

## Analysis of Cocoa Exchange Rates in Blitar Regency



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**ABSTRACT:** Farmer's Exchange Rate (NTP) is a proxy indicator or indicator of the approach to the level of farmer welfare. The welfare of farmers can describe the purchasing power of farmers. The purpose of this study was to determine the level of welfare of cocoa farmers. This study used time series data from NTP with the base year of 2012 = 100 as the basis for calculating the years 2019 - 2020. The location of the study was determined by the purposive sampling method in The Blitar Regency which is the center of Cocoa. The sample was selected by purposive random sampling as many as 60 Cocoa Farmers. The NTP analysis method was carried out descriptively. The results showed that the exchange rate of Cocoa Farmers in 2020 increased by 1.20 percent from 100.54 in 2019 to 101.75 in 2019. This indicates that cocoa farmers in The Blitar district are experiencing a surplus or prosperity.

**KEYWORDS:** Farmer's exchange rate, welfare, plantation sub-sector, cocoa

### I. INTRODUCTION

Development in all fields is the direction and goal of government policy. The social nature of development itself is one of the efforts to increase welfare, given that most of Indonesia's population comes from rural areas and the average livelihood is in the agricultural sector, it is highly expected that the agricultural sector will become a growth driver that can increase farmers' income in order to achieve farmer welfare and able to eradicate poverty.

National development activities basically aim to improve people's welfare. National development cannot be separated from several supporting factors, one of which is the agricultural sector [1]. The agricultural business sector itself consists of several sectors, one of which is the plantation sector which also needs attention to improve the welfare of farmers [2].

Based on Table 1, it shows that cocoa production in East Java 2017-2021 is fluctuating which tends to decrease, indicating that the control/development of this cocoa is still not optimal because farmers still do not have the knowledge and skills in breeding and maintaining cocoa plants. Cocoa farmers switch to other commodities which cause a decrease in people's cocoa area [3].

The implementation of agricultural development actually aims to improve the welfare of farmers. However, based on the obstacles that occur, it is considered not sufficient to increase income, farmers' welfare, and to overcome poverty in rural areas in order to achieve prosperity [1]. One of the indicators/measuring tools used to assess the level of farmers' welfare is the Farmer's Exchange Rate (NTP) which is used as an ingredient in formulating policies to improve farmers' welfare [4].

Farmer's exchange rate (NTP) is a proxy indicator of the level of welfare or purchasing power of farmers with a comparison between the price index received by farmers (IT) and the price index paid by farmers (IB) in percentage (%). The farmer's exchange rate index is useful in the ability to measure the exchange value of products sold with products needed by farmers in the production process and household consumption of farmers [5]. If the income of farmers is greater than the increase in production prices and has an impact on their purchasing power, then this indicates that farmers' abilities are better or farmers' incomes are increasing [6]. One form of farmer welfare is the purchasing power of farmers' income in meeting the expenditure needs of farm households by measuring the increase in purchasing power of income in meeting these expenditures [7].

Fluctuations in FTT will show fluctuations in the ability to pay or the real income level of farmers. Agricultural activities cannot be separated from activities outside the agricultural sector, thus the exchange rate of farmers is also influenced by roles and behavior outside the agricultural sector [8]. Various policies, programs, and efforts have been formulated and implemented

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to ensure the welfare of farmers. Such as the acceleration of movement in the trade services sector through increasing agricultural exports to improve welfare [9].

The diversity of expenditures, receipts and farmer exchange rates (NTP) in each region and time is influenced by the formation mechanism in the NTP system which is different in each region and time as a result of the diversity of the supply and acceptance formation system. In terms of farmer income, the diversity of each region and time of year is related to the diversity of resources and commodities cultivated as well as the diversification of other sources of income as well as farmers' expenditures on consumption patterns [10].

### II. MATERIALS AND METHODS

The commodity in this research is cocoa. By choosing several areas in East Java as the research location, with the background that the area Blitar Regency as one of the centers of cocoa commodity production. Objects in this study were conducted randomly with ownership of land area of  $0.25 \text{ ha} < n < 1 \text{ ha}$  as many as 60 farmers. Analysis of the data used is the farmer's exchange rate can be formulated as follows:

$$NTP = IT/IB$$

Information:

NTP = Farmer Exchange Rate Index

IT = Price Index received by Farmers

IB = Price Index Paid by Farmers

The Central Statistics Agency defines the meaning of the Farmer's Exchange Rate (NTP) figures obtained as follows [11]:

1.  $NTP > 100$ , farmers experience a surplus where the level of welfare of farmers is better than before
2.  $NTP = 100$ , farmers experience a breakeven point or are in a break even condition, where the level of farmer welfare does not change
3.  $NTP < 100$ , farmers experience a deficit, where the level of welfare of farmers has decreased when compared to the previous condition.

