Research Trends and Focus on the Impact of Price DeclinesSelling Palm Oil on the Consumption Behavior of West Pasaman Community: A Bibliometric Analysis Vosviwer

[1]**Aisyah Kartini**
[12]UIN Imam Bonjol Padang, Indonesia
[1]Corresponding Author: 2320040025@uinib.ac.id

ABSTRACT: The decline in the selling price of palm oil has a significant impact on both the economy and people's consumption behavior. In terms of the economy, the decline in the selling price of palm oil can reduce the income of farmers and producers which in turn affects their purchasing power. This study aims to map the topic of research on consumption behavior. This study uses a bibliometric research method using bibliographic data using the VOSviewer tool to analyze trends and patterns in a science. The results of the study show a decline in research in the field of consumption behavior over a period of four years from 2020 to 2024. The total search for the keyword consumption behavior on the publish or perish application from Scopus data obtained 183 data from journal articles. In 2023 and 2024 there were no journal publications at all. However, in 2020, 2021 and 2022 there were journal publications with the highest publications in 2020, namely 99 article publications. Meanwhile, the publication of scientific publications that published the most related journals was the journal of retailing and consumer services.

KEYWORDS: Consumption behavior; VOSviewer; Bibliometrics

INTRODUCTION

Oil palm plants are one of the potential commodities that are currently being developed because they have a very strategic role as a source of income for the community, have very good prospects both domestically and abroad and are able to absorb new workers.(Rizki Gemala Busyra, 2014). Apart from being cultivated as a large plantationThis commodity is also being developed as a leading export(Jamilah et al., 2022). Oil palm is an industrial plant that produces cooking oil, industrial oil and fuel. Oil palm plantations have a significant role in contributing foreign exchange to the Republic of Indonesia. So that many forests and plantations are converted into oil palm

plantations.(Haya & Tambunan, 2022). One of the provinces producing palm oil is the province of West Sumatra, especially the West Pasaman Regency. The people of West Pasaman generally make the palm oil plantation sector a leading sector.(Annisa et al., 2022).

Based on BPS data in 2020, the development of oil palm plantations in West Pasaman has had a significant impact on the community's economy. During 2020, the largest plantation production was oil palm with a production volume of 2,710,239.93 tons. And a land area of 290,160 ha. With its development, oil palm plantations have increased the community's economic level and influenced regional development. Almost 90% of the West Pasaman community work as oil palm

farmers. In addition, changes have also occurred in the facilities in West Pasaman, namely in the fields of education, community purchasing power, health and infrastructure.(Putri & Fitrisia, 2021).

Price palm oil commodities depend on consumer demand conditions,(Suwaji & Hermanto, 2019). ARecently, the price of crude palm oil (CPO) has decreased, namely from a price range of Rp 2,900 / kg in 2020 to touching the lowest price of Rp 900 / kg in April 2022 and until November 2022, the price has increased slightly to 1,250 / kg. The cause of the price decline was due to the decline in demand for CPO in various countries, resulting in an increase in domestic stock. There is a great risk to the quality of CPO if domestic stock is in the long term. When viewed from the concept of economic demand and supply, in general if the demand for CPO is low, the price will automatically decrease(Noviana & Ardiani, 2020).

The increasingly declining price of palm oil has caused many palm oil farmers to abandon their palm oil plantations and switch to other businesses to meet their daily needs. This condition is increasingly concerning for potential community self-help groups.(Mulyana & Tamba, 2017). The decline in CPO prices that occurred became a problem and burden for palm oil plantation entrepreneurs. The price of palm oil which has tended to decline lately has greatly affected people's income which will then have an impact on people's consumption patterns.

