



## Determinant Factors Affecting Farmers' Welfare in Kabupaten Bogor, West Java

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### **Abstract**

The objective of this study was to investigate determinant factors affecting farmers' welfare in Kabupaten Bogor, West Java, Indonesia. This research used quantitative approach with descriptive method. The research design used was survey method. Data were collected through observation and questionnaires. The findings showed that there was a positive and significant effect of agrarian reform on farmers' welfare in Kabupaten Bogor with a correlation value of  $r = 0.279$ ,  $p = 0.000$  ( $p < 0.05$ ). There was a positive and significant effect of social capital on farmers' welfare in Kabupaten Bogor with a correlation value of  $r = 0.621$ ,  $p = 0.000$  ( $p < 0.05$ ). There was a positive and significant effect of job satisfaction on farmers' welfare in Kabupaten Bogor with a correlation value of  $r = 0.578$ ,  $p = 0.000$  ( $p < 0.05$ ). There was a positive and significant effect of farmers' personality on farmers' welfare in Kabupaten Bogor with a correlation value of  $r = 0.553$ ,  $p = 0.000$  ( $p < 0.05$ ). It can be concluded that the determinant factors affecting farmers' welfare in Kabupaten Bogor were agrarian reform, social capital, job satisfaction and farmer personality.

**Keywords:** *Agrarian Reform; Social Capital; Job Satisfaction; Farmers' Personality; Farmers' Welfare*

### **1. Introduction**

The Preamble of Indonesian 1945 Constitution states that Indonesia's development goals include four important points, namely "Protecting the entire Indonesian people and entire Indonesian homeland, advancing general welfare, developing the intellectual life of the nation and participating in maintaining the world order based on independence, eternal peace and social justice." Prosperity and general welfare are the main targets in Indonesia's development programs. Social policy comprises actions designed to

promote social and economic development, offering a broad perspective on social welfare. In addition, the government also implements various strategies as an effort to improve people's standards of living (Midgley, 2014).

Indonesia is an agrarian country, where most of the population works in the agricultural sector. Indonesian Central Statistics Agency stated that the percentage of the population working in the agricultural sector in 2020 was the highest, namely 29.04 percent. However, a common problem occurred in Indonesia is that level of community welfare has not been evenly distributed, causing social inequality. In September 2020, the gini ratio in Indonesia was 0.385. This number increased by 0.005 compared to the gini ratio in September 2019, which was 0.380. Gini ratio is a measure of aggregate inequality, ranging from zero to one (Shao, 2021). A gini ratio closer to zero indicates better equity. Conversely, a gini ratio that falls further away from zero and closer to one indicates a greater spread of inequality (Munandar & Fikriah, 2016). As of February 2020, the Indonesian Central Statistics Agency has recorded that most Indonesians work in the agricultural sector. It was noted that 29.04% of the 131.03 million people in Indonesia's total population work in agriculture.

Globally, agriculture is under great pressure due to the demands of feeding a growing population. Agriculture also suffers from the risks of uncertainty in natural resource competition, natural sustainability, and uncertainty in industry demand (Lippman & Rumelt, 1982; Lippman & Rumelt, 1992). In addition to these global problems, agriculture in Indonesia is exposed to low levels of farmers' welfare, capital issues, access to financing institutions, market access, competitiveness, legal and social forces, environmental sustainability (Nuswardani, 2019). Accordingly, the role of agriculture and manufacturing industry determines the strength of a country so that the agricultural business management system must be prioritized (Barnett & Hansen, 1996; Ommani, 2011). In this case, the government serves as a stakeholder of Indonesian agriculture alongside industry, traders, associations, farmer groups, and financial institutions (Nuraini & Atmaja, 2019). Improving the welfare of farmers is also a target that the Ministry of Agriculture strives to achieve (Purukan, Nayoan, Pangemanan, 2021).

