**Economics And Business Management Journal ( EBMJ )**
**February 2023 | Vol. 2 | No. 1**
**E-ISSN : 2828-0288**

# Analysis of the Effect of Palm Oil Production and Commodity Prices on the Income of Oil Palm

**Yovita Irma Febriliyanti*[1], Fitri Jayanti[2],**
[1,2]IAIN Pontianak:JL letjend Suprapto Pontianak (0561)740601
e-mail: ***[1]yovitaita24@gmail.mail**, [2]fitrisetohartoyo12123@gmail.com,

**Abstrak**

This study aims to determine the effect of production and prices partially and simultaneously on the income of oil palm plantation owners in Rasau Jaya District This study uses a descriptive analysis method with a quantitative approach. Data collection techniques used in this study were questionnaires and interviews. This type of research used by researchers is associative research. There is a positive and significant influence between production (X1) on the income of garden owners, namely 19.4%. There is a positive and significant influence between price (X2) on the income of garden owners, namely 38.4%.

**Keyword :** Production, Price, Commodity of Oil Palm and Income of Oil Palm Owners.

## INTRODUCTION

Indonesia is an agrarian country which is currently developing, therefore there is a sector that supports the growth of its economy, namely the agricultural sector. The agricultural sector has an important role in economic activity in Indonesia. Of course this can be observed from the number of residents and workers whose daily work or work is in the agricultural sector as well as from national products originating from the scope of agriculture (Tanjung, 2010: 1).

Income is the amount of income earned by farmers within a certain period of time as remuneration for obtaining the production factors that have been carried out (Reksoprayitno, 2004:79). The amount of income earned by farmers comes from the production they get after carrying out agricultural processes. Income is influenced by several factors such as production, land area, capital and selling price.

Production factors can also affect the amount of income if the results obtained are not optimal, of course the amount of income will decrease and vice versa. Meanwhile, currently the income from oil palm plantation owners is experiencing an increase due to the increasing demand for oil palm plantations.

Table 1.3 above shows that the average total planted area from 2017-2020 is 1,960.22 hectares and total production is 4,500.89 tons. The data above shows that every year the area of land and production has increased, but in 2019-2020 the area of land has increased by only 21,747 hectares and production of 236,108 tons.

The amount of production is influenced by several factors including capital and oil palm area. Production results are one of the factors that affect people's income. The factors that affect people's income are production, land area, capital and selling price (Muwardati, 2013: 36). This research is intended to examine the amount of production and the selling price of palm oil. Capital and land area are factors that influence palm oil production according to Sugiarto (2017: 15)

**Area, Land Area and Total Production in Kubu Raya Regency**

| Kecamatan | Luas Wilayah ($KM^2$) | Rata-rata Luas Lahan Lahan (Ha) 2017-2021 | Rata-rata Produksi (Ton) 2017-2021 |
|---|---|---|---|
| Rasau Jaya | 111,07 | 1.524,6 | 2.485,8 |
| Sui. Ambawang | 726,10 | 7.880,6 | 8.916,2 |
| Teluk Pakedai | 291,90 | 138,6 | 278 |
| Sungai Kakap | 453,13 | 92,8 | 88,6 |
| Batu Ampar | 2.002 | 1.273,5 | 1.685 |
| Kuala Mandor B | 473 | 1.604,8 | 4.877,4 |
| Kubu | 1.211 | 5.426,8 | 9.903,6 |
| Sungai Raya | 929,30 | 3.627,4 | 4.541,6 |
| Terentang | 786,40 | 1.395,8 | 2.588,5 |

*sorce : Dinas Perkebunan Kabupaten Kubu Raya tahun 2017-2021*

From the data table 1.6 above, Rasau Jaya District has a smaller area compared to other districts. But Rasau Jaya has an average land area that exceeds the sub-district which has a sizeable area including Pakedai Bay, Sungai Kakap, Batu Ampar and Terentang. The choice of Rasau Jaya as a research object for researchers is because Rasau Jaya District is a sub-district that has the smallest area of the 9 sub-districts in Kubu Raya.

