ANALYSIS OF FACTORS AFFECTING COFFEE PRODUCTION IN BANDUNG REGENCY

Nugroho Sumarjiyanto Benedictus Maria dan Aqshal Averiel Albiyand[*]

Fakultas Ekonomika dan Bisnis, Universitas Diponegoro, Semarang, Indonesia

[*]Corresponding Email: aqshalaveriel10@gmail.com

ABSTRACT

This study aims to analyze the effect of factors of production on the level of coffee production in the Bandung Regency during a pandemic. The selected variables are capital, land area, labor, and fertilizer. The population in this research is coffee farmers in Bandung Regency. The sample was selected through simple random sampling with the results of as many as 100 respondents from coffee farmers from villages in Bandung Regency. This type of research uses quantitative methods with a descriptive approach. The data obtained and collected were then analyzed through multiple linear regression using Statistical Package for the Social Sciences (SPSS) version 25. The results of this study indicate that only capital, land, and fertilizer partially have a positive and significant impact on coffee production in Bandung Regency during the pandemic. Labor variables partially have no significant impact on coffee production in Bandung Regency during the pandemic. Simultaneously capital, land area, labor, and fertilizer had a significant impact on coffee production in Bandung Regency during the Pandemic. This could encourage future research in the coffee plantation sector that uses this variable to support strategic policy.

Keywords: Bandung Regency, Coffee, Pandemic, and Production.

INTRODUCTION

As one of the largest coffee producers in the world after Brazil and Colombia, Indonesia is a coffee exporting country with great demand in the world (Wijayanti et al., 2022). According to data published by the Badan Pusat Statistik (BPS) in 2020 with the title "Indonesian Coffee Statistics", it is known that the number of coffee exports in 2020 was 379.35 thousand tons of the total annual production of 762.38 thousand tons (BPS). Coffee production is exported with an export volume in 2021 of 382.93 thousand tons with a contribution of 12.35 trillion with the fifth largest foreign exchange earner in the plantation sector after palm oil, rubber, cocoa, and coconut. Compared to various other commodities, coffee has considerable to add value to the country's revenue. Coffee is not only a great source of foreign exchange, but also a source of income for millions of coffee farmers in Indonesia. Indonesia's geographical location in a tropical climate is very suitable for coffee plants because the climate is ideal for its growth and production (Wasis, 2022).

In Indonesia, the total coffee production of each province can reach a maximum of 180 thousand tons per year, which is dominated by several provinces on the island

of Sumatra. Although West Java does not have as much coffee production as other regions, the resulting product is reliable. Currently, West Java Province is still able to produce 20,000 tons per year. One of the areas that has the largest level of land area for coffee farming in West Java is Bandung Regency (BPS, 2018). Bandung Regency is intensively developing coffee commodities in an effort to increase the level of coffee production. High production can lead to an increase in the coffee farmer's income.

Several factors that can affect coffee production refer to Riswan (2018) including capital, land area, labour, and fertilizer. The description of capital in the analysis of the Arabica Coffee Farming business in West Bandung Regency in Zakaria's research (2019) shows that the net income from the harvest is Rp4,693,625.00 per hectare of land. Financial analysis is very necessary in running a business, not only based on net profit results but the rate of return on capital also needs to be taken into account.

Land ownership is also a major factor that can determine coffee production. People's coffee plantations in Bandung Regency in 2020 amounted to 12,147.00 hectares, which means a decrease of 0.11 hectares from 2019, but an increase in area when compared to 2017 which was only 10,880.00 hectares (BPS). The wider the plantation area, the higher the level of production produced. But not all farmers own their land area, some of them still rent it. The rent cost might increase the production cost.

Labor can be used as a benchmark for production, high labor input will speed up the production process but also increase the minimum wage costs incurred for labor costs themselves (Riswan, 2018). The skills of each laborer are also needed to make the production process more effective and efficient. The number of farmers who cultivate land with a certain area and skills in land management will determine the production results on the land.

