	Indicator	Initial	Extraction
1.	Role of Government (X1)	X1.1	1,000	0.697
		X1.2	1,000	0.630
		X1.3	1,000	0.641
		X1.4	1,000	0.640
2.	The Role of Farmer Groups (X2)	X2.1	1,000	0.660
		X2.2	1,000	0.508
		X2.3	1,000	0.703
		X2.4	1,000	0.520
		X2.5	1,000	0.732
3.	The Role of Subak (X3)	X3.1	1,000	0.797
		X3.2	1,000	0.693
		X3.3	1,000	0.680
		X3.4	1,000	0.695
		X3.5	1,000	0.657
4.	Farmer Welfare (Y)	Y1	1,000	0.772
		Y2	1,000	0.687
		Y3	1,000	0.789
		Y4	1,000	0.556
		Y5	1,000	0.503
		Y6	1,000	0.622
		Y7	1,000	0.690
		Y8	1,000	0.863

Source: SPSS Data Processing Results, 2025 (Appendix 4)

Classical Assumption Test Results

1) Normality Test

Table 10. Results of Normality Test with One-Sample KS Method

	Unstandardized Residual
Test Statistics	0.087
Asymp.Sig (2-tailed)	0.067c

Source: SPSS Data Processing Results, 2025 (Appendix 5)

Based on table 10, it is known that the value of the Test Statistic in the regression model is 0.079 with a significance level at Asymp.Sig (2-tailed) of 0.067. This value is greater than α = 5 percent (0.05) so that the results state that the data is normally distributed and the regression model created is suitable for further analysis.

2) Multicollinearity Test

Table 11. Multicollinearity Test Results

Variables	Collinearity Statistics	
	Tolerance	VIF
Role of Government (X1)	0.821	1,217
The Role of Farmer Groups (X2)	0.900	1,111
The Role of Subak (X3)	0.801	1,248

Source: SPSS Data Processing Results, 2025 (Appendix 5)

The results of the multicollinearity test in table 11 show that all variables have a tolerance value > 0.10 or a VIF value < 10, so the results can be concluded that there are no symptoms of multicollinearity or pass the multicollinearity test.

3) Heteroscedasticity Test

Table 12. Heteroscedasticity Test Results

Variables	Sig.
Role of Government (X1)	0.204
The Role of Farmer Groups (X2)	0.526
The Role of Subak (X3)	0.058
Farmer Welfare (Y)	0.100

Source: SPSS Data Processing Results, 2025 (Appendix 5)

Based on table 12 presents the data of heteroscedasticity test results using the Glejser Method by regressing the independent variables against the absolute residual. The variables of the role of government (X1), the role of farmer groups (X2), the role of subak (X3), and farmer welfare (Y) have a significance value greater than the level of significance that has been set (0.05). This means that there is no relationship between the independent variables and the absolute residual, so it can be concluded that there is no symptom of heteroscedasticity.

Multiple Linear Regression Analysis Results

Table 13. Results of Multiple Linear Regression Analysis

Coefficientsa						
Model		**Unstandardized**	**Coefficients**	**Standardized Coefficients**	**t**	**Sig.**
		B	**Std. Error**	**Beta**		
1	(Constant)	6,802	4.467		1,523	.131
	Role of Government	.427	.194	.221	2.206	.030
	The Role of Farmer Groups	.400	.179	.214	2.240	.027
	The Role of Subak	.350	.164	.216	2.134	.035
a. Dependent Variable: Farmer Welfare (Y)						

Source: SPSS Data Processing Results, 2025 (Appendix 6)

Multiple linear regression is conducted to regress the variables of government role status (X1), farmer group role (X2), subak role (X3) on the level of farmer welfare in Denpasar City (Y). Based on the results of multiple linear regression in table 4.22, the following regression equation can be made.

$Y = \alpha + \beta 1\chi_1 + \beta 2\chi_2 + \beta 3\chi_3 + \mu$

$\hat{Y} = 6.802 + 0.427X1 + 0.400X2 + 0.350X3$

Information:

Y: Farmer Welfare

X1: Role of Government

X2: The Role of Farmer Groups

X3: The Role of Subak

From this equation, it can be seen how big the influence of each independent variable is that has a significant influence on the welfare of farmers in Denpasar City.

1) The constant value (α) obtained was 6.802 with a positive sign which states that the level of farmer welfare in Denpasar City is 6.802 points if the variables of government role, farmer group role, and subak role are zero or non-existent.
2) Role of Government
   Regression coefficientβ1of 0.427 is an estimate of the parameter of the government's role variable on the level of farmer welfare, if it increases by 1 point, then the level of farmer welfare will increase by 0.427, provided that there are no other influencing factors or other variables are constant.
3) The Role of Farmer Groups

Regression coefficientβ2of 0.400 is an estimate of the parameter of the variable role of farmer groups in the level of farmer welfare, if it increases by 1 point, then the level of farmer welfare will increase by 0.400, provided that there are no other influencing factors or other variables are constant.