Social welfare can be realized through both economic and social development (Midgley, 2014). In addition, social welfare is achieved through social capital, job satisfaction and personal attributes (Dhamija, Gupta & Bag, 2019; Taştan, Küçük & Işıaçık, 2020). Farmers' welfare in economic development is built through agrarian reform policies related to timeliness, financial calculation, measurement and targets (Saripudin, 2021). Wahyuni, Riyanto & Hardana (2022) stated that farmers' welfare can be emphasized on four main aspects, namely aspects of agrarian reform, social capital, farmer job satisfaction and farmers' personality.

Agrarian reform is a national strategic program aimed at reducing inequality in land ownership, control, use, and utilization, especially for poor farmers (Earlene & Djaja, 2023). Agrarian reform improves farmers' welfare because it provides a strong basis for farmers to improve their living standards through fairer access to land and agrarian resources (Sihaholo & Sita, 2021). Agrarian reform allows a small-scale farmer or farm laborer to obtain a larger land area or land ownership rights. Having their own land allows farmers to manage and utilize it directly for more productive agricultural purposes, thus increasing their income and welfare (Fajar, 2021).

Another factor affecting farmers' social welfare is social capital. Social capital is a resource owned by individuals or groups derived from social networks of relationships, trust, and norms within the community (Gannon & Roberts, 2020). Social relationships are considered individual assets and resources in the form of information and trust (Coleman, 1990; Fathy, 2019). Social capital is very important because it can increase efficiencies and success in various social activities. In farmers' context, for example, social capital helps them share information about farming methods, technology, or markets,

which can ultimately improve productivity and welfare (Bhandari & Yasunobu, 2009; Herrero & Hughes, 2019; Wu, 2021).

Job satisfaction is also one of the factors affecting farmers' social welfare. Research conducted by Jeong & Kim (2020) and Lavenia & Rodhiah (2024) states that satisfaction is a feeling or condition in which someone feels satisfied, happy, or fulfilled because their expectations, needs, or desires are achieved. Farmers' job satisfaction is important in achieving farmers' welfare, sustainable agriculture and sustainable economic development. Farmers' job satisfaction serves a crucial role as an indicator to evaluate the effectiveness of agricultural policies and strategies to improve farmers' welfare (Herrera-Sabillon, Gerster-Bentaya & Knierim, 2022; Zhao, et al., 2019; Wuli, 2023)

Farmers' personality is one of the components affecting farmers' motivation to work (Meierová & Chvátalová, 2022). Farmers' personality covers psychological characteristics, attitudes, behaviors, and mindsets that are unique to individual farmers (Indrian, 2020; Estuti, Rosyada, & Faidah, 2021). Factors such as cultural background, social environment, education, life experience, and genetic factors can also influence farmers' personality (Iswardayati, Yulianto, Munanto, 2020; Payong, 2020). As individuals attached to nature and the agricultural environment, farmers' personality also reflects their awareness of their environment and ability to adapt to climate change and agrarian challenges (Supatminingsih & Tahir, 2022). Understanding farmers' personality is important as it can affect their decisions and behaviors in managing farmland, dealing with risks and challenges in agriculture, and impacting their overall well-being (Sok, et al., 2021; Ranadhan, et al., 2024). Research and understanding of farmers' personality can help in designing more appropriate and effective agricultural programs and policies to improve farmers' welfare and agricultural sustainability (Rosmalah, 2022; Naylor, et.al., 2023).

Farmers in Bogor Regency suffer from limited land ownership. Data from the Center for Land Data and Information, Spatial Planning and Sustainable Food Agricultural Land in 2019 showed that the land tenure gap rate in West Java reached 0.78 (Ministry of Agrarian Affairs and Spatial Planning/National Land Agency, 2019). From 2017 to 2023, there has been a massive eviction of farmers' cultivated land in West Java in general (Tridakusumah, et al., 2019; Sinaga, 2020). It is increasingly difficult for small-scale farmers and farm laborers to gain access to land. Patterns of production relations that tend to be rational, such as profit sharing and rent, make their conditions more difficult, and the eviction of people's land for the sake of development is increasingly widespread. It makes the average land tenure by farmers decrease from year to year, thus land becomes vulnerable to change ownership (Luthfi, 2019). The number of landless farmers tends to increase and the accumulation of land tenure occurs, which in turn causes inequality in the agrarian structure of society. If this situation is left unresolved, agricultural development will be hampered, which will also obstruct the efforts to increase land productivity and business efficiency to achieve farmers' welfare (Rahman, 2023). Land ownership of less than 1 Ha per farmer family will cause inefficient use of production factors and reduce farmers' welfare because the income from farming is not sufficient to fulfill family needs (Umyati, Andayani, Ismanuddin, 2019).