The fertilization factor can also be the final determining factor of the three previous factors. Fertilizers need to be selected according to the characteristics of the soil, climate, type of plant, and the age of the plant. The purpose of fertilization is to maintain plant resistance and ensure the quality of production (Riswan, 2018). Plants that receive fertilizer ideally and regularly will become strong and quality plants when harvested, while insufficient fertilization can cause crop failure.

Riswan's research (2018) states that of the four factors studied, only capital and land area factors can have a positive influence on coffee production. Meanwhile, the amount of labor and fertilizer has no relationship with coffee production. This means that the more capital spent by farmers and the wider the land area, the higher the level of production. The number of workers that do not affect production can occur as a result of uneven farmer skills, and fertilization that is less effective in helping production levels can indicate that fertilization is not ideal.

In order to increase the income of coffee farmers using the number of production, in 2020 an extraordinary pandemic occurred and detained the production. The pandemic caused by novel coronavirus 19 that hit in early 2020 has hampered coffee production. It is event brings various uncertainties in various fields. Production levels at the time of a pandemic can be influenced by various factors that are affected by systematic risk.

Despite the pandemic that started in 2020, the data shows that Indonesia's total coffee production reached 22.372 tons in 2020 and continued to rise the following year. Coffee production in Indonesia grew by 66.17 percent between 2019 and 2020. In 2020, West Java had a total production of 50.3 thousand tons (Badan Pusat Statistik,

2021). The coffee business did not expand its installed capacity during the pandemic. Many businesses were out of business by 2020. Last year, the number of coffee processing industries was steadily declining. He is hoping for a rebound momentum this year so that manufacturing capacity may be enhanced. (Badan Pusat Statistik, 2021)

LITERATURE REVIEW

According to Rufaidah (2015), production theory is the study of production or economic processes that transform production factors (inputs) into production results (outputs). Production uses resources to create usable goods or services. In production theory, production itself is an activity that adds value to an item, the outcome of which is measured as the level of production (output) over a given period of time.

The purpose of production itself is to increase the use value or benefits in order to fulfill human needs. The human needs mentioned are goods and services. The production process produces goods or tools to fulfill human needs that are visible, while services are tools to fulfill human needs that are not visible but can be felt (Hidayati, 2019).

According to Daniel in Putri et al. (2018), capital is an important factor of production to increase the amount of production. Capital in the economy can be in the form of goods or money. In a production business, capital can be in the form of land or land, agricultural buildings, agricultural tools, raw materials, and cash. The existence of capital can be used as a source of financing for farming activities that can be carried out so that production can be optimized. Farmers start to spend capital at the beginning of the business, namely in the first land management when the plants are planted. The use of upfront capital is also required in the purchase of machinery and various equipment for farming. Henceforth, capital is needed in daily activities in caring for coffee plants and providing nutrition to plants.

In the research of Yana et al. (2022), it was found that capital had no relationship with production. This can happen because the capital is only issued by farmers when clearing the land at the beginning, and subsequent costs are not too significant. While in Putri et al. (2018) and Riswan (2018) found that capital is proven to have an influence on production. Thus, the capital factor still really needs to be considered and not underestimated so that the level of production can be maximized.

Mubyarto (2015) defines land as one of the factors of production which is the place where agricultural products are produced that have a large enough contribution to farming. A narrow land area can provide inefficiency for farmers. The narrower the land can lead to suboptimal production. According to Rahim and Hastuti in Putri et al. (2018), the high amount of production is a result of the breadth of the land factor and is supported by soil fertility and certain land heights. The land height factor is very influential because, on land that is too low, coffee production of poor quality is because the plants are susceptible to disease. Research by Riswan (2018) and Yana et al. (2022) show that land has a positive relationship to coffee production.