The price and productivity of palm oil and farmers' income are interrelated values. It can be proven that when the price of palm oil falls, farmers' expenses will be increasingly difficult. According to Heriyanto, if the price of palm oil falls, farmers' income will also fall because with the same amount of productivity but the price of palm oil falls, income will automatically fall.(Heriyanto, 2016). According to Suwaji, the price of palm oil has an impact on the level of economic welfare of the community. The better the price of palm oil will have an impact on increasing the level of farmer welfare, and

vice versa, the lower the selling price of palm oil will have an impact on the level of decline in the level of community welfare.(Suwaji & Hermanto, 2019). According to Mulyani, consumption and demand for a commodity are determined by the price and income levels. If the price in a region is assumed to be homogeneous, it can be hypothesized that residents (households) with different income levels will have different consumption and demand patterns. The main problem that affects food consumption patterns is that the price of the commodity in question fluctuates and tends to increase, the availability of materials is increasingly limited, the level of income and tastes of the community change.(Mulyani, 2021). Based on the description above, the author is interested in conducting research with the title Trend and Focus of Research on the Impact of Declining Palm Oil Selling Prices on Community Consumption Behavior: A Vosviwer Bibliometric Analysis.

METHODS

This research applies the bibliometric analysis method, namely an approach method that uses bibliographic data to evaluate research trends and patterns in scientific disciplines.(Elfi Sahara, 2024). Bibliometric research on the impact of falling palm oil prices on consumption behavior, researchers use secondary data obtained from Scopus searches on the publish or perish application as many as 183 data from journal articles, in this study the technique used in data searches is to collect data with the key consumption behavior. After collecting consumption behavior data, the study uses a bibliometric analysis tool, namely Vosviwer, to visualize research patterns and trends in the publication. This tool can help researchers identify the main research topics in the field of community consumption behavior.

RESULT AND DISCUSSION

BASIC CONCEPT

Palm oil plays an important role in the community's economy, including as a source of income for farmers. Currently, the selling price of palm oil has decreased. Various problems that arise due to the decline in the price of palm oil are that people's basic needs are not met, both secondary and primary needs, and also affect people's consumption behavior. As is the case in the West Pasaman Regency community. The decline in the selling price of palm oil has made the community economically difficult. The source of people's livelihoods depends on palm oil plantations, if the price of palm oil falls, it will affect their consumption patterns.

There are several studies related to the decline in palm oil prices on consumption behavior, including the analysis of household consumption patterns of oil palm farmers in Labuhan Batu Regency with the results of the study, namely the estimation results found that all independent variables were positive and significantly influenced the amount of food consumption, conversely negative and significant on non-food consumption expenditure. The estimation results also found that the amount of consumption of various types of urban food was smaller than the consumption of inland communities by Rp1,248,000. However, it is greater than the consumption of coastal community food, which is Rp1,323,800. while the amount of expenditure on consumption of various types of non-food in urban communities is greater than the consumption of non-food inland communities by Rp2,782,000. and also greater than the consumption of non-food in coastal communities, which is Rp1,376,000. The variation in the ability of independent variables to explain food consumption is 92.5 percent and non-food consumption expenditure is 87.4 percent. The model specifications are very good with the model being free from violations

of the classical assumption of multicollinearity(Nasution et al., 2020).

The impact of oil palm plantations on the economy of residents in Gampong Paya Baro, Teunom District, Aceh Jaya Regency. The results of the study show that oil palm plantations have had a significant impact on the economy of residents in Gampong Paya Baro.(Fahrul Adhar, 2022).

The studies have several aspects of similarity, but none of them have discussed bibliometric analysis. The difference is new in research with the hope of being a reference in finding related journal references.

Consumption comes from the English word consumption.Consumption is spending on goods and services made by households with the aim of meeting the needs of the people making the purchases. People's spending on food, clothing, and other necessities is classified as spending or consumption. Goods produced for use by the community to meet their needs are called consumer goods. The consumption function is a curve that describes the nature of the relationship between the level of household consumption in an economy and the national income (disposable income) of the economy.