Social welfare consists of three elements, namely an extent to which social problems are managed, an extent to which needs are met and an extent to which opportunities for advancement are provided (Midgley, 2014). The operation of these three elements is carried out through agrarian reform policies, social capital, job satisfaction and farmers' personality so that farmers are able to enjoy good social welfare conditions in Kabupaten Bogor. Based on the explanation above, the main research questions are how the influence of agrarian reform, social capital, job satisfaction and farmers' personality on farmers' welfare.

## 2. Methods

This research used quantitative approach with descriptive method. The research design used was survey method by collecting data through research instruments, and distributing questionnaires to respondents. The results were then processed through the SPSS program to determine the effect of agrarian reform, social capital, job satisfaction and farmers' personality on farmers' welfare. This research also used publication data from various sources such as surveys conducted by the Central Statistics Agency (BPS), such as the National Socio-Economic Survey (Susenas) and Village Potential (PODES), as well as data from the National Land Agency (BPN) specifically on agrarian reform data.

The population in this study were all farmers who received agrarian reform benefits in Kabupaten Bogor. The number of agrarian reform beneficiary farmers in 2017 was 50 beneficiaries spread across all *kecamatan* in Kabupaten Bogor. The number of beneficiaries has increased by 50 beneficiaries every year, so that the number of beneficiary farmers in 2021 has reached 250 farmers. Samples were taken based on probability sampling techniques. The number of samples taken based on the Slovin Formula, namely 152 farmers. Data analysis techniques used bivariate analysis.

## 3. Results and Discussion

### 3.1 Agricultural Potential of Bogor Regency

The agricultural potential in Kabupaten Bogor generally consists of food crops, vegetables, horticulture and plantations. Rice crops are widely grown in almost all *kecamatan*, with different variations in land area. Generally, paddy rice is grown in the central and northern areas where irrigation is available, such as in the Kecamatan Rumpin, Cigudeg, Sukajaya, Pamijahan, Cibungbulang, Ciampea, Caringin, Jonggol, Sukamakmur and Cariu (LQ value more than 1) (Matheus, 2019; Nugraha & Aminudin, 2019).

Horticultural agriculture such as vegetables and fruit is also widely available in almost all areas. Plantation crops are relatively limited in Kabupaten Bogor. Based on business management, plantation crops are divided into 2 (two), namely Large Plantations and Smallholders' Plantations. Large plantations are managed by both state and private companies, while smallholder plantations are managed by farming communities. The number of state plantations is 4 plantations with tea and palm oil commodities managed by 1 (one) state-owned company, PTPN VIII. There are 17 private plantations with rubber, tea, nutmeg and coffee commodities. They are located in the Kecamatan Jasinga, Cigudeg, Nanggung, Leuwiliang, Rancabungur, Ciawi, Cisarua, Megamendung, Cigombong, Rumpin, Tamansari, Citeureup, Sukajaya and Tenjo. The number of smallholder plantations is spread across 40 *kecamatan* with commodities such as rubber, coffee, nutmeg, cloves, coconut, vanilla, palm and medicinal plants (Arham, Sjaf & Darusman, 2019; Andriani, Purnamasari & Meisanti, 2023).

### 3.2 Analysis Result

The results of the descriptive analysis of the independent variables (agrarian reform, social capital, job satisfaction, farmers' personality) and the dependent variable (farmers' welfare) in Kabupaten Bogor are in the table below.