4) The Role of Subak

Regression coefficientβ3of 0.350 is an estimate of the parameter of the variable role of farmer groups in the level of farmer welfare, if it increases by 1 point, then the level of farmer welfare will increase by 0.350, provided that there are no other influencing factors or other variables are constant.

Based on the basis of decision making that proves that the variables that have the highest regression coefficient value (βn) with a value that is far from zero so that the variable is the most dominant variable compared to other variables. The data results state that the government role variable is the most dominant variable that influences the level of farmer welfare, from the results obtained a coefficient value of 0.427 compared to other variables whose coefficient values are 0.400 and 0.350. Becauseχ_1(β1= government role) >χ_2(β2= role of farmer groups) >χ_3(β3 = subak role) where 0.427 > 0.400 > 0.350. So, it can be concluded that the most dominant variable result is the government role variable.

The description of the results of the multiple linear regression test explains that the role of the government has a positive effect on the level of farmer welfare, the role of farmer groups has a positive effect on the level of farmer welfare, and the role of subak has a positive effect on the level of farmer welfare. The role of the government is the most dominant variable that simultaneously influences the level of farmer welfare in Denpasar City.

Statistical Test Results

1) Results of the Determination Coefficient Test (R2)

Table 14. Results of the Determination Coefficient (R2)

R Square	0.228
Adj R Square	0.204

Source: SPSS Data Processing Results, 2025 (Appendix 7)

BeBased on the results in table 14, it was obtained that the coefficient of determination (R2) = 0.228, which means that 22.8 percent of the level of farmer welfare in Denpasar City is influenced by the role of the government, the role of farmer groups, and the role of subak. While the remaining 77.2 percent is influenced by other variables that are not included in the research model.

2) Results of Simultaneous Coefficient Significance Test (F Test)

Table 15. F Test Results

ANOVA						
Model		**Sum of Squares**	**Df**	**Mean Square**	**F**	**Sig.**
1	Regression	344,332	3	114,777	9.266	.000b
	Residual	1164.372	94	12,387		

Total	1508.704	97	

Source: SPSS Data Processing Results, 2025 (Appendix 7)

Based on the results of the SPSS regression analysis, it can be concluded that the Fcount value > Ftable, namely Fcount = 9.226 > Ftable = F 0.05 (3; 94) = 2.701 or with a significance value of 0.000 < 0.05, then H0 is rejected and H1 is accepted, which means that the variables of the role of government, the role of farmer groups, and the role of subak simultaneously have a significant effect on the welfare of farmers in Denpasar City.

3) Results of Partial Coefficient Significance Test (t-Test)

Table 16. t-Test Results

Coefficientsa						
Model		**Unstandardized**	**Coefficients**	**Standardized Coefficients**	**t**	**Sig.**
		B	**Std. Error**	**Beta**		
1	(Constant)	6,802	4.467		1,523	.131
	Role of Government	.427	.194	.221	2.206	.030
	The Role of Farmer Groups	.400	.179	.214	2.240	.027
	The Role of Subak	.350	.164	.216	2.134	.035
a. Dependent Variable: Farmer Welfare (Y)						

Source: SPSS Data Processing Results, 2025 (Appendix 7)

Based on table 16 The values of the data processing results can be interpreted using the t-test as follows:

a) Testing the Influence of the Role of Government (X1) Partially on the Level of Farmer Welfare in Denpasar City (t-Test)

Based on the results obtained in table 16, the test results show that the t-count value (2.206) > t-table (1.984) and the significance value of 0.030 < 0.050, then H0 is rejected and H1 is accepted. This means that the government role variable has a partial and significant effect on the level of farmer welfare in Denpasar City.

b) Testing the Influence of the Role of Farmer Groups (X2) Partially on the Level of Farmer Welfare in Denpasar City (t-Test)

Based on the results obtained in table 16, it states that the test results show that the t-count value (2.240) > t-table (1.984) and the significance value of 0.027 < 0.050, then H0 is rejected and H1 is accepted. This means that the variable of the role of farmer groups has a partial and significant effect on the level of farmer welfare in Denpasar City.

c) Testing the Influence of the Role of Subak (X3) Partially on the Level of Farmer Welfare in Denpasar City (t-Test)

Based on the results obtained in table 16, it states that the test results show that the t-count value (2.134) > t-table (1.984) and the significance value of 0.035 < 0.050, then H0 is rejected and H1 is accepted. This means that the subak role variable has a partial and significant effect on the level of farmer welfare in Denpasar City.

CONCLUSION

The research results show that based on the discussion in the previous chapter, the following conclusions can be drawn:

1) The role of government, the role of farmer groups, and the role of subak simultaneously have a significant influence on the welfare of farmers in Denpasar City.
2) The role of government, the role of farmer groups, and the role of subak partially have a positive and significant influence on farmer welfare in Denpasar City.

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