IMPACT OF COVID-19 PANDEMIC ON RUBBER FARMER HOUSEHOLD IN TANDING MARGA VILLAGE, PENUKAL ABAB LEMATANG ILIR REGENCY

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ABSTRACT

Rubber prices in 2020 during the Covid-19 pandemic decreased in March, April, and May. The decline in rubber prices in the domestic market was caused by a decline in world rubber demand, this affected the selling price of rubber at the farmers' level. The impact of the decline in rubber prices also affects the income of rubber farmers who depend on rubber farming for their lives. This condition affects in the decreasing of farmers' purchasing power for primary and secondary products. This study aimed to analyze the differences between income and household consumption expenditure of rubber farmers before and during the Covid-19 pandemic in Tanding Marga Village. The study used survey method. Data collection was carried out in March 2021. Sampling was done using the simple random sampling method. The total sample for the analysis tool was 41 rubber farmers from 474 total rubber farmers. The data processing method used a paired two-sample t-test analysis tools. The results showed that there were differences in the income and household consumption expenditure of rubber farmers before and during the Covid-19 pandemic. Farmers income decreased -12.61% during the Covid-19 pandemic. Income also affects consumption expenditures of farmer households. The household consumption expenditure decreased as much as -14.76% during the Covid-19 pandemic. Based on the results of the t-test, there are significant differences between farmer household consumption expenditures before and during the Covid-19 pandemic. Farmers should implement adaptation strategies to overcome the decline in income, which is by finding other income sources.

Keywords: *decreased, household consumption expenditure, income, rubber price*

BACKGROUND

Rubber is one of export commodities in Indonesia. Most of Indonesia's natural rubber production is exported to foreign countries. Indonesia's natural rubber exports reach five continents namely Asia, Africa, Australia, America and Europe with the main market share in Asia. In 2020, the top five importing countries for Indonesia's natural rubber are the United States, Japan, China, India and Korea. Indonesia's natural rubber exports reached 2.28 million tonnes with a total value of US$ 3.01 billion (BPS, 2020). As a plantation crop, rubber is one of the current sources of income. The climate and environment in Indonesia are main capital to develop the potential of natural rubber. Thus, it can lead Indonesia as one of the natural rubber producing countries in the world. Indonesia also has relatively advance human resources which can support the development of rubber plantations in Indonesia (Permana and Izzati, 2010).

South Sumatra is areas that contributes high production of rubber in Indonesia. One of the supporting factors is the physical condition of South Sumatra Province which is very effective and profitable to be used as rubber plantation land. Based on data from the Central Bureau of Statistics (2020), during 2018 rubber production in South Sumatra reached 1.31 million tons/ha while in 2019 rubber production reached 1.3 million tons/ha. Based on that, there was a decrease in rubber production in South Sumatra by 0.01%. Penukal Abab Lematang Ilir (Pali) Regency is one of area in South Sumatra that contributed 80,460 tons of rubber production in 2019 with a land area of 71,423 ha.

As one of the export commodities, the price of rubber is strongly influenced by the world's rubber demand. The world rubber price is formed based on the world market mechanism. The rise and fall of the world rubber price will be followed by the domestic rubber price. Covid-19 pandemic resulted in a decrease in world rubber demand and prices (Nugraha & Sahuri, 2019). This situation in line with other research (Antoni & Purbiyanti, 2015), which states that rubber prices at the farmer level are elastic to changes in world prices. When there is a decline in world rubber prices, the selling price at the farmer level also decreases. The problem of selling also occurs in the international market. It is not only faced by rubber commodities, but also faced by all plantation commodities. The decline in domestic rubber prices due to the decline in international rubber prices will greatly affect the farmers livelihood. The influence of the large purchase price of rubber determines the standard of living and enthusiasm of farmers in farming. The decline in rubber prices has a lot of impact on the socio-economic conditions of rubber farmers, because more than 40% of South Sumatra's population depends on this commodity (Syarifa et al., 2016).

According to rubber price data, from the Indonesian Rubber Farmers Association (Gapkindo), rubber prices in 2020 decreased compared to rubber prices in 2019. The average rubber price in 2019 was Rp 20,524 and in 2020 it dropped to Rp 17,270, meaning that there was a reduction in the average price of Rp 3,254 or 15.85%. The decline in rubber prices in the domestic market due to the decline in international rubber demand which affects the purchase price of rubber at the farmer level. This situation leads the purchasing power of farmers decreases to meet primary and secondary goods. Due to this decline in purchasing power, the regional economy also in the weak condition. Thus, traditional markets and modern markets in both regions and cities seemed desolate (Syarifa et al., 2016).