Table 1. Independent and Dependent Variables of Farmers' Welfare in Kabupaten Bogor

Variables	Description	Mean	Standard of Deviation	Minimum Value	Maximum Value
Independent	Agrarian Reform	20.8	2.08	15	24
Independent	Social Capital	27.94	2.73	19	36
Independent	Job satisfaction	47.66	5.08	27	60
Independent	Farmers' Personality	50.05	4.84	36	60
Dependent	Farmers' welfare	189.45	11.75	151	218

Source: Data Analysis, 2021

The average score of agrarian reform is 20.8 with a standard deviation of 2.08. Thus, the level of agrarian reform perceived by farmers is in the moderate range. The lowest score for agrarian reform is 15 and the highest score is 24.

For social capital, the mean score is 27.94 with a standard deviation of 2.73. It indicates that in general, the level of social capital is perceived to be quite high by farmers. The lowest social capital score is 19 and the highest is 36.

The average job satisfaction score is 47.66 with a standard deviation of 5.08. It means that in general, the farmers are quite satisfied with their jobs. The lowest job satisfaction score is 27 and the highest is 60.

As for personality, the mean score is 50.05 with a standard deviation of 4.84. It shows that in general, the farmers have a nice personality. The lowest personality score is 36 and the highest is 60.

The average score for farmers' welfare is 189.45 with a standard deviation of 11.75. It means that in general, the farmers feel quite well off. The lowest welfare score is 151 and the highest is 218. The results of the bivariate analysis are in the table below.

Table 2. Correlation Analysis of Dependent Variable (Farmers' welfare) and Independent Variables (Agrarian Reform, Social Capital, Job Satisfaction and Farmers' personality)

Independent Variables	Dependent Variables	r	p
Agrarian Reform	Farmers' welfare	0.279	0.000
Social Capital	Farmers' welfare	0.621	0.000
Job Satisfaction	Farmers' welfare	0.578	0.000
Farmers' personality	Farmers' welfare	0.553	0.000

Source: Data Analysis, 2021

Based on the correlation analysis, agrarian reform has a weak positive relationship with farmers' welfare ( $r = 0.279$ ). It means that the better the agrarian reform is perceived by farmers, the more their welfare will increase, although the increase is not too great. Social capital has a moderate positive relationship with farmers' welfare ( $r = 0.621$ ). It means that the higher farmers' social capital, the higher their welfare will be with a moderate strength of relationship. Job satisfaction has a moderate positive correlation with farmers' welfare ( $r = 0.578$ ). It indicates that the more satisfied farmers are with their jobs, the more their welfare will tend to increase with a moderate strength of relationship. Personality is moderately positively correlated with farmers' welfare ( $r = 0.553$ ). So the better the personality of farmers, the more their welfare will tend to increase although the strength of the relationship is moderate. Hypothesis testing is expressed in the following table.

Table 3. Hypothesis Testing

Hypothesis	Correlation and Regression Test		Results
	r	p	
H1: There is an effect of agrarian reform on farmers' welfare	0.279	0.000	Accepted
H2: There is an effect of social capital on farmers' welfare	0.621	0.000	Accepted
H3: There is an effect of job satisfaction on farmers' welfare	0.578	0.000	Accepted
H4: There is an influence of personality on farmers' welfare	0.553	0.000	Accepted

Source: Data Analysis, 2021

The results of hypothesis testing using correlation and regression analysis reveal the following results.

**Hypothesis 1 (H1):** There is an effect of agrarian reform on farmers' welfare.

The results of the correlation analysis show that there is a significant positive relationship between agrarian reform and farmers' welfare with a value of  $r = 0.279$  and  $p = 0.000$  ( $p < 0.05$ ). Thus, H1 is accepted. Agrarian reform has a positive and significant effect on farmers' welfare.

**Hypothesis 2 (H2):** There is an effect of social capital on farmers' welfare.

The results of the correlation analysis show that there is a significant positive relationship between social capital and farmers' welfare with a value of  $r = 0.621$  and  $p = 0.000$  ( $p < 0.05$ ). Thus, H2 is accepted. Social capital has a positive and significant effect on farmer welfare.