Consumption is an action to reduce or use up the economic utility of an object. Meanwhile, according to Drakem Bannoch, consumption isis the total expenditure to obtain goods and services in an economy within a certain period of time (in one year) expenditure:

1. Factors that determine the level of consumption

    TheoryConsumption is a form of reflection of consumer behavior to meet their needs for goods and services. There are several factors that determine the level of consumption for normal goods, namely:

a. Incomeconsumer

b. Price level

c. Interest rate

d. Socio-economic

e. Appetite

Main factorsWhat determines a consumer's consumption of goods and services is the consumer's income level. Income level has a positive effect, meaning that if consumer income increases, then their consumption expenditure will also increase, and vice versa. This behavior is especially for normal goods or goods whose behavior follows the laws of supply and demand.

Consumer income can be divided into two, namely nominal income and real income. Nominal income is the income that consumers receive in nominal amounts (values listed on money). While real income is income whose amount has been deflated by changes in the prices of goods and services. Real income can be calculated by dividing nominal income by the price index of goods and services (consumer price index). Real income is the most realistic indicator used to measure the level of welfare of a consumer, because real income has taken into account price increases or decreases.

The price level of goods and services in the market also determines a consumer's consumption expenditure. This is related to the real income received by the consumer. In nominal terms, consumer income may be the same each period, but if prices increase over time, this will result in a decrease in a person's purchasing power. In other words, the price level is negatively related to consumption expenditure. If prices increase, consumption expenditure will decrease, and vice versa.(Suparmono, 2018).

consumption expenditure is influenced by economic, social,and culture. In addition to the five factors discussed at the beginning of this chapter, there are several factors that determine the size of a society's consumption expenditure, namely: Distribution of national income, Amount of society's wealth in the form of liquid assets, Amount of durable consumer goods, Company financial policies, Marketing policies of a company, Society's predictions of future price changes(Priyono & Candra, 2016).

Bibliometric studies are research methods that use quantitative data to analyze published literature, usually in the form of articles, journals, books, or other publications. Bibliometric studies include quantitative measurements such as number of publications, citation frequency, author collaborations, and network analysis and scientific validation to understand patterns and trends in knowledge production and scientific communication.(Budianto & Dewi, 2023). Bibliometric studies can be used to identify and study the most widely discussed research topics in a field, map collaborative networks between researchers and institutions, and estimate the impact or influence of a study using indicators such as the number of citations or the journal impact factor. This method can also provide information on the development of publications in a field over a certain period of time, as well as compare scientific production between countries, institutions, or specific researchers. In practice, bibliometric studies are often used in scientific research and as a tool in decision-making in various fields, such as public policy development, evaluation of institutional or researcher performance, and in market or industry research.(Budianto, 2023). Bibliometric studies are generally conducted using specialized bibliometric software that can automatically process and analyze data from academic databases such as Scopus, Web of Science, or Google Scholar. The results of bibliometric studies can provide valuable insights for researchers, companies, and academic institutions in understanding trends in knowledge production and influence in the field.(Budianto & Dewi, 2023).

One of the software that is often used in bibliometric studies is VOSviewer.(Hellen Monica Ghaby Ayu Saputra, 2022). VOSViewer is a software used to visualize bibliometric maps that include journals, authors, titles, publications, and others. In addition, the VOSViewer program also has the ability to map types of bibliometric analysis, generate databases from primary bibliographies, and can also perform advanced visualizations using visual magnification. This tool can present specific information about bibliometric graph maps to make it easier to interpret a network or correlation in a literature citation(Budianto & Dewi, 2023).

Research Trends in Consumption Behavior

Reaction from the search for scientific journal publications on consumption behavior during a 4-year period, namely from 2020 to 2024, the total search for the keyword consumption behavior on the publish or perish application from Scopus data. obtained 183 data from journal articles. With the highest number of article publications in 2021. The lowest number of article publications was in 2023 and 2024. The following is a picture of the development of journal article publications in 2018-2023.