Household consumption is the important component in economy aggregate trading (Hanum, 2017). The smallest unit in society is the household. It can be said that the household income reflects the income of the community. The amount of income of farmer households can be analyzed through consumption budgets. This income will ultimately affect the consumption patterns of each household (Prasetyoningrum et al., 2016). The Covid-19 pandemic has had an impact on the income and expenditure of household consumption of rubber farmers in Tanding Marga village, Penukal Utara District, Pali Regency. Pali Regency is one of the regions in South Sumatra where most of the populations' income comes from rubber plantations. The price of raw rubber in the market is the main trigger of the large income of community in Desa Tanding Marga. As a result of the low price of rubber, the income of farmers in Tanding Marga Village has decreased, so that farmer households are forced to do savings so that their income can be sufficient to meet their daily needs. Sometimes farmers are forced to borrow money from their neighbors, because their income is insufficient. Farmers there stated, that their income was only enough to buy rice and spices. For the

side dish, sometimes they look for edible leaves in the garden. At a time when rubber prices were high, basic needs and secondary needs were met, they could buy motorbikes, televisions, refrigerators, etc. When the price of rubber fell as in the Covid-19 pandemic, they also have to regulate consumption patterns so that their daily needs can be met.

Tanding Marga Village is one of the villages in Penukal Utara District, Pali Regency with an area of 3,200 ha. The total population of Tanding Marga Village is 3,635 people in which 88% of population are rubber farmers, 2% civil servants, 5% traders and 5% oil palm farmers. Farmers' rubber production averages 60 kg/ha per week in the form of thin slabs. Meanwhile, rubber production in average, based on BPS data in 2020, is 80.46 kg/ha/week. As described in background, the purpose of this study is to analyze the differences in income and expenditure of farmers' household consumption before and during the Covid-19 pandemic in Tanding Marga Village, Penukal Utara District, Pali Regency. The novelty of this study is finding about economic impact of Covid-19 pandemic to rubber farmers household.

RESEARCH METHODS

The method used in this study was the survey method. Researchers took samples from a population and used a list of questionnaires as a basic data collection tool in Tanding Marga Village, Pali Regency. The sampling method is carried out by the simple random sampling method. The random technique is that researchers use an online application, by accessing www.randomizer.org and entering a population of 474 farmers with an error rate of 15% to get the sample. Total population of rubber farmers in Tanding Marga Village is 474 rubber farmers who have a land area about 1 to 2 hectares. The number of samples used in the study was 41 samples. The data used in this study is primary data.

The data obtained from the field is then processed and presented in tabulation form, followed by mathematical calculations using computer programs such as Microsoft Excel and statistical analysis with the SPSS 20.0 (Statistical Product and Service Solutions) program. To calculate the income of rubber farmers Desa Tanding Marga before and during the Covid-19 pandemic, it is possible to collect production data and the total cost of production per month in the form of tabulations, then income calculations can be carried out. To calculate income using the following income formula (Kurniawan and Made, 2015).

$$Pd = Pn - BTx_1x_1x_1$$
$$Pd = Pn - BTx_2x_2x_2$$

Information:

Pd : income of rubber farmers before x_1 the Covid-19 pandemic (Rp/land area/yr)

Pd : income of rubber farmers during x_2 the Covid-19 pandemic (Rp/land area/yr)

Pn : revenue of rubber farmers before x_1 the Covid-19 pandemic (Rp/land area/yr)

Pn : revenue of rubber farmers during x_2 the Covid-19 pandemic (Rp/land area/yr)

BT : total cost of rubber production before the x_1 Covid-19 pandemic (Rp/land area/yr)

BT : total cost of rubber production during x_2 the Covid-19 pandemic (Rp/land area/yr)

To calculate the consumption expenditure is the total of household food and non-food consumption expenditures before and during the Covid-19 Pandemic. This calculates using the following formula.

$$C_1 = C_{P1} + C_{Np1}$$
$$C_2 = C_{P2} + C_{Np2}$$

Information:

C_1 : total household consumption before the Covid-19 pandemic (Rp/month)
C_2 : total household consumption during the Covid-19 pandemic (Rp/month)
C_{P1} : total food consumption before the Covid-19 pandemic (Rp/month)
C_{P2} : total food consumption during the Covid-19 pandemic (Rp/month)
C_{NP1} : total non-food consumption before the Covid-19 pandemic (Rp/month)
C_{NP2} : total non-food consumption during the Covid-19 pandemic (Rp/month)

To analyze the differences in income and expenditure of household consumption of rubber farmers before and during the Covid-19 pandemic, using t-test (paired sample t-test). The hypotheses proposed in this study are:

H_0 : there is no difference in the income and expenditure of household consumption of rubber farmers before and during the Covid-19 pandemic.