Labor is an important element in farming activities. Optimal availability of labor can increase the amount of production. Ulma et al (2021) says that the workforce used in agro-industry activities is labor that does not require special skills so when farming it is not difficult to get a job. However, on the other hand, workers need to learn activities related to marketing, and agro-industry management, as well as training

related to their fields in order to introduce and sell their products in accordance with coffee sales targets. Riswan (2018) argues that investment in human capital should focus on individual support in obtaining education because skills and knowledge affect a person's ability to do productive work. Training is a form of investment that can contribute directly to the growth of national income through increasing skills and work production

To maintain highly stable production, fertilizer is needed. As with other plants, fertilizing generally requires a timely approach, the dosage and type of fertilizer, and how it is applied. Fertilization activities are completely dependent on the type of soil, climate, and age of the plants. Handayani in Riswan (2018) explains that organic fertilizer is a fertilizer that comes from nature, in the form of remnants of living organisms, both plant and animal residues. Organic fertilizers contain both macro and micronutrients needed by plants so that they can thrive. This is because the application of organic fertilizers has a major role in supporting the improvement of physical, chemical, and biological, soil properties and increasing the availability of nutrients in the soil.

METHODS

The population in this study were coffee farmers in Bandung Regency which is 14.599 people (BPS, 2018). Ikhsan (2014), a sample is a fraction of the numbers and characteristics that a population possesses and is carefully selected from the population. The sample in this study used simple random sampling for sampling, a technique for obtaining samples directly on sampling units. The researcher will conduct research on 100 farmers through random sampling of coffee farmers in villages located in Bandung Regency.

This study uses a descriptive approach with quantitative methods. The data sources include primary data from the questionnaire and secondary data from Badan Pusat Statistik (BPS). To analyze the data in this study, the multiple linear regression method will be used through the application of Statistical Product and Service Solutions (SPSS) version 25.

The main independent variable is capital (CAP), land area (LAREA), labor (L), and fertilizer (FTL). Meanwhile, the independent variable in this study was coffee production (COPROD).

RESULT AND DISCUSSION

Descriptive statistics is displayed in Table 1 as follows.

Table 1. Descriptive Statistics

Variables	Min	Max	Mean	Std. Deviation
Production	700	4,250	2,290	855.4
Capital	2,250,000	7,500,000	4,910,000.00	1,373,228.9
Land	1	4	2.16	0.849
Labour	1	5	2.00	1.054
Fertilizer	400	1.600	85.50	314.4

Based on Table 1, it is known that the mean production is 2,290 (Kg) with a minimum value of 700 (Kg) and a maximum value of 4,250 (Kg). In the capital variable, it is known that the mean value is Rp4,910,000 with a minimum value of Rp2,250,000

and a maximum value of Rp7,500,000.

In the land variable, it is known that the mean value is 2.16 (Ha) with a minimum value of 1 (Ha) and a maximum value of 4 (Ha). In the labor variable, it is known that the mean value is 2 people with a minimum value of 1 person and a maximum value of 5 people. Then, the Fertilizer variable is known to have a mean value of 851.5 with a minimum value of 400 and a maximum value of 1,600.
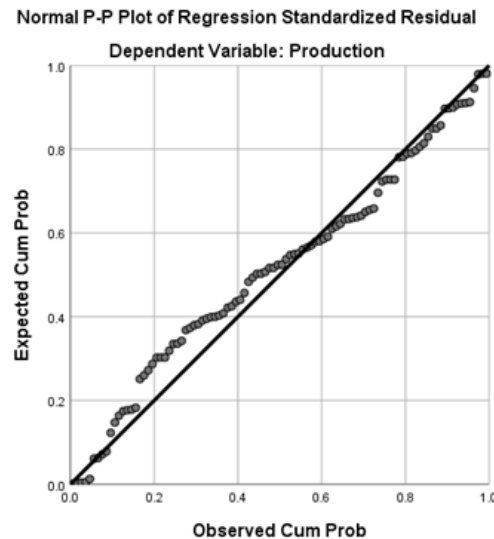

Figure 1. Normality Test Results

Based on the Figure 1, it is known that the data is normally distributed. This is because the points on the Normal P-P Plot graph coincide with the diagonal line (Ghozali, 2016). Furthermore, to test the normality of the data, you can use the Kolgomorov-Smirnov test as follows:

Table 2. Kolmogorov Smirnov Test Results

	Unstandardized Residual
Test Statisic	0.098
Asymp Sig. (2-tailed)	0.088

Source: Data Processed(2022)

Based on Table 2, it can be concluded that the distribution of the data is normal. This is because the significance value is $0.88 > 0.05$ (Ghozali, 2016).