Figure 1. Number of publications of articles on consumption behavior
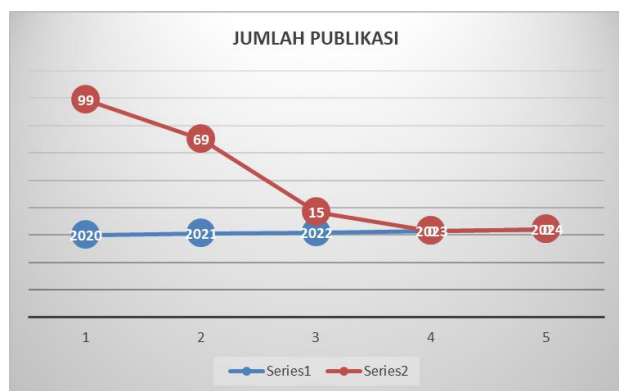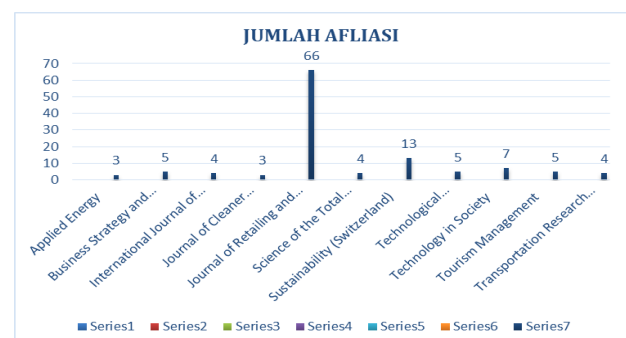

Source: processed data, 2024

From the image above, we can see the trend of publication of consumption behavior journal articles from 2020 to 2024 indexed by Scopus in the publish or perish application search. Based on the image above, it shows a decrease in article publications, in 2023 and 2024 there were no article publications at all. However, in 2021, 2022 and 2023 there were article publications with the highest article publication in 2020, with a total of 99 journal articles published. On the other hand, the lowest publication occurred in 2023 and 2024 where there were no articles published. Although there were no journal publications in 2024, this does not rule out the possibility of article publication considering that this research was conducted in mid-2024.

However, in general, the publication of articles on consumption behavior in the 2020-2024 period experienced a significant decline. This also indicates that there are obstacles and challenges in conducting research so that the publication of consumption behavior articles decreased. In fact, recently oil palm farmers have been shocked by the significant decline in palm oil prices in 2022, resulting in a decrease in consumption for oil palm farmers. The publication of consumption behavior articles should also increase. So that the many publications will help the government in taking the right policies.

Ranking of institutions and journals publishing scientific publications on consumption behavior:

In the table there are 11

A number of affiliates/institutions that publish the most research articles on consumption behavior. The institution that publishes the most related research results is the Journal of Retailing and Consumer Services, which reaches 66 articles, and conversely the lowest is Applied Energy, Journal of Claner Production as many as 3 and the International Journal of Environmental Research and Public Health, and Transportation Research Part D: Transport and Environment as many as 4.

Bibliometric Mapping of Research on Consumption Behavior

In the context of research on consumption behavior, visualizations of search results on the Garuda website (digital reference portal) can be displayed, exported in RIS (research information system) format, inputted and analyzed with Vosviewer. This visualization is produced to provide an explanation and understanding of how the relationship between keyword elements related to consumption behavior. In the next section, the findings generated from this visualization will be analyzed. The following are the results of data processing visualization using data processing using Vosviewer with the keyword consumption behavior.

Utilizing network visualization to illustrate keyword patterns and distribution

Through data analysis using Vosviewer software, a map of publications with keywords was obtained from the network visualization results, this shows the existence of a relationship or network between keywords in the field of consumption behavior.
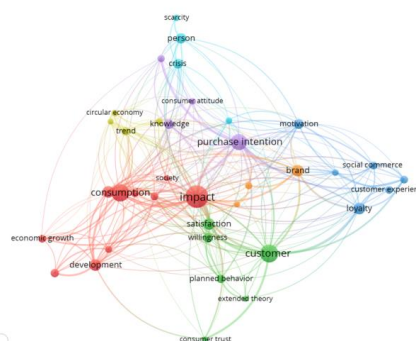

Source: processed data from Vosviwer

Figure 2 depicts the relationship of growth maps around consumption behavior. The results of network visualization In co-word, the development of research around consumption behavior is divided into 7 clusters and 37 topics as follows.