H_1 : there are differences in income and expenditure of household consumption of rubber farmers before and during the Covid-19 pandemic.

If the value of Sig. $> \alpha = 0.05$ then accept H_0 means that there is no difference, if Sig. $\leq \alpha = 0.05$ then reject H_0 means that there is a difference.

RESULTS AND DISCUSSION

Income Analysis of Rubber Farmers
Fixed Costs of Rubber Farming

The fixed costs of rubber farming are obtained from the depreciation costs of tools used to carry out rubber farming activities. The fixed costs calculated are fixed costs in 2019 before the Covid-19 pandemic and 2020 during the Covid-19 pandemic. The average depreciation cost of the tools before and during pandemic can be seen in Table 1.

Table 1. Average Fixed Cost of Rubber Farming Before and During the Covid-19 Pandemic

No	Description	Before the Covid-19 Pandemic (Rp/la/Yr)	During the Covid-19 Pandemic (Rp/la/Yr)	Difference (Rp/la/Yr)	Percentage Change (%)
1.	Hoe	17,073	17,073	0	0.00
2.	Machete	17,220	17,220	0	0.00
3.	Tapping Bowl	267,683	267,683	0	0.00
4.	Gutter Sadap	26,768	26,768	0	0.00
5.	Tapping Knife	23,902	23,902	0	0.00
6.	Bucket	41,951	41,951	0	0.00
7.	Freezer Tubs	126,220	126,220	0	0.00
8.	Bowl Ring	133,841	133,841	0	0.00
9.	Handsprayer	69,024	69,024	0	0.00
	Total	**723,683**	**723,683**	**0**	**0.00**

Table 1 shows that there is no difference between total fixed costs before and during the Covid-19 pandemic. This is because the fixed costs are calculated from the depreciation costs using the straight-line method. There was no change in the tools used before and during the Covid-19 pandemic. Fixed costs are types of costs that do not change or are static. The total fixed cost Rp 723,683/la/yr. The highest fixed cost is for tapping bowls, which is Rp 267,683. The number of tapping bowls used is depended on the number of rubber trees that exist, the more used, the greater the cost.

Variable Costs of Rubber Farming

The variable costs used in this study are coagulant, fertilizers, pesticides, and labor. The average variable costs before and during the Covid-19 pandemic can be seen in Table 2. This table show that before the Covid-19 Pandemic, the total variable cost was Rp 2,621,854/la/yr, while for variable cost during the Covid-19 pandemic was Rp 2,495,976/la/yr. The difference between the two is Rp -125,878/land area/year, with a percentage change of -4.8 0 percent.

The decrease in total variable costs during the Covid-19 pandemic occurred because the average farmer did not use production cost inputs such as fertilizer and paid labor during the Covid-19 pandemic. The inability of farmers to buy fertilizer during the Covid-19 pandemic was caused by the decrease in farmers' income due to the decline in rubber prices during the Covid-19 pandemic. There are several variable cost components that have increased including coagulant and herbicides.

Table 2. The Average Variable Cost of Rubber Farming Before and During Covid-19 Pandemic

No	Description	Before the Covid-19 Pandemic (Rp/lg/yr)	During the Covid-19 Pandemic (Rp/lg/yr)	Difference (Rp/lg/yr)	Percentage of Change (%)
1.	Freezer Materials	365,268	450,732	85,464	23.39
	a. Ant Acid	365,268	450,732	85,464	23.39
2.	Fertilizer	82,195	0	-82,195	100.00
	a. Urea	51,829	0	-51,829	100.00
	b. SP 36	14,634	0	-14,634	100.00
	C. KCl	15,732	0	-15,732	100.00
3.	Herbisida	281,707	309,878	28,171	10.00
	a. Round Up	281,707	309,878	28,171	10.00
4.	Workforce	1,892,683	1,735,366	-157,317	-8.31
	a. In the Family				
	Spraying	1,034,146	858,537	-175,609	-16.98
	Fertilization	59,756	0	-59,756	100.00
	b. Outside the Family				
	Spraying	701,220	876,829	175,609	25.04
	Fertilization	97,561	0	-97,561	100.00
	Total	**2,621,854**	**2,495,976**	**-125,878**	**-4.80**

Total Cost of Rubber Farming Production

The total cost of production is derived from the summation of total fixed costs and variable costs. The size of the cost of production can affect income, the greater the cost of production, the greater the reduction in income. Average total cost of production before and during the Covid-19 pandemic can be seen in Table 3.