**Hypothesis 3 (H3):** There is an effect of farmer job satisfaction on farmers' welfare

The results of the correlation analysis show there is a significant positive relationship between job satisfaction and farmer welfare with a value of  $r = 0.578$  and  $p = 0.000$  ( $p < 0.05$ ). Thus, H3 is accepted. Job satisfaction has a positive and significant effect on farmers' welfare.

**Hypothesis 4 (H4):** There is an effect of farmers' personality on farmers' welfare

The results of the correlation analysis show that there is a significant positive relationship between farmers' personality and farmers' welfare with a value of  $r = 0.553$  and  $p = 0.000$  ( $p < 0.05$ ). Thus, H4 is accepted. Personality has a positive and significant effect on farmers' welfare.

Based on the analysis results, all four hypotheses are accepted because they show a positive and significant relationship with a significance level of  $\alpha = 0.05$ . Thus, agrarian reform, social capital, job satisfaction, and personality have a positive and significant effect on farmers' welfare.

### 3.3 The Effect of Agrarian Reform on Farmers' Welfare in Kabupaten Bogor

Access to agrarian reform is an important tool in improving farmers' welfare, especially in social mapping, improving technical and managerial skills, using appropriate technology, partnerships, and strengthening databases and commodity information (Sihalolo & Sita, 2021; Yamagishi, Gantalao, Ocampo, 2021). Data analysis shows that there is a significant positive relationship between agrarian reform and farmers' welfare with a value of  $r = 0.279$  and  $p = 0.000$  ( $p < 0.05$ ). Thus, agrarian reform has a positive and significant effect on farmers' welfare.

Meanwhile, the survey results show that respondents also emphasized the importance of improving technical and managerial skills. It is indicated by 65.56% of respondents who agree and 34.44% who strongly agree that technical guidance and improved managerial skills could strengthen farmers' productivity and business diversification. The majority of respondents also viewed the use of appropriate technology as a crucial factor in improving farmers' welfare, with 51.11% agreeing and 47.78% strongly agreeing. With the use of appropriate technology and partnerships, efficiency and productivity in the agricultural sector could be improved, which in turn could increase farmers' income and welfare (Damanik & Purba, 2019).

As many as 53.89% of respondents agreed and 45% strongly agreed that partnerships, whether with companies, government, or non-profit organizations, could expand market access and improve farmers' technical and managerial skills. In addition, farmers needed to have strong and accurate commodity databases and information (Eskarya & Eilhami, 2019; Saiz-Rubio & Rovira-Más, 2020). As many as 66.67% of respondents agreed and 31.67% strongly agreed that the right data and information could help farmers and related stakeholders make better and more effective decisions.

Agrarian reform allows small-scale farmers or farm laborers to acquire larger landholdings or land ownership rights. With legal assurance over their land, farmers are more encouraged to invest time and resources in agriculture. They tend to be more willing to adopt better technology or farming methods because they feel that the land is their own (Pratiwi & Moeis, 2022). After obtaining land ownership rights, farmers can more easily access loans or credit from financial institutions because the land can be used as collateral. The capital can be used to purchase agricultural tools, high-quality seeds, fertilizers, or improve production technology, which in turn increases farmers' productivity and welfare (Kurniawan, Sudibyanung, Supriyanti, 2020). By acquiring their own land, farmers are no longer dependent on land leases or landlords. It allows them the freedom to determine the type of crops they want to cultivate as well as the timing of harvest, thus reducing economic risk and providing income certainty (Charoenratana, Anukul & Rosset, 2021; White & Wijaya, 2022).