From BPS data, every year, Rasau Jaya has an increasing amount of production, plus the selling price of palm oil is currently increasing. When the price of palm oil increases, the income level of the population will also increase and vice versa when the price of palm oil decreases, the income level of farmers will decrease. Therefore, researchers are interested in digging deeper into the factors that affect the income of oil palm farmers in the District of Rasau Jaya.

## RESEARCH METHODS

The type of probability sampling method used in this study is simple random sampling. simple random sampling, namely taking samples from a number of populations which are carried out randomly by taking into account the strata in the population (Sugiyono, 2019: 289). Researchers determined the number of samples as much as 61 respondents or garden owners. Data collection techniques used in this study were questionnaires and observation. Data analysis techniques using Descriptive Analysis, Instrumental Testing, Classical Assumption Testing and Hypothesis Testing.

## RESULTS AND DISCUSSION

### Validity Test Results

| Variabel | Indikator | R Hitung | R Tabel | Keterangan |
|---|---|---|---|---|
| | X1.1 | 0,549 | 0,2521 | Valid |
| | X1.2 | 0,687 | 0,2521 | Valid |
| | X1.3 | 0,720 | 0,2521 | Valid |

| Variabel | Indikator | R Hitung | R Tabel | Keterangan |
|---|---|---|---|---|
| Produksi (X1) | X1.4 | 0,675 | 0,2521 | Valid |
| | X1.5 | 0,687 | 0,2521 | Valid |
| | X1.6 | 0,584 | 0,2521 | Valid |
| | X1.7 | 0,660 | 0,2521 | Valid |
| | X1.8 | 0,705 | 0,2521 | Valid |
| | X1.9 | 0,288 | 0,2521 | Valid |
| | X1.10 | 0,437 | 0,2521 | Valid |
| Harga (X2) | X2.1 | 0,698 | 0,2521 | Valid |
| | X2.2 | 0,743 | 0,2521 | Valid |
| | X2.3 | 0,497 | 0,2521 | Valid |
| | X2.4 | 0,476 | 0,2521 | Valid |
| | X2.5 | 0,364 | 0,2521 | Valid |
| | X2.6 | 0,560 | 0,2521 | Valid |
| | X2.7 | 0,277 | 0,2521 | Valid |
| | X2.8 | 0,478 | 0,2521 | Valid |
| | X2.9 | 0,436 | 0,2521 | Valid |
| | X2.10 | 0,443 | 0,2521 | Valid |
| | X2.11 | 0,404 | 0,2521 | Valid |
| | X2.12 | 0,274 | 0,2521 | Valid |
| Pendapata (Y) | Y1 | 0,646 | 0,2521 | Valid |
| | Y2 | 0,650 | 0,2521 | Valid |
| | Y3 | 0,524 | 0,2521 | Valid |
| | Y4 | 0,631 | 0,2521 | Valid |
| | Y5 | 0,662 | 0,2521 | Valid |
| | Y6 | 0,636 | 0,2521 | Valid |
| | Y7 | 0,572 | 0,2521 | Valid |
| | Y8 | 0,527 | 0,2521 | Valid |

| Variabel | Indikator | R Hitung | R Tabel | Keterangan |
|---|---|---|---|---|
| | Y9 | 0,293 | 0,2521 | Valid |

*source: Data Primer yang Diolah, 2022*

Based on the table above, it can be seen that all values in the question items used for each production, price, and income variable have a valid status because all items show an r count value > r table value. From this information it can be concluded that all question items are valid and can be used for the entire testing model**.**

**Reliability Test Results**

| No | Variabel | Alpha Cronbach | Nilai Alpha | Keterangan |
|---|---|---|---|---|
| 1 | Produksi ($X_1$) | 0,787 | 0,60 | Reliabel |
| 2 | Harga ($X_2$) | 0,678 | 0,60 | Reliabel |
| 3 | Pendapatan (Y) | 0,749 | 0,60 | Reliabel |

*sourcer: Data Primer yang Diolah, 2022*

Based on the table above, it can be seen that the Cronbach Alpha value in the production variable is 0.787 > 0.60, the Cronbach Alpha value in the price variable is 0.678 > 0.60, and the Cronbach Alpha value in the income variable is 0.749 > 0.60 . so that it can be said that the whole question item is declared reliable.