Table 3. Average Cost of Total Production Before and During the Covid-19 Pandemic

No	Description	Before the Covid-19 Pandemic (Rp/la/yr)	During the Covid-19 Pandemic (Rp/la/yr)	Difference (Rp/la/yr)	Percentage of Change (%)
1	Fixed Costs	723,683	723,683	0	0.00
2	Variable Costs	2,621,854	2,495,976	-125,878	-4.80
	Total	**3,345,537**	**3,219,659**	**-125,878**	**-3.76**

Table 3 shows that the average total cost of production before the Covid-19 pandemic was Rp 3,345,537/la/yr. During the Covid-19 pandemic, the average total cost of production was Rp 3,219,659/la/yr. The decrease in production costs is -Rp 125,878/la/yr or -3.76%. The total cost of production before the covid-19 pandemic was greater than during the Covid-19 pandemic. This was influenced by variable costs where there was a reduction in the use of variable inputs such as fertilizer and labor costs during the Covid-19 pandemic.

Revenue and Income of Rubber Farming

The total revenue before pandemic was obtained from April 2019 to March 2020, while during pandemic was obtained from April 2020 to March 2021. Revenue is influenced by the production and rubber prices. The higher the price, the higher the revenue obtained by farmers, on the contrary, the lower the price, the lower the revenue that will be obtained by farmers. Table 4 shows the average revenue and income of farmers from rubber farming before and during pandemic.

Table 4. Average Revenue and Income of Rubber Farming Before and During the Covid-19 Pandemic

No	Description	Before the Covid-19 Pandemic	During the Covid-19 Pandemic	Difference	Percentage Change (%)
1.	Production (kg/la/yr)	431	434	3	0.69
2.	Price (Rp/kg)	8,755	7,392	-1,363	-18.43
3.	Revenue (Rp/la/yr)	44,307,073	39,091,598	-5,215,475	-11.77
4.	Total Cost (Rp/la/yr)	3,345,537	3,219,659	-125,878	-3.76
5.	Income (Rp/la/yr)	40,961,536	35,871,939	-5,089,597	-12.43

Based on Table 4, the average rubber production before the Covid-19 pandemic in Tanding Marga Village was 431 kg/la/yr, while during the Covid-19 pandemic was 434/la/yr. This means that there is a difference of 3 kg/la/yr or 0.69%. The highest Rubber price before pandemic occurred in October 2019, which was Rp 10,000/kg. Meanwhile, the lowest price was in April 2020 which about Rp 5,000/kg. The Covid-19 pandemic has emerged in various policies such as restrictions on the entry and exit of goods, postponement of rubber purchases, regional quarantine, or lockdown. Therefore, the outbreak of the Covid-19 pandemic in various countries has caused a low performance and sharp decline of export. The decline in manufacturing activity and the disruption of export-import logistics activities have led to a decrease in demand and world agricultural product prices (Muliati, 2020). There is a decline in world rubber prices, it also causes the selling price at the farmer level also decreases.

The average revenue before pandemic was Rp 44,307,073/la/yr, while the during pandemic was Rp 39,091,598/la/yr. The decrease in farmer revenue was -Rp 5,215,475/la/yr or -11.77%. The average revenue before pandemic were greater than during pandemic. The decline in revenue occurred due to a decrease in rubber prices. Price fluctuations can affect farmers' revenue. Price is one of the factors that play a role in farmers' revenue and income. The influence of changing prices and productivity has resulted changing in farmers' revenues and incomes (Hardiyanti, 2016). The increase in rubber prices will reduce the contribution of rubber farmers' incomes to household incomes which will determine how much expenditure for next production, consumption, and investment (Jannah, 2021).

The average income from rubber farming is obtained from the difference between revenue and total costs. The number of revenue and cost will affect the income of rubber farming. The average income of rubber farming before the pandemic was Rp 40,961,536/la/yr, while during the pandemic was Rp 35,871,939/la/yr. This difference was Rp 5,089,597/la/yr which means decrease to -12.43%. The difference in average income is caused by differences in average revenue due to different prices. Rubber prices during the Covid-19 pandemic were lower than before.