The formula for calculating the exchange rate of farmer household income is as follows [11]:

$$\begin{aligned} NTPRP &= Y/E \\ Y &= Y_P + Y_{NP} \\ E &= E_P + E_k \end{aligned}$$

Information:

NTPRP = Farmer household income exchange rate

Y = Farmer household income (Rp)

E = Farmer household expenditure (Rp)

$Y_P$  = Total income from farming (Rp)

$Y_{NP}$  = Total income from non-agricultural business (Rp)

$E_P$  = Total expenditure for farming (Rp)

$E_k$  = Total expenditure for non - agricultural business (Rp)

Thus, the exchange rate of farmer household income which is used as a benchmark for the level of welfare is as follows:

1.  $NTPRP < 1$ , the level of welfare of farmers is not yet included in the prosperous class
2.  $NTPRP > 1$ , the level of farmer welfare has entered the prosperous class.

### III. RESULTS AND DISCUSSION

#### A. The Behavior of Cocoa Farmers' Exchange Rates in Blitar Regency

Farmer's Exchange Rate in Blitar Regency is a proxy indicator to measure the level of farmer's welfare in Blitar Regency. Farmer's Exchange Rate Index is the comparison between the price index received by farmers (IT) and the price index paid by farmers (IB). IT and IB are price-weighted indexes consisting of the prices of the constituent commodities weighed by the total value of production sold or purchased. In this study, the base year used was 2012. The Farmer's Exchange Rate in 2012 was 100 (2012 = 100).

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### B. Price Index received by Cocoa Farmers (IT)

Table 1. Price Index Accepted by Cocoa Farmers (IT) Blitar Regency 2019-2020 (2012 = 100)

Description	IT 2019	Year IT 2020	Year Growth IT
Cocoa Farmers	101,50	103,60	2,10

Source: Data analysis, 2020

Harga yang diterima petani (IT) di Kabupaten Blitar pada tahun 2020 menunjukkan peningkatan dibandingkan dengan indeks harga yang diterima petani pada tahun 2019. Kenaikan indeks harga yang diterima petani di Kabupaten Blitar sebesar 4,10 persen, dari 101,50 pada tahun 2019 105,60 pada tahun 2020, artinya pendapatan petani Kakao pada tahun 2020 akan meningkat sebesar 4,10 persen dibandingkan pendapatan pada tahun 2019. Harga komoditas kakao berdampak langsung terhadap pendapatan petani kakao. Data harga yang digunakan adalah harga Kakao yang diperoleh dari hasil survei dan wawancara terstruktur dengan menggunakan kuesioner kepada sampel kakao di Kabupaten Blitar. Selain itu, data harga juga diperbandingkan dan ditawarkan melalui publikasi harga kakao di tingkat kabupaten dan provinsi Jawa Timur tahun 2019 dan 2020.

### C. Price Index Paid by Cocoa Farmers (IB)

The price index paid by farmers (Ib) consists of two groups, namely household consumption and the category of production costs and the formation of capital goods (BPPBM). Household consumption groups are divided into food groups and non-food groups. In 2020, the price index paid by Cocoa Farmers increased 0.86 percent compared to 2019, from 100.95 to 101.82. The increase in the price index paid by Cocoa Farmers was caused by an increase in the household consumption price index by 1.02 percent and the cost of production and capital goods purchase index (BPPBM) by 0.71 percent.

Table 2. Average Paid Index of Cocoa Farmers (Ib) Blitar Regency 2019-2020

No	Description	Cocoa Farmers		
		2019	2020	Growth
	Price Index Paid by Cocoa Farmers (Ib)	100,95	101,82	0,86
1	Household consumption	100,78	101,80	1,02
	a. Food	102,35	103,40	1,05
	b. Housing Area	100,31	101,25	0,94
	c. Clothing	100,10	100,93	0,83
	d. Health	100,47	101,40	0,93
	e. Education	100,16	101,15	0,99
	f. Transportation & Communication	101,30	102,65	1,35
2	BPPBM	101,12	101,83	0,71
	a. Seeds	101,19	102,14	0,95
	b. Fertilizer	100,85	101,24	0,39
	c. Labor Wages	101,32	102,12	0,80

Source: Data analysis, 2021

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The growth of the Cocoa Farmer's exchange rate in Blitar Regency by 1.20 percent was caused by the increase in the Cocoa Farmer's exchange rate from 2019 to 2020. wherein 2019 the farmers' exchange rate produced was 100.54 while in 2020 it increased to 101.75. This shows that cocoa farmers in Blitar Regency are prosperous because the value obtained has exceeded the basic limit of 100. The exchange rate of cocoa farmers in Blitar Regency can be seen in Table 3 below.

**Table 3. Exchange Rates of Cocoa Farmers in Blitar Regency in 2019 - 2020**

No	Description	2019	2020	Growth
1	Cocoa Farmers			
	Price Index Received by Cocoa Farmers	101,50	103,60	2,10
	Cocoa Farmers Paid Price Index	100,95	101,82	0,86
	Cocoa Farmers Exchange Rate	100,54	101,75	1,20

Source: Data analysis, 2021

## IV. CONCLUSION

The exchange rate of Cocoa Farmers in Blitar Regency in 2020 increased by 1.20 percent from 100.54 in 2019 to 101.75 in 2020. This shows that Cocoa Farmers in Blitar Regency are experiencing a surplus or prosperity. When compared to the base year of 2012, the increase in the farmer's exchange rate was 1.75 percent in a period of 8 years.

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