**One-Sample Kolmogorov-Smirnov Test**

| | | Unstandardized Residual |
|---|---|---|
| N | | 61 |
| Normal Parameters[a,b] | Mean | ,0000000 |
| | Std. Deviation | 2,92226115 |
| Most Extreme Differences | Absolute | ,091 |
| | Positive | ,091 |
| | Negative | -,089 |
| Test Statistic | | ,091 |
| Asymp. Sig. (2-tailed) | | ,200[c,d] |

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

d. This is a lower bound of the true significance.

**Normality Test Results**

source: Data Primer yang Diolah, 2022

Based on the table above on the results of the normality test using the One Sample-Kolmogorov Smirnov method, it can be seen that the Asymp.Sig. (2-tailed) that is equal to

0.200. It can be seen that the significance value is > 0.05 so it can be concluded that the data shows a normal distribution pattern.

**Results of Production Linearity Test on Income**

**ANOVA Table**

| | | | Sum of Squares | Df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|---|
| Pendapatan_Y * Produksi_X1 | Between Groups | (Combined) | 68,727 | 10 | 6,873 | 2,006 | ,052 |
| | | Linearity | 48,419 | 1 | 48,419 | 14,130 | ,000 |
| | | Deviation from Linearity | 20,308 | 9 | 2,256 | ,658 | ,742 |
| | Within Groups | | 171,339 | 50 | 3,427 | | |
| | Total | | 240,066 | 60 | | | |

*source: Data Primer yang Diolah, 2022*

it can be seen that the value of Deviation From Linearity is equal to 0.742. From the description of the data, it has a Deviation From Linearity value of > 0.05 so it can be interpreted that this variable has a linear relationship between production variables and income and fulfills the linearity requirements.

**Price Linearity Test Results Against Income**

**ANOVA Table**

| | | | Sum of Squares | Df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|---|
| Pendapatan_Y * Harga_X2 | Between Groups | (Combined) | 150,424 | 11 | 13,675 | 7,475 | ,000 |
| | | Linearity | 120,897 | 1 | 120,897 | 66,085 | ,000 |
| | | Deviation from Linearity | 29,527 | 10 | 2,953 | 1,614 | ,131 |
| | Within Groups | | 89,642 | 49 | 1,829 | | |
| | Total | | 240,066 | 60 | | | |

*source:Data Primer yang Diolah, 2022*

the value of Deviation From Linearity or the relationship between price variables and income is equal to 0.131. The value data has a Deviation From Linearity > 0.05 so it can be concluded that this variable has a linear relationship between the price variable and the income of the owner of the oil palm plantation and fulfills the linearity requirements.

**Multicollinearity Test Results**

**Coefficients[a]**

| Model | Unstandardized Coefficients | | Standardized Coefficients | T | Sig. | Collinearity Statistics | |
|---|---|---|---|---|---|---|---|
| | B | Std. Error | Beta | | | Tolerance | VIF |
| (Constant) | 15,983 | 3,890 | | 4,108 | ,000 | | |