The official portal of Kabupaten Bogor ([bogorkab.go.id](http://bogorkab.go.id), 2024) states that agrarian reform in Kabupaten Bogor has experienced various developments in recent years. In 2021, President Joko Widodo handed over land redistribution certificates to residents of Kabupaten Bogor. In September 2024, Commission II of the House of Representatives conducted a specific working visit to evaluate the implementation of agrarian reform in Kabupaten Bogor and Kota Bogor. During the visit, Commission II appreciated all efforts undertaken, especially those related to land mapping and certification. To overcome various land issues, the Government of Kabupaten Bogor formed the Agrarian Reform Task Force (GTRA) in 2021. GTRA is in charge of resolving land issues and preventing conflicts in the community. Kabupaten Bogor's Government supports the national land certification program for all land fields by 2024. This program is aimed at providing legal certainty over land ownership to the community. Overall, although there has been progress in the implementation of agrarian reform in Kabupaten Bogor, there are still challenges that need to be overcome, especially related to agrarian conflicts and the completion of land certification. It requires cooperation between the government, the community, and other related parties to realize fair and sustainable agrarian reform.

Access to agrarian reform, such as social mapping, improved technical and managerial skills, use of appropriate technology, partnerships, and strengthened commodity databases and information, also play crucial role in improving farmers' welfare. If these factors are managed appropriately, they can contribute to improving the efficiency and productivity of the agricultural sector, which will increase farmers' income and welfare (Hasriyanti & Syarif, 2022; Limpo, Andri & Mujahidin, 2022). Comprehensive strategies and policies are essential to achieve a balance in agricultural land ownership and utilization. Asset redistribution through agrarian reform can reduce social and economic disparities

and strengthen economic structures at the local level (Akinola, 2020; Arfi & Magriasti, 2023). In addition, improved access to markets, technology and financial services will assist farmers in increasing their productivity and income (Faguet, Sanchez, Villaveces, 2020).

### 3.4 The Effect of Social Capital on Farmers' Welfare in Kabupaten Bogor

Social capital includes cooperation in managing land, working together and obtaining benefits, a friendly and personal approach, resolving conflicts in the group, equitable distribution of information, and participating in informal group activities (Auer, et.al., 2020; Mandrysz, 2020; Arnott, et.al., 2021).

The results of the analysis show that there is a significant positive relationship between social capital and farmer welfare with a value of  $r = 0.621$  and  $p = 0.000$  ( $p < 0.05$ ). Thus, social capital has a positive and significant effect on farmer welfare. Meanwhile, the results of the survey related to the ability to cooperate with various groups and obtain benefits, 63.33% of respondents agreed, 35.56% of respondents strongly agreed, and 1.11% of respondents disagreed. Regarding the ability to take a friendly, warm and personal approach with various parties to build trust, 53.33% of respondents agreed and 46.67% of respondents strongly agreed. Regarding participation in resolving conflicts that arise in the group, 48.89% of respondents agreed with the statement, 25.56% strongly agreed, 18.89% disagreed, and 6.67% strongly disagreed. The majority of respondents also agreed or strongly agreed with participating in informal activities organized by the group as an effort to improve close relationships between group members. These results provide a clear view of the importance of involving farmers in the planning and implementation process of agrarian reform.

Equitable information distribution can strengthen relationships between individuals and groups, facilitate participation in decision-making, and create a stable social environment. Therefore, relevant entities should focus on efforts to increase community awareness and understanding of the importance of equitable information distribution in the context of social capital (Saleh & Riyadi, 2023). The ability to take a friendly, warm and personal approach with various parties is an important element in building trust in agricultural groups. This approach reflects an attitude of familiarity and affection, and fosters close relationships and mutual recognition between individuals and groups. Strong trust enables farmer groups to achieve common goals and reap economic benefits together (Kehinde, Adeyamo & Ogundeji, 2021). Informal activities such as meetings, dining together, or other activities play an important role in improving social relations and togetherness among group members. Participation in these activities can form strong and mutually supportive social networks, help achieve common goals, and improve the welfare of agricultural groups (Daulay & Sanny, 2019).