Table 3. Multicollinearity Test Results

	Tolerance	VIF
Capital	0.254	3.939
Land	0.113	8.834
Labor	0.669	1.459
Fertilizer	0.181	5.513

From the Table 3, it can be explained that:
1. The multicollinearity test of the capital variable (X1) has a tolerance value of $0.254 > 0.1$ and a VIF value of $3.939 < 10$, so it is concluded that there is no multicollinearity.
2. The multicollinearity test for the land variable (X2) has a tolerance value of $0.113 > 0.1$ and a VIF value of $8.834 < 10$, so it is concluded that there is no

multicollinearity.

3. The multicollinearity test of the labor variable (X3) has a tolerance value of 0.669 > 0.1 and a VIF value of 1.495 < 10, so it is concluded that there is no multicollinearity.

4. The multicollinearity test for the fertilizer variable (X4) has a tolerance value of 0.181 > 0.1 and a VIF value of 5.513 < 10, so it is concluded that there is no multicollinearity.

Table 4 . Heteroscedasticity Test Results

	Sig.
Constant	0.000
Capital	0.022
Land	0.130
Labor	0.095
Fertilizer	0.543

Table 4 shows that the land area, labor, and fertilizer variables have a significance value > 0.05 in the Glacier test while capital has a significance value of 0.02 < 0.05. This proves that there are symptoms of heteroscedasticity in the research, precisely on the capital variable.

Table 5. Multiple Linear Regression Analysis Results

	Unstandardized Coefficients (B)
Constant	0.508
Capital	0.389
Land	0.268
Labor	-0.019
Fertilizer	0.247

Based on Table 5 the following is the resulting regression equation:

$$LnY = Ln0.508 + Ln0.389 \; X1 + Ln0.268 \; X2 - Ln0.019 \; X3 + Ln0.247 \; X4 + ei \qquad (1)$$

Table 6. Coefficient of Determination

R	R Square	Adjusted R Square
0.944	0.891	0.886

Based on Table 6 above, it can be explained that the value of the coefficient of determination ($R2$) is 0.891. This shows that capital (CAP), land (LAREA), labor (L), and fertilizer (FTL) have an effect on Coffee Production (CPROD) of 89.1%. While the remaining 10.9% is influenced by other variables.

Table 7. F test Results

Model	F
Regression	193.727

Based on Table 7 above, it can be explained that the value of the coefficient of determination ($R2$) is 0.891. This shows that capital (CAP), land (LAREA), labor (L), and fertilizer (FTL) have an effect on Coffee Production (CPROD) of 89.1%. While the remaining 10.9% is influenced by other variables.

Table 8. t-statistics Test

Variables	t	Sig.
Constant	8.339	.000
Capital	4.026	.000
Land	5.181	.000
Labor	-1.083	.282
Fertilizer	2.746	.007

The t-test aims to examine the effect of independent variables on the dependent variable. The decision-making criteria are as follows:
1. Constant = 0.508 indicates that without capital, land, labor, and fertilizer, the amount of Coffee Production is 0.508.
2. The Capital regression coefficient (CAP) is 0.389 which shows if capital increases by 1% then Coffee Production will increase by 3,89%. The t-statistic value is 4,026 > t-table is 1,985, so it can be concluded that there is a positive and significant impact between capital and coffee production.
3. The Land regression coefficient (LAREA) is 0.268 which shows that if land increases by 1%, Coffee Production will increase by 2,68%. The t-statistic value is 5.181 > t-table is 1.985, it is concluded that there is a positive and significant impact between land and coffee production.
4. The Labour's (L) t-statistic value is -1,083 < t-table of 1.985 it can be concluded that there is no significant impact between labor on coffee production.
5. The Fertilizer regression coefficient (FTL) is 0.247, which indicates that if fertilizer increases by 1%, Coffee Production will increase by 2,47%. The t-statistic value is 2.746 > t-table is 1.985, it is concluded that there is a positive and significant impact between fertilizer on coffee production.
6. The value of the coefficient of determination (R^2) is 0.891. This shows that capital (CAP), land (LAREA), labor (L), and fertilizer (FTL) have an effect on Coffee Production (CPROD) of 89.1%. While the remaining 10.9% is influenced by other variables.