Table 5 show of the results of t-Test Sig.(2-tailed) value was 0.00. This means that the value of Sig.(2-tailed) is 0.00 < 0.05, it means hypothesis null (H$_0$) is rejected. There is a significant difference between the income before and during pandemic. As previously explained, income changing caused by decreasing in rubber prices during pandemic. It is compatible according to research by Syarifa et al. (2016), which stated that the low price of rubber has an impact on the income per month. It also will affect investment value, purchasing power on primary products and secondary products. The income of rubber farmers during pandemic is smaller than before the pandemic. This is also in line with the results of research from Kurniasi (2020); Kamaruddin (2021); and Mallo (2021) which stated that there was a decrease in farmers' income and also income from other professions due to pandemic.

Table 5. The Results of t-test of Income Before and During Pandemic

Description	Paired Samples t-Test
Average	5,089,597.56
Standard deviation	2,851,790.83
Standard Error	445,374.90
Lower Limit	4,189,461.30
Upper Limit	5,989,733.82
T	11.43
Df	40
Sig. (2-tailed)	0.00

Analysis of Household Consumption Expenditures of Rubber Farmers
Food Consumption Expenditure

Household consumption can be divided into two, namely food and non-food consumption. Income will affect household consumption expenditures. There is a significant relationship between income and the proportion of household food consumption expenditure (Hanisah et al., 2022). Food consumption expenditure in this study was analyze before and during pandemic. The consumption of grain foods including rice, corn, wheat flour, and glutinous rice; tubers including cassava, sweet potatoes, sago, and potatoes. Fish group including fresh fish, canned fish, anchovies, cork, tilapia, catfish, shrimp, squid, clams, snails, and mussels. While, Meats group including beef, mutton, chicken meat, and native chicken meat. Dairy group including kind of eggs, fresh milk and condensed milk. Vegetables including spinach, kale, cabbage, mustard greens, chickpeas, string beans, tomatoes, carrots, cucumbers, cassava leaves, jengkol, onion, garlic, red pepper, green chilis and cayenne pepper. Legumes are like peanuts, tempeh, tofu and fermented tempeh. Fruits such as mango, oranges, apples, rambutan, duku, durian, salak, bananas and watermelons. Other consumption items such as instant noodles, crackers and bread and tobacco. The average expenditure of food consumption before and during pandemic can be seen in Table 6.

Table 6. Average Food Consumption Expenditure Before and During the Covid-19 Pandemic

No	Food Consumption Expenditure	Before the Covid-19	During a Pandemic	Difference (Rp/month)	Percentage of Change

		Pandemic (Rp/month)	Covid-19 (Rp/month)		(%)
1.	Grains	310,505	315,049	4,544	1.46
2.	Tuber	17,902	20,390	2,488	13.89
3.	Fish, Shrimp, Squid, and Shellfish	118,293	130,683	12,390	10.47
4.	Meat	91,463	100,610	9,146	9.99
5.	Eggs and Milk	65,829	73,878	8,049	12.22
6.	Vegetables	338,439	419,561	81,122	23.96
7.	Beans	11,347	11,347	0	0.00
8.	Fruits	59,829	62,659	2,830	4.47
9.	Food and Beverage	91,073	91,073	0	0.00
10.	Tobacco	239,756	283,537	43,781	18.26
11.	Other consumption	119,244	128,675	9,431	7.90
	Total	**1,463,681**	**1,637,460**	**173,778**	**11.87**

The average expenditure on food consumption before the pandemic was Rp 1,463,681/month and during pandemic was Rp 1,637,460/month. The difference is Rp 173,778/month or 11.87%. The average food consumption expenditure during pandemic was greater than before pandemic. This was due to an increase in food prices during the Covid-19 pandemic. This condition leads increasing on food consumption expenditures. According to Bhakti (2015), one factor that affects expenditure is the product price. If the price of food increases, the expenditure of food consumption also increases. The price level of goods and services in the market also determines the consumption expenditure of a person or household. Consumer income may be the same every period, but if prices increase from time to time, this will involve a decreasing in purchasing power.