Social capital contributes to the success of agricultural groups in Kabupaten Bogor. The high level of agreement in statements about working together in cultivating land, working together and gaining benefits, and participation in conflict resolution confirmed that social capital influenced group performance and created a harmonious social environment. Farmers' participation in farmer associations was considered a factor that could improve farmers' welfare and help in creating social capital in the community (Mhlanga, 2021; Shaturaev, 2021). The majority of farmers in Kabupaten Bogor actively participated in farmer associations. By participating in farmer associations, farmers could share knowledge, experience and resources with each other, thereby increasing the productivity and competitiveness of the agricultural sector as a whole.

Social capital includes relationships, networks, trust, and social norms that exist within the farming community, which in turn, significantly affect farmers' welfare. Bandrang's research (2024) shows that through social networks, farmers could more easily obtain information on agricultural technology, markets, commodity prices and business opportunities. It helped them increase their



productivity and income, which had a direct impact on their welfare. Social capital encouraged cooperation among farmers, such as in the form of farmer groups, cooperatives, or *gotong royong*. Such cooperation allowed them to overcome problems such as access to capital, means of production, and distribution of agricultural products, which were difficult to deal with individually.

Research by Daniswara & Habib (2024) stated that with strong social networks, farmers could share risks, such as crop failure or price fluctuations, through a system of assistance or social support between community members. It increased their social and economic security. Research by Fardillah (2022) stated that the ability of group members to work together, share knowledge, and build trust among each other was an important key in improving the efficiency and welfare of agricultural groups. Social support provided by the community through mutual trust and emotional assistance helped farmers overcome psychological stress, especially when facing economic or environmental challenges. It positively influenced on their mental well-being. In addition, Yunus, Zainal & Jalil (2021) stated that social capital allowed farmers to more easily access government, private or NGO institutions for technical assistance, capital or policy support. Good networks with stakeholders accelerated access to social welfare programs.

### 3.5 The Effect of Farmers' Job Satisfaction on Farmer Welfare in Kabupaten Bogor

Farmers' job satisfaction includes a high level of education, membership in a farmer group, satisfaction with working in the agricultural sector, and happiness working in the agricultural sector (Darmawati & Ningrum, 2022; Surayya, Martono & Subejo, 2024). The analysis shows a correlation between job satisfaction and farmer welfare with  $r = 0.578$ ,  $p = 0.000$  ( $p < 0.05$ ). Thus, job satisfaction has a positive and significant effect on the welfare of farmers in Kabupaten Bogor.

Based on the survey results, most farmers in Kabupaten Bogor considered that having a high level of education was not important for working as a farmer. This finding is inconsistent with the research of Vrchota, et.al. (2019) which stated that knowledge and practical skills gained from practical field experience were more influential factors in the success of farmers. The role of formal education has value in improving the quality of human resources in the agricultural sector.

The majority of farmers joined farmers' associations with a percentage of 52.22 percent stating strongly agree and 47.22 percent stating agree. Farmers also were satisfied with their work in the agricultural sector. Farmers' satisfaction in working in agriculture was high, with 92.23 percent of respondents agreeing or strongly agreeing. High job satisfaction in the agricultural sector could improve farmers' performance and encourage them to develop innovations in agricultural practices. However, improving such factors that can increase farmers' job happiness is necessary (Wuli, 2023). The majority of farmers felt happy while working in the agricultural sector. 74.44 percent of respondents agreed and 15 percent strongly agreed with the statement. This happiness affected their performance and productivity in farming. Factors such as work environment conditions, financial well-being, and the quality of social interactions at work also served an important role in improving farmers' job satisfaction. Efforts to improve farmers' welfare could be carried out by strengthening farmers' participation in farmer groups, providing adequate financial support, education and training, and creating a conducive work environment for farmers (Venugopalan, Bastian, & Viswanathan, 2021; Lee & Kim, 2022). Thus, the agricultural sector would be able to continuously grow and make a positive contribution to the economy and the society.

The importance of job satisfaction and farmers' welfare in agricultural sector should not be neglected. High job satisfaction can increase farmers' productivity, encourage the development of innovations in agricultural practices, and create positive relationships with the surrounding community

(Olawuyi & Mushunje, 2019). Therefore, it is necessary for the government to pay more attention to improving farmers' job satisfaction and supporting the development of a sustainable and productive agricultural sector.