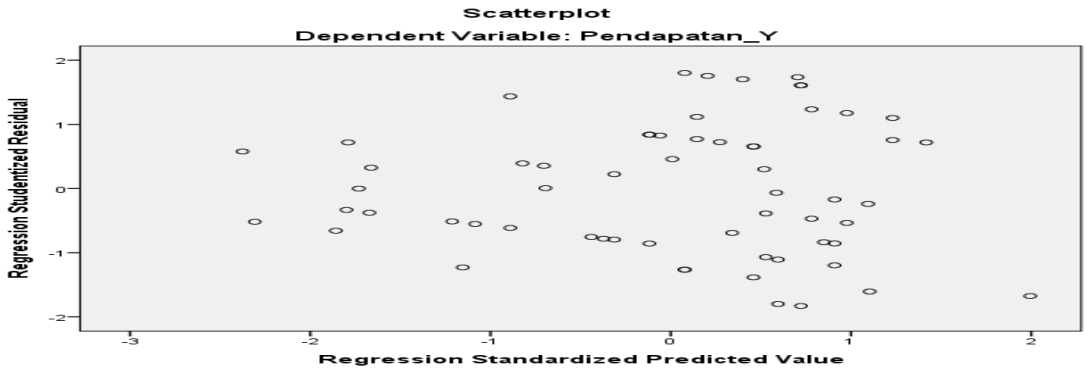
| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Produksi_X1 | ,130 | ,069 | ,191 | 1,882 | ,065 | ,892 | 1,121 |
| Harga_X2 | ,402 | ,068 | ,596 | 5,877 | ,000 | ,892 | 1,121 |

a. Dependent Variable: Pendapatan_Y

*Sumber: Data Primer yang Diolah, 2022*

the production variable has a Tolerance value of 0.892 and a VIF value of 1.121 and the price variable has a Tolerance value of 0.892 and a VIF value of 1.121. From this information it can be seen that each variable has a Tolerance value of> 10% and VIF <10, so it can be concluded that the regression model in this study did not occur multicollinearity between the independent variables.

**Scatterplot Graph Heteroscedasticity Test Results**




*source: Data Primer yang Diolah, 2022*

Based on the picture above it can be seen that the data does not have a clear pattern and the points in the picture are spread evenly above and below the number 0 on the Y axis. From this information it can be concluded that there is no heteroscedasticity in the regression model, because the data is said to be good if there is no heteroscedasticity.

**Partial Test Results (Uji t)**

**Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | T | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 13,831 | 4,082 | | 3,388 | ,001 |
| | Produksi_X1 | ,194 | ,080 | ,245 | 2,426 | ,018 |
| | Harga_X2 | ,384 | ,068 | ,570 | 5,637 | ,000 |

*source: Data Primer yang Diolah, 2022*

it can be interpreted that H1 is accepted, which means that the production variable (X1) partially affects income. From this information it can be seen that the significance value is <0.05 and the t count > t table, so it can be interpreted that H2 is accepted, which means that the price variable (X2) partially affects income.

**Simultaneous Test Results (Uji F)**

**ANOVA[a]**

| Model | Sum of Squares | Df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Regression | 103,626 | 2 | 51,813 | 27,497 | ,000[b] |
| Residual | 109,292 | 58 | 1,884 | | |
| Total | 212,918 | 60 | | | |

a. Dependent Variable: Pendapatan_Y

b. Predictors: (Constant), Harga_X2, Produksi_X1

*Sumber: Data Primer yang Diolah, 2022*

From this information, it can be seen that the significance value is <0.05 and the calculated f value is > f table, so it can be interpreted that H¬3 is accepted, which means that the production and price variables simultaneously affect income.

**Determination Coefficient Test Results ($R^2$)**

**Model Summary[b]**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Durbin-Watson |
|---|---|---|---|---|---|
| 1 | ,739[a] | ,547 | ,578 | 1,36987 | 1,769 |

a. Predictors: (Constant), Harga_X2, Produksi_X1

b. Dependent Variable: Pendapatan_Y

*source: Data Primer yang Diolah, 2022*

Owners of oil palm plantations in the District of Rasau Jaya (Y) are influenced by the variable production (X1) and price (X2) which is equal to 57.8%. While the remaining 42.2% is influenced by other factors not included in this study, namely capital and oil palm land area (Muwardati, 2013: 36).

## CONCLUSION

There is a positive and significant influence between production (X1) on the income of garden owners, namely 19.4%. There is a positive and significant influence between price (X2) on the income of garden owners, namely 38.4%. There is a significant influence between production and price variables simultaneously or together on the income of the garden owner.