1. The first cluster is colored red with the most prominent keyword, namely consumption, which consists of 27 links with a total relationship strength of 277 and 64 occurrences. The word consumption is interrelated with other keywords including consumption, development, economic growth, environment, environmental sustainability, impact, increase, renewable energy consumption, society and sustainable development.

2. The second cluster is green with the most prominent keyword, namely consumer trust, which consists of 25 links with a total relationship strength of 284 and 66 occurrences. The word consumer trust is interrelated with other keywords, namely customer, extended theory, planned behavior, statisfaction, willingness.

3. The third cluster is blue with the most prominent keyword, namely customer engagement, which consists of 18 links with a total relationship strength of 150 and occurrences of 28. The word customer engagement is interrelated

with other keywords including customer experience, e-commerce, loyalty.

4. The fourth cluster is yellow with the most prominent keyword, namely circular economy, which consists of 17 links with a total relationship strength of 77 and 16 occurrences. The word circular economy is interrelated with other keywords, including consumer behavior, sustainability and trend.

5. Cluster 5 is purple with the most prominent keyword, namely consumer attitude. Which consists of 28 links with a total relationship strength of 297 and occurrences 53. The word consumer attitude is interrelated with other keywords including consumption value and knowledge.

6. Cluster 6 is turquoise with the most prominent keyword, namely crisis, which consists of 15 links with a relationship strength of 52 and occurrences of 22. The word crisis is interrelated with other keywords, including person, scarcity and structural equation moc.

7. Cluster 7 is orange with the most prominent keyword sustainable consumption which consists of 15 links with a relationship strength of 52 and occurrences of 22.

Utilization Of Network Visualization To Depict Patterns And Distribution Of Keywords Overlay Visualization
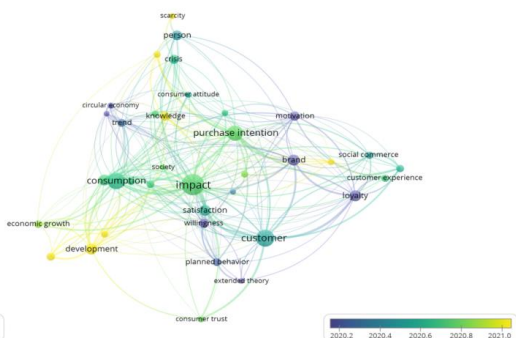
Source: Vosviwer processed data, 2024

Figure 2 explains the visualization of publications each year. The movement of research with the theme can be seen from the image listed for each keyword. The darker it is, the older the publication year is, while the lighter it is, the newer the publication. 2020 has the darkest color, which is dark blue, and 2021 is yellow. For prospective researchers, it is easier to find out the trend of their publication themes each year by looking at the color of each keyword icon. The lighter the color, the more recently the article was published, while the darker the color of each keyword icon indicates that the article was published longer ago. The oldest publication in 2020 related to consumption behavior can be seen from the dark blue keywords, namely motivation, loyalty, brand, trend, etc. Publication in 2021 is represented by the color yellow such as development, scarcity, knowledge, and others. From this data, it can be concluded that the focus of the study is not limited to consumption behavior issues but rather to things more than consumption behavior.