### 3.6 The Effect of Farmers' Personality on Farmers' Welfare in Kabupaten Bogor

Farmers' personality refers to the distinctive psychological and behavioural characteristics of farmers in carrying out their daily activities, including the way they think, behave, and act in dealing with the social and natural environment. This personality is established by various factors, such as cultural background, economic conditions, education, and social interactions in the farming community (Sawitri, Rohmadi & Warnanen, 2024).

The analysis shows a correlation between farmers' personality and farmers' welfare with  $r = 0.553$ ,  $p = 0.000$  ( $p < 0.05$ ). Thus, there is a positive and significant influence of farmers' personality on farmers' welfare in Kabupaten Bogor. Farmers' personality includes three factors, namely: comfortable interacting with others; compliance or easy to agree; and openness (Rahman, Syukur & Aziz, 2020; Khafi & Azizah, 2023; Kurniawan & Fusfita, 2024).

On the factor of being comfortable interacting with others, the survey results show that the majority of farmers in Kabupaten Bogor have good communication skills. A total of 43.89 percent of respondents strongly agreed and 71 percent of respondents agreed that the farmers had good communication skills. Meanwhile, 14.44 percent of respondents disagreed and 0.56 percent of respondents strongly disagreed. According to research conducted by Sibhatu & Qaim (2018), farmers' communication skills affect the performance and success of their agricultural businesses. Farmers who have excellent communication skills tend to be better able to promote their products, gain access to a wider market, and increase their income.

In the factor of compliance or easy agreement, farmers' attitudes of respect for others, compassion and gentleness, and voluntarism are determining factors for the success of agricultural businesses. The survey results show that the majority of respondents agreed and strongly agreed that farmers respected others, with a percentage of 61.67 percent and 37.22 percent respectively. The majority of respondents agreed and strongly agreed that farmers were gentle and compassionate, with a percentage of 53.89 percent and 44.44 percent respectively. The majority of respondents agreed and strongly agreed that farmers had volunteerism, with a percentage of 68.89 percent and 27.22 percent respectively. Another study conducted by Tadesse & Tafere (2017) found that farmers' attitudes of respecting others can improve farmers' relationships with related parties. A polite attitude and respect for others could also help farmers in building networks and establishing mutually beneficial relationships with related parties. Farmers' personal characteristics such as being compassionate and soft-hearted could help improve farmers' welfare and the quality of agricultural products. These characteristics could influence the way farmers interact with the plants and animals they raised, thereby improving the quality and productivity of agricultural products produced.

In the openness factor, an organized and productive lifestyle and a high level of responsibility greatly affect farmers' productivity. Farmers in Kabupaten Bogor showed high sensitivity to art, high curiosity, and a creative and innovative personality. The results indicated that 76.67 percent of farmers agreed or strongly agreed with the statement. It could be used as a source of inspiration for sustainable agricultural development and should be supported through appropriate training or education programs. Chen, et al. (2021) stated that creative and innovative personalities encourage farmers to evolve with the times and achieve high productivity.

## Conclusion

This study concludes that determinant factors affecting farmers' welfare in Kabupaten Bogor are agrarian reform, social capital, job satisfaction and farmer personality. Thus, the positive findings regarding the effect of agrarian reform on farmers' welfare indicate that, in order for the agrarian reform policy to be more effective, the government needs to increase transparency and fairness in land distribution, accelerate the land certification process, and strengthen coordination between relevant agencies. In addition, more intensive assistance to farmers receiving land is also required so that they can maximize the productive use of the land.

Farmer organizations and farmer associations should strengthen social networks among farmers through more structured cooperation programs, such as cooperatives or joint business groups. Strong social capital will increase farmers' access to resources and information that support their welfare. Farmers must continue to develop a proactive, adaptive and innovative attitude in dealing with climate change, agricultural technology and market challenges. This attitude can be strengthened through informal education, such as training on modern agricultural technology and farm business management.

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