## SUGGESTION

For oil palm plantation owners, it is advisable to pay attention to increasing the amount of production, good maintenance and the fertilizer application process used so that each harvest period can increase the amount of oil palm production so as to increase the income of land owners. For future researchers, this research is expected to be a reference for further research.

## REFERENCES

Adisasmita, H. Raharjo.2005. *Pembangunan Ekonomi Perkotaan*. Edisi Pertama: Yogyakarta: Graham Ilmu.

Andriani, Evi. 2017. Analisis Sumber Pendapatan Petani Kelapa Sawit. *Jurnal Agrisep.* Vol.16, No. 2.

Anshori, Muslich dan Sri Iswati.2009. *Metode Penelitian Kuantitatif*. Surabaya: Airlangga University Press.

Darma, Budi. 2021. *Statistika Penelitian Menggunakan SPSS ( Uji Validitas, Uji Reabilitas, Regresi Linear Sederhana, Regresi Linear Berganda, Uji t, Uji ,R2)*. Jakarta:Guepedia.

Duli, Nikolaus. 2019. *Metode Penelitian Kuantitatif: Beberapa Konsep Dasar Untuk Penulisan Skripsi & Analisis Data dengan SPSS*. Yogyakarta: Penerbit FE UGM.

Ferdian. R. 2017. Faktor-faktor yang Mempengaruhi Pendapatan Petani Kelapa Sawit di Desa Talang Bukit Kabupaten Muaro Jambi. *Jurnal Ekonomi Sumber Daya dan Lingkungan.* Vol. 5, No. 3. (Diakses tanggal 1 November 2021)

Firdaus, A. 2021. Pengaruh Harga Sawit dan Produktivitas Terhadap Pendapatan Petani Kelapa Sawit (di Desa Tarikan Kec. Kumpeh Ulu Kab. Muaro Jambi). *Skripsi.* Fakultas Ekonomi dan Bisnis Islam Universitas Negeri Sulthan Thaha Saifuddin Jambi. (Diakses tanggal 21 November 2021)

Ghony, M. Djunaidi dan Fauzan Almanshur. 2009. *Metode Pendidikan Pendekatan Kuantitatif*. Malang: UIN Malang Press.

Ghozali, Imam. 2013 . *Aplikasi Analisis Multivariate dengan Program IBM SPSS21 Update PLS Regres*. Semarang: Diponegoro.

Hakim, L 2012. *Prinsip-Prinsip Ekonomi Islam*. Surakarta: Erlangga.

Halim, M. A. 2018. *Teori Ekonomi Mikro Edisi Ketiga.* Jakarta: Mitra Wacana Media.

Hakim, Abdul. 2018. Pengaruh Biaya Produksi Terhadap Pendapatan Petani Mandiri Kelapa Sawit di Kecamatan Segah. *Jurnal Ekonomi STIEP.* Vol.3, No.2. (Diakses tanggal 10 Noveber 2021)

Hasibuan, Duma Yanti. 2019. Analisis Pendapatan Usaha Tani Kelapa Sawit di Kecamatan Angkolan Selatan (Studi kasus Desa Gunung Baringin Musa Jae). *Skripsi.* Fakultas Ekonomi dan Bisnis Islam Institut Agam Islam Negeri Padangsidimpuan. (Diakses 6 November 2021)

Hasibuan, Nova Yolanda. 2018. Pengaruh Harga Sawit dan Produktivitas Terhadap Kesejahteraan Petani Kelapa Sawit di Desa Siamporik Kecamatan Kualuh Selatan Kabupaten Labuan Batu Utara. *Skripsi.* Fakultas Ekonomi dan Bisnis Islam Universitas Islam Negeri Sumatera Utara Medan. (Diakses tanggal 7 November 2021).