Vegetables as an expenditure component was 23.96 % increasing. This is because they increased their consumption of vegetables during the Covid-19 pandemic to maintain their health. This is in line with several previous studies which stated that the consumption of vegetables during pandemic increased due to consumers behavior that tend to enrich their living quality (Mustakim et al., 2021; Akbar and Aidha, 2020; Noviasty and Susant, 2020; Yilmaz et al., 2020).

Non-food Consumption Expenditures

Non-food consumption is covering housing expenditures and household facilities, goods and services, health, education, clothing, footwear, durable goods, taxes, insurance, and ceremonial purposes. The average expenditure of non-food consumption before and during the Covid-19 pandemic in Tanding Marga Village can be seen in Table 7.

Table 7. The Average of Non-food Consumption Expenditure Before and During Pandemic

No	Non-food Consumption Expenditures	Before the Covid-19 Pandemic	During a Pandemic Covid-19	Difference (Rp/month)	Percentage Change (%)

		(Rp/month)	(Rp/month)		
1.	Housing Facilities	27,600	25,000	-2,600	-9.42
2.	Goods and Services	24,737	25,294	0,557	2.25
3.	Health	30,000	0	-30,000	-100.00
4.	Education	463,243	138,649	-324,595	-70.07
5.	Clothing, and Others	189,286	62,857	-126,429	-66.79
6.	Durable Goods	107,317	0	-107,317	-100.00
7.	Taxes and Insurance	0	0	0	0.00
8.	Ceremonial Purposes	70,488	66,098	-4,390	-6.23
	Total	**912,671**	**317,897**	**-594,773**	**-65.17**

Total expenditure of non-food before pandemic was Rp 912,671/month and during the pandemic Rp 317,897/month. The difference was Rp 594,773/month or -65.17%. This decreasing due to the people did not spend much money for education and other goods such as household appliances. They have priority to meet the basic needs first before fulfill others expenditure.

Total Consumption Expenditure

The total consumption expenditure is devided to the total food and non-food expenditure as seen in Table 8. The total household consumption expenditure of rubber farmers before the pandemic was Rp 2,376,352 per month, while the total household consumption expenditure during the Covid-19 pandemic was Rp 1,955,357 per month. There is a difference in consumption expenditure of Rp -420,995 per month or -17.72%. The average household consumption expenditure before pandemic was greater than during pandemic. As previously explained, the decline in farmer household consumption expenditure during the Covid-19 pandemic was due to decreased income, so farmers had to reduce consumption, especially non-food consumption.

Table 8. Total Household Consumption Expenditures Before and During the Covid-19 Pandemic

No	Description	Before the Covid-19 Pandemic (Rp/month)	During a Pandemic Covid-19 (Rp/month)	Difference (Rp/month)	Percentage of Change (%)
1.	Food Consumption Expenditure	1,463,681	1,637,460	173,779	11.87
2.	Non-food Consumption Expenditures	912,671	317,897	-594,773	-65,17
3.	Total Household Consumption Expenditure	2,376,352	1,955,357	-420,995	-17.72

Based on Table 9, the Sig.(2-tailed) was 0.021. It means that Sig.(2-tailed) value of $0.021 < 0.05$. Thus, H_0 is Rejected. There is a significant difference in the consumption expenditure of farmer households before and during pandemic. The results of this study are in line with research conducted by Kurniasi (2020) and Kamaruddin (2021), the decline in income at the beginning of the pandemic has resulted in people making drastic changes in their consumption patterns, so that household consumption expenditures have also changed.

Table 9. T-test Result of Consumption Expenditures Before and During Pandemic

Description	t-Test Of Paired Samples
Average	327,646,341
Standard deviation	871,942,281
Standard Error	136,174,506
Lower Limit	52,427,398
Upper Limit	602,865,285
T	2.406
Df	40
Sig. (2-tailed)	0.021

CONCLUSIONS AND SUGGESTION

Based on discussion, it was concluded that there was a difference in the income before and during pandemic, which was Rp 5,089,597/la/yr. There was a decrease in income about -12.43%. The income of rubber farmers before pandemic was Rp40,961,536 and the income during pandemic was Rp 35,871,939. In line with the decline in income, there is also a difference in household consumption expenditure before and during pandemic. The difference is Rp 420,995 or -17.72%. The household consumption expenditure before pandemic was Rp 2,376,352 and during pandemic was Rp 1,955,357. The results of t-test showed that there was a significant difference of income and consumption between before and during pandemic. Farmers should implement adaptation strategies to overcome the decline in income, which is by finding other sources of farming outside of rubber farming and income from non-farming businesses.

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