Table 9. Return to Scale

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.508	1.501		8.339	.000
	Capital	.389	.097	.271	4.026	.000
	Land	.268	.052	.522	5.181	.000
	Labor	-.019	.017	-.045	-1.083	.282
	Fertilizer	.247	.090	.219	2.746	.007

$$\text{Ln } Y = \text{In } 0.508 + \ln 0.97 \; X1 + \ln 0.268 \; X2 - 0.19 \; X3 + 0.247 \tag{2}$$

The transformation form of the Cobb-Douglass production function is then transformed back into the original form of the Cobb-Douglass production function, giving the equation:

$$y = 4,199 \; x10.97 \; x20.268 \; x3\text{-}0.19 \; x4 \; 0.247 = 1,295 \tag{3}$$

The quantity of return to scale is estimated by summing the coefficients of each independent variable, indicating that the firm is in a state that increases the return to

scale. (y > 1) This may occur as a result of the increased size of operation, which allows management and workers to specialize in their responsibilities and use more complex, large-scale factories and equipment. The auto assembly line is a well-known example of increased returns. If the returns are growing, it is more cost-effective to have one huge business producing (at a cheap cost) rather than multiple small firms (at a relatively high cost).

RESULT AND DISCUSSION

The Effect of Capital on Coffee Production in Bandung Regency

The results of regression showed that the Capital regression coefficient is 0.389 which shows if capital increases by 1% then Coffee Production will increase by 38,9%, and the t-count value is 4,026 > t-table is 1.985, which means that the capital had a positive and significant effect on coffee production in Bandung Regency during the Pandemic. The results of this study also support Daniel's statement of Putri et al (2018) that capital is an important production factor to increase the amount of production because with capital it is possible to finance farming activities so that production can be optimized. The management of the amount of capital needs to be considered because it is very important in ensuring the amount of production in the business, thus farmers must be able to allocate sufficient resources to manage the capital. Capital will affect the level of production produced.

The Effect of Land on Coffee Production in Bandung Regency

The results of regression showed that the Land regression coefficient is 0.268 which shows that if land increases by 1%, Coffee Production will increase by 26,8%, and the t-statistic value is 5.181 > t-table is 1.985, which means that land had a positive and significant effect on coffee production in Bandung Regency during the Pandemic. This shows that the larger the land owned, the more productive the coffee plantations produced in Bandung Regency will be. The results of this study are in line with previous research conducted by Yana et al (2022) and Riswan (2018) which show that land has a positive and significant impact on coffee production. The wider the arable land owned by the farmer, the more free the farmer is in determining and managing the land to be cultivated. The area of land owned by farmers also influences attitudes in determining the type of farming business and the technology that will be applied in carrying out their farming activities.

The Effect of Labor on Coffee Production in Bandung Regency

The results of regression showed that the Labor regression coefficient is -0.019, and the t-statistic value is -1,083 < t-table of 1.985, which means that labor had no significant effect on coffee production in Bandung Regency during the Pandemic. This shows that the large number of laborers does not have an impact on increasing coffee production in Bandung Regency during the Pandemic. The results of this study are in line with previous research conducted by Riswan (2018) and Yana et al (2022) which shows that labor has no significant impact on coffee production. This study supports Hidayati's (2019) statement, which states that labor skills are more needed than the quantity of labor. The absence of a significant impact can be indicated due to inefficient use of labor, as well as lack of knowledge and skills in managing plantations

in an appropriate and integrated manner it can affect the quantity and quality of coffee production in Bandung Regency.