Klenten, Yosep. 2016. Faktor-Faktor yang Mempengaruhi Pendapatan Petani Kelapa Sawit di Kecamatan Belitang Hilir Kabupaten Sekadau. *Jurnal Pembangunan dan Pemerataan.* Vol.5, No.2. (Diakses tanggal 15 November 2021)

Magfira R, Tengku. 2019. Pengaruh Produksi dan Harga TBS Terhadap Pendapatan Petani Kelapa Sawit di Desa Sibodak Sosa Jae, Padang Lawas, Sumatera Utara. *Skripsi.* Fakultas Ekonomi dan Bisnis Universitar Sumatera Utara Medan. (Diakses tanggal 16 November 2021)

Mangunjojo, R Sudiro. 2001. *Sosial Ekonomi Masyarakat.* Jakarta: Direktorat Jendral.

N. Aswan dan Y. Tanjung. 2021. Analisis Faktor-faktor Pendapatan Petani Kelapa Sawit (Studi kasus: Desa Terapung Raya Muara Batangtoru). *Jurnal Education and Development).* Vol.9, No.1. (Diakses tanggal 17 November 2021)

Nasution, M. E. 2007. *Pengenalan Eksklusif Ekonomi Islam*. Jakarta: Kencana Prena Media Grup.

Noviana, Githa dan Fani Ardiani. 2020. Analisis Pendapatan Petani Kelapa Sawit Sebelum dan Selama Covid-19 ( studi kasus Kabupaten Padang Lawas Utara). *Jurnal ilmu-ilmu Pertanian.* Vol. 16, No 2. (Diakses tanggal 7 November 2021)

Philip, K. 2008. *Manajemen Pemasaran Edisi 12 Jilid 2.* Jakarta: Indeks Grup Gramedia.

Rafidah. 2020. *Pengaruh Modal Usaha, Lama Usaha dan Sikap Kweirausahan Islam Terhadap Pendapatan dan Kesejahteraan Keluarga Wanita Pengerajin Batik Danau Teluk Kota Jambi.* Malang: Ahli Media Pers.

Rahayu, Sri. 2020. Pengaruh Biaya Produksi dan Harga Jual Terhadap Pendapatan Petani Cengkeh Wonokarto Kecamatan Ngadirojo Kabupaten Pacitan. *Skripsi.* Fakultas

Ekonomi dan Bisnis Islam Institut Agama Islam Negeri Ponorogo. (Diakses tanggal 2 November 2021)

Reksoprayitno. 2004. *Sistem Ekonomi dan Demokrasi Ekonomi*. Jakarta: Bina Grafika.

Rianto. 2015. Analisis Pengaruh Modal dan Tenaga Kerja Terhadap Produksi Kelapa Sawit pada PT. Gruti Lestari Pratama Medan. *Jurnal Ekonomi Islam.* Vol.1, No.1. (Diakses tanggal 3 November 2021).

Sodikin, S. S. 2014. *Akuntasi Pengantar I Edisi Kesembilan*. Yogyakarta: Unit Penerbit dan Percetakan Sekolah Tinggi Ilmu Manajeman.

Soekartawi. 2002. *Faktor-faktor Produksi*. Jakarta: Salemba Empat.

Sugiyono. 2008. *Metode Penelitian Kuantitatif Kualitatif dan R&D*. Bandung: Alfabeta.

Triyanto. 2017. Pengaruh Tingkat Pemupukan dan Harga Jual Tandan Buah Segar (TBS) Terhadap Produksi dan Pendapatan Usaha Tani Kelapa Sawit Rakyat Kabupaten Labuanbatu. *Jurnal Argoplasma.* Vol.4, No.2. (Diakses tanggal 1 November 2021)

Wulandari, Sinta. 2018. Faktor-faktor yang Mempengaruhi Pendapatan Petani Kopi di Kabupaten Lampung Barat. *Skripsi.* Fakultas Ekonomi dan Bisnis Universitas Muhammadiyah Yogyakarta. (Diakses tanggal 2 November 2021)

Yanti, Syafri. 2014. Pengaruh Produksi Terhadap Pendapatan Petani Kelapa Sawit di Gampong Alue Poneawa Kecamatan Babahrot Kabupaten Aceh Barat Daya. *Skripsi.* Fakultas Ekonomi Universitas Tengku Umar Meulaboh Aceh Barat. (diakses tanggal 2 November 2021)