

## Fluctuations Of Oil Palm Fresh Fruit Bunches In Labuhanbatu Regency

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**Abstract:** The purpose of this study is to study the supply chain for losses caused by fluctuations in the selling price of FFB. The method used is conducting a direct survey of palm oil FFB traders and Palm Oil Mill final consumers in nine subdistricts in Labuhanbatu Regency with 256 respondents successfully interviewed. The results of the study explain the factors that influence fluctuations in FFB purchase prices at the supplier level competition by the non-transparency of the selling price of FFB from Palm Oil Mill to traders and from traders to farmers. The findings are also about making the local government create a special institution that can provide information about the price of palm oil issued by the government through the North Sumatra manufacturing service.

**Keywords-** Price Fluctuation, FFB Traders, Labuhanbatu Regency

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### I. INTRODUCTION

This research is backed by the vulnerability of the fresh Fruit bunches (FFB) price which tends to be unstable and different received by oil palm Pentani from distributors in Labuhanbatu district. According to Dar, Sarkum, Nasution, & Mustamu (2018), this phenomenon occurred because the farmers did not get clear information about the market price of fresh fruit Tandan (FFB) of oil palm in concrete while harvesting. On the other hand, supply chains are prone to losses on price fluctuations and decrease in FFB quality due to depreciation resulting in lower yield. Price fluctuations are based on price formation and for commodity prices as outlined by Pohan (2015) that pricing in the international market affects the market mechanism in a country, while FFB Price is based on price determination Crude Palm Oil (CPO) domestically and is not separated from the influence of international market mechanisms. In Indonesia, the price of FFB has been formulated through the guidelines on the price determination of palm oil Fresh Fruit bunches (2018) which explained in article 7 paragraph (3) stated that the determination price is at the Palm processing plant Palm oil (POM). Thus it can be guessed that the possibility of transmitting prices can occur between the MCC and the supply chain in profit sharing.

Tety, Maharani, & Deswita (2013) reveals in general the process of transmitting prices from consumer markets to the manufacturer's market is imperfect and asymmetrical, meaning that if there is a price increase in the consumer market, then the price increase is continued To the farmer in a sluggish and imperfect manner, conversely in the event of a price drop (Kohn & Shavell, 1974). The transmission pattern process occurs because the consumer has market strength. In addition the price transmission can also occur due to perishable goods and Storage (Nahmias, 1982). This can happen because it is influenced by the quality of FFB and storage process in supply chain that can result in the decrease in the yield of FFB level, causing the risk of loss of the price decreases (Bisuk, 2009). In particular one of the factors that influenced the purchase price of FFB according Wulandari & Salman (2014) is influenced by a patron-client relationship (Touke-farmer) where the farmer has a dependent relationship to his toukenya. Another case with primary, primary, Eliza, & Tety (2016) stating that unstable FFB production in the country is one of the causes of price fluctuations at the farmer level, the demand of kernel and crude palm oil (CPO) company in the market The world was followed by government decree limiting CPO (Nugroho, 2015). While the research results of Yeni. R & Girsang (2019) stated that prices may fluctuate due to the mileage of buying FFB with MCC.

FFB price fluctuations can also occur due to the transmission of prices conducted by the supply chain as a collector trader in transforming the price of FFB by way of transmitting the price of the MCC (Pratama et al., 2016). This can be due to a high cost marketing function so that the dealers have different offers (Bisuk, 2009). Due to the marketing element in the purchase of FFB, profit sharing and marketing costs are one of the elements of the marketing component that affects the height of low profit (Pratama et al., 2016). The

descriptions of the study imply that one factor in the fluctuation of FFB price is influenced by the marketing function carried out by FFB dealers.

In previous research from several authors who do research on FFB supply chain in Indonesia have different opinion and analysis according to the location and place of research. Likewise, the profit sharing in carrying out the marketing function of supply chain marketing operations demonstrates the same thing.