The Effect of Fertilizer on Coffee Production in Bandung Regency

The regression results showed that the Fertilizer regression coefficient is 0.247, which indicates that if fertilizer increases by 1%, Coffee Production will increase by 2,47%, and the t-statistic value is $2.746 > $ t-table is 1.985, which means fertilizer had a positive and significant effect on coffee production in Bandung Regency during the Pandemic. This shows that the better the fertilizer, the more productive the coffee plantations produced in Bandung Regency. The results of this study are in line with research conducted by Ulma et al. (2021) which shows that fertilizer has a positive and significant effect on coffee production. There is a significant impact of the amount of fertilizer on production because fertilizer is able to improve the growth and production of coffee plants. The application of fertilizers, especially manure, has a major role in improving physical, chemical, and biological properties and increasing nutrients in the soil so that production can be increased.

Capital, Land Area, Labour, and Fertilizer Impact on Coffee Production in the Bandung Regency Simultaneously

The results showed that simultaneously Capital, Land area, Labor, and Fertilizer had a significant effect on coffee production in Bandung Regency during the Pandemic. This shows that the main production factors in the plantation business, especially in coffee plantations are capital, land area, labor, and fertilizer.

CONCLUSION

The findings of this study could generally conclude as follows:
1. The results showed that capital had a positive and significant effect on coffee production in Bandung Regency during the Pandemic. This shows that the greater the capital owned, the more productive the coffee plantations produced in Bandung Regency will be.
2. The results showed that land had a positive and significant effect on coffee production in Bandung Regency during the Pandemic. This shows that the larger the land owned, the more productive the coffee plantations produced in Bandung Regency will be.
3. The results showed that labor had no significant effect on coffee production in Bandung Regency during the Pandemic. This shows that the large number of laborers does not have an impact on increasing coffee production in Bandung Regency during the Pandemic.
4. The results showed that fertilizer had a positive and significant effect on coffee production in Bandung Regency during the Pandemic. This shows that the better the fertilizer, the more productive the coffee plantations produced in Bandung Regency.
5. The results showed that simultaneously Capital, Land area, Labor, and Fertilizer had a significant effect on coffee production in Bandung Regency during the Pandemic.

Regarding the results of this study, there are several limitations addressed to various parties. First, This research is only limited to statistical analysis on testing the factors that affect coffee production in Bandung Regency during the Pandemic. Secondly, this study did not perform statistical analysis to examine the effect of respondents' characteristics on coffee production in Bandung Regency during the Pandemic.

In addition to future research, there are suggestions put forward in this study.

1. The coffee production can be increased by increasing the capital, so activities can be carried out so that production can be optimized.
2. Coffee production can be increased by managing the land in a wider area because the high amount of production is a result of the breadth of the land factor and is supported by soil fertility and certain land heights.
3. Coffee production can be increased by increasing investment in human capital and should focus on individual support in obtaining education because skills and knowledge affect a person's ability to do productive work.
4. Coffee production can be increased by increasing the application of organic fertilizers so that it can improve the growth and productivity of coffee plants.
5. Bandung Regency has to be intense in giving counseling to coffee farmers about the efficiency of using production inputs so that they can increase coffee production and production.
6. It is hoped that the next study will add another variable that indicates affect production like technology, plant age, etc.

REFERENCE

Daini, R., Iskandar, I., & Mastura, M. (2020). Pengaruh modal dan luas lahan terhadap pendapatan petani kopi di Desa Lewa Jadi, Kecamatan Bandar, Kabupaten Bener Meriah. *J-ISCAN: Journal of Islamic Accounting Research, 2*(2), 136–157.