Utilizing Density Visualization To Depict Patterns And Distribution Of Keywords Overlay Visualization
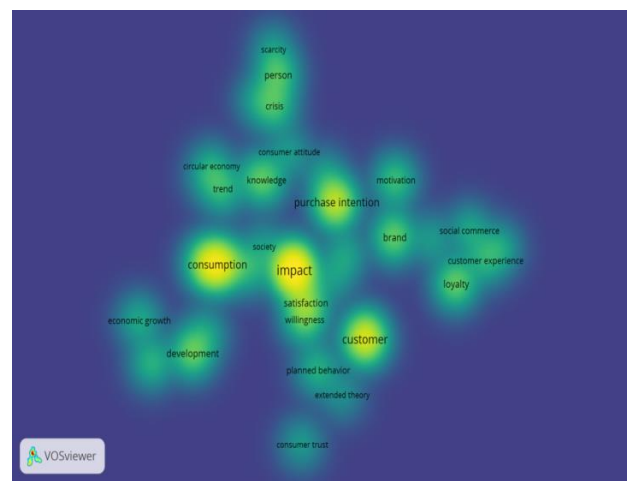
Source: Vosviwer processed data, 2024

In the third image above is a visualization of keywords based on density

visualization. In this visual, the brighter or lighter the color indicates that many articles have been done with the keyword. Then the bluer or darker the color indicates that not many have done research. Meanwhile, related to the keyword. This could be a gap for further researchers to fill in the gaps for subsequent researchers. As in the word consumption, it is a keyword that has been widely worked on by researchers because it shows a bright color. While the keywords social commerce, development and others that are in a darker color indicate that not many studies use this item or keyword. Therefore, this visualization provides a broad picture to further researchers who are looking for themes or topics related to research.

CONCLUSION

Based on the results of the discussion above, it is concluded that the development of research in the field of consumption behavior over a period of four years, namely from 2020-2024 from the Scopus database with the help of the publish of perish application, there was a decrease in article publications, namely in 2023 and 2024 there were no article publications at all, but this does not rule out the possibility of article publication in 2024 considering that this research was conducted in mid-2024. Meanwhile, the highest publication occurred in 2020 with a total publication of 99 research journal articles. MeanwhileInstitutional and journal rankings Publishing Scientific Publications Regarding consumption behavior, institutions that publish a lot of related journals arejournal of retailing and consumer services.

REFERENCE

Annisa, W., Marleni, M., & Rahmadani, S. (2022). Kajian Sosiologi Ekonomi Dalam Transaksi Jual Beli Sawit Di Jorong Pasir Panjang, Kecamatan Ranah Batahan Kabupaten Pasaman Barat. *Jurnal Pendidikan Sosiologi Dan Humaniora*, *13*(2), 781. https://doi.org/10.26418/j-psh.v13i2.58076

Budianto, E. W. H. (2023). Pemetaan Penelitian Rasio Financial Value Added (FVA) pada Perbankan Syariah dan Konvensional: Studi Bibliometrik VOSviewer dan Literature Review. *Bongaya Journal for Research in Management Vol.*, *6*(3), 1–10.

Budianto, E. W. H., & Dewi, N. D. T. (2023). Pemetaan Penelitian Rasio Biaya Operasional terhadap Pendapatan Operasional (BOPO) pada Perbankan Syariah dan Konvensional: Studi Bibliometrik VOSviewer dan Literature Review. *JAF- Journal of Accounting and Finance*, *7*(1), 34. https://doi.org/10.25124/jaf.v7i1.5995

Elfi Sahara. (2024). MAPPING RESEARCH TOPICS REGARDING RESOLVING SHARIA ECONOMIC DISPUTES : BIBLIOMETRIC ANALYSIS STUDY. *SAQIFAH : Jurnal Hukum Ekonomi Syariah*, 31–38.

fahrul Adhar, Mirza Desfandiunan, D. peternakan dan. (2022). DAMPAK PERKEBUNAN KELAPA SAWIT TERHADAP PEREKONOMIAN WARGA DI GAMPONG PAYA BARO KECAMATAN TEUNOM KABUPATEN ACEH JAY. *Https://Disbunak.Paserkab.Go.Id/Pages/Indikator-Kinerja-Utama-Iku*, 73329. https://doi.org/10.24815/jpg.v

Haya, S. F., & Tambunan, K. (2022). Dampak Penurunan Harga Sawit terhadap Kesejahteraan Petani Sawit di Padang Lawas Utara Sumatera Utara. *Dampak Penurunan Harga Sawit Terhadap Kesejahteraan Petani Sawit Di Padang Lawas Utara Sumatera Utara*, *1*(1), 129–138.