Dewi, I. A. N. U., & Yuliarmi, N. N. (2017). Pengaruh modal, tenaga kerja, dan luas lahan terhadap jumlah produksi kopi Arabika di Kecamatan Kintamani, Kabupaten Bangli. *E-Jurnal Ekonomi Pembangunan, 6*(6), 1127–1156.

Ghozali, I. (2016). *Aplikasi analisis multivariete dengan program IBM SPSS 23* (Edisi 8). Semarang: Badan Penerbit Universitas Diponegoro.

Isyariansyah, M. D., Sumarjono, D., & Budiraharjo, K. (2018). Analisis faktor-faktor produksi yang mempengaruhi produksi kopi robusta di Kecamatan Sumowono, Kabupaten Semarang. *Agrisocionomics: Jurnal Sosial Ekonomi Pertanian, 2*(1), 31–38.

Kharisma, A., Asngari, I., & Subardin, M. (2021). Produksi, modal dan tenaga kerja industri tas kulit di Indonesia (ISIC: 15121) (Doctoral dissertation, Sriwijaya University).

Mulyono, T., & Sasana, H. (2022). Analisis penawaran ekspor kopi Indonesia ke Amerika Serikat tahun 1990-2019. *JEpa, 7*(1), 51–59.

Putri, A., Yusmani, Y., Paloma, C., & Zakir, Z. (2018). Kinerja faktor produksi kopi Arabika (Coffea arabica L.) di Lembah Gumanti, Kabupaten Solok, Sumatera Barat. *Industria: Jurnal Teknologi dan Manajemen Agroindustri, 7*(3), 189–197.

Riswan. (2018). Analisis faktor-faktor yang mempengaruhi produksi kopi di Kabupaten Enrekang (Skripsi, Universitas Muhammadiyah Makassar).

Rustami, P., Kirya, I. K., & Cipta, W. (2014). Pengaruh biaya produksi, biaya promosi, dan volume penjualan terhadap laba pada perusahaan kopi bubuk Banyuatis. *Jurnal Manajemen Indonesia, 2*(1).

Ulma, R. O., Nurchaini, D. S., & Damayanti, Y. (2022). Analisis optimasi penggunaan faktor produksi kopi bubuk pada agroindustri XYZ di Kota Jambi. *SEPA: Jurnal Sosial Ekonomi Pertanian dan Agribisnis, 17*(2), 104–110.

Wasis, P. (2022). Strategi pengembangan usaha kopi dalam upaya meningkatkan produksi kelompok tani Suka Maju dalam perspektif ekonomi Islam (Studi pada kelompok tani Suka Maju Gunung Ratu Kecamatan Bandar Negeri Suoh Kabupaten Lampung Barat) (Doctoral dissertation, UIN Raden Intan Lampung).

Wijayanti, N., Angkasa, M. A. Z., & Ramadhani, D. (2022). Bauran pemasaran pada usaha kopi Punik Sumbawa di Dusun Punik, Desa Batudulang, Kecamatan Batulanteh, Kabupaten Sumbawa. *Jurnal Sosial Ekonomi Pertanian, 2*(1), 40–45.

Yana, E., Fitri, I., & Yustisar, M. (2022). Analisis subsistem agroinput tanaman menghasilkan kopi Arabika (Coffea arabica Sp) terhadap tingkat produksi di Kecamatan Pegasing, Kabupaten Aceh Tengah. *Jurnal Sosiologi Pertanian dan Agribisnis, 4*(1), 1–11.

Zakaria, A. (2019). Analisis kelayakan finansial usaha tani kopi Arabika (Coffea arabica) di Desa Suntenjaya, Kecamatan Lembang, Kabupaten Bandung Barat. *AGROSCIENCE, 9*(1), 34–40.

Zakaria, A., Aditiawati, P., & Rosmiati, M. (2017). Strategi pengembangan usahatani kopi Arabika (kasus pada petani kopi di Desa Suntenjaya, Kecamatan Lembang, Kabupaten Bandung Barat, Provinsi Jawa Barat). *Jurnal Sosioteknologi, 16*(3), 325–339.