Hellen Monica Ghaby Ayu Saputra. (2022). El Mudhorib Pemetaan Topik Penelitian Seputar Koperasi Jasa Keuangan Syariah (KJKS): Studi Bibliometrik VOS viewer dan Literature Review. *Jurnal Kajian Ekonomi Dan Perbankan Syariah,* *3*(2), 131–138. http://e-journal.iainfmpapua.ac.id/index.php/el mudhorib

Heriyanto. (2016). Prilaku Konsumsi Pangan

Sumber Karbohidrat Rumahtangga Petani Kelapa Sawit di Kecamatan Kandis. *Jurnal Ilmiah Pertanian*, *13*(1), 22–30.

Jamilah, J., Mawardati, M., & Syamni, G. (2022). Kontribusi Usahatani Kelapa Sawit Dalam Meningkatkan Kesejahteraan Rumahtangga Petani Di Kabupaten Aceh Utara. *Mimbar Agribisnis: Jurnal Pemikiran Masyarakat Ilmiah Berwawasan Agribisnis*, *8*(1), 387. https://doi.org/10.25157/ma.v8i1.6815

Mulyana, A., & Tamba, M. G. (2017). *Dampak Penurunan Harga Tbs Terhadap Keberlanjutan Usahatani Sawit Ditinjau Dari Tingkat Kesejahteraan Petani Swadaya Di Kabupaten Musi Bayuasin Sumatera Selatan*. *1*, 37–44.

Mulyani, M. (2021). Analisis Harga Tandan Buah Segar Kelapa Sawit di Provinsi Jambi. *Jurnal Ekonomi Pertanian Dan Agribisnis*, *5*(2), 315–322. https://doi.org/10.21776/ub.jepa.2021.005.02.04

Nasution, Z., Rizal, K., & Lubis, J. (2020). Analisis Pola Konsumsi Rumah Tangga Petani Kelapa Sawit di Kabupaten Labuhanbatu. *Journal of Economic, Bussines and Accounting (COSTING)*, *4*(1), 44–53.

https://doi.org/10.31539/costing.v4i1.1347

Noviana, G., & Ardiani, F. (2020). Analisis Pendapatan Petani Kelapa Sawit Sebelum dan Selama Covid-19 (Studi Kasus: Kabupaten Padang Lawas Utara). *Mediagro*, *16*(2), 1–8. https://doi.org/10.31942/md.v16i2.3751

Priyono, & Candra, T. (2016). Esensi Ekonomi Makro. In *Journal of Chemical Information and Modeling*.

Putri, F. D., & Fitrisia, A. (2021). Perkebunan Sawit dan Kehidupan Perekonomian di Pasaman Barat 2004-2020. *Kronologi*, *3*(1), 31–44.

Rizki Gemala Busyra. (2014). Dampak Revitalisasi Perkebunan Pada Komoditas Kelapa Sawit Terhadap Perekonomian Propinsi Jambi. *Jurnal Ilmiah Universitas Batanghari Jambi*, *14*(1), 30–36.

Suparmono. (2018). 6.Buku Pengantar Ekonomi Makro. *Pengantar Ekonomi Makro*, 1–278.

Suwaji, S., & Hermanto, H. (2019). Dampak Penurunan Harga Kelapa Sawit Terhadap Kesejahteraan Petani Desa Titian Resak Kecamatan Seberida Kabupaten Indragiri Hulu. *Jurnal Manajemen Dan Bisnis*, *8*(1), 150–161. https://doi.org/10.34006/jmbi.v8i1.65*.*