In some studies, it is possible to see that the distribution of profit performed by the average distributor was 76%. As for the profit sharing of the lowest marketing channel is on the marketing channel farmers → collector traders → Big traders → MCC of 34.4% located in the village Meranti understand Panai Hulu District of Labuhanbatu. As for the FFB marketing channel system, more select two-level marketing channels i.e. farmer → collector → MCC traders. The difference in Table 1 research explains that the distribution of profit carried out by the distributor becomes one of the factors that affect the fluctuations in FFB price. Therefore it is necessary to know how much transmission price between the MCC and the dealer; Then what are the factors that become cost in marketing function; And how much profit sharing should be done by the dealer.

Description of the previous studies we concluded that the cause of factors affecting the fluctuation of FFB Price is the transmission of price, marketing function and share margin. Then the purpose of this research is to test the factors that affect the fluctuations in the purchase price of FFB at the reseller level. In addition to these primary objectives, other objectives of the study also wanted to know if there were other factors, a) mileage; b) requests and supplies; c) FFB quality and yield; d) Import policies of countries importing palm oil; e) Changes in the tax policy and the export/import solution ("palm oil," 2017).

## II. METHODOLOGY

This research took samples and conducted a direct survey to the palm oil FFB merchants in nine sub-districts in Labuhanbatu. As known as Labuhanbatu Regency is one of the central District of palm oil producer in North Sumatera. The research method is done by observing directly through interviews and questionnaire. Selection of respondents was done with purposive sampling technique. In addition to traders as samples, the study also observed the direct process flow of the end consumer (MCC) (Lubis&Tinaprilla, 2016; Sumartono et al., 2018). While the number of samples planned will be interviewed as many as 800 respondents divided from 784 Pedangang collector and 16 MCC can be seen in table 2.

Analysis of the transmission of prices tested to know the market overview between the market at the producer and consumer level (Kumala, Tetty, & Tarumun, 2015). In this study, transmission price analysis was measured to look at price elasticity relationships at MCC levels with price elasticity at the merchant level. The formula used according to George & King (1971) is  $n = \frac{dPr}{dPf} \cdot \frac{Pf}{Pr}$ ; Description: N = elasticity of the price transmission; Pr = Price at MCC level; Pf = Price at the collecting merchant level; dPr = Price change at MCC level; dPf: Price Changes in the collector's merchant. As for the number of costs charged in the marketing function, it is done qualitatively for the costs incurred, as well as other contributing factors that affect the fluctuations in the price of FFB (Tambunan&Ratna, 2017) while to calculate the share margin used formula:  $MP = Pr - Pf$ . Description: MP = Marketing Margin (Rp/kg) Pr = Factory level Price (Rp/kg) Pf = Price for collecting merchant/farmer (Rp/kg) (Kumala et al., 2015).

## III. RESULT AND DISCUSSION

Collector traders are part of the FFB marketing channel that conducts business activities between producers and consumers. The function of collecting traders as a marketing channel has a very important role, particularly to see the price levels of the collector merchants as part of the marketing agency (Tety et al., 2013). The gatherer traders have a role in the dissemination of information by giving the signal up the ride of FFB price that will be transmitted precisely or not to the farmer (Rachman, Nurmalina, & Harmini, 2012). The presence of collector traders appears to be in the business of buying and selling FFB due to opportunities given by consumers so that the collecting traders get FFB to meet the needs of consumers. The collector merchants are rewarded with customer service in the form of a marketing margin (Kumala et al., 2015).

The regency of Labuhanbatu divided into nine sub-districts has an area of plantation area of 34,339 (Data area, production and productivity of people's estates, 2017 palm oil commodities in Labuhanbatu, 2017) is very potential For dealers to develop their business, the following can be seen on table 1:

**Table 1.** Number of traders and SMES and average FFB production in Labuhanbatu

No	Location (District)	Marketing	Average Production of Plantation People (Yr/Ha/Kg)	Collector Merchants	Palm Oil Mills
1	Bilah Barat		3.892.058	80	-
2	Bilah Hilir		3.961.278	104	7
3	Bilah Hulu		4.503.015	192	4
4	Pangkalan		3.242.943	56	3
5	Panai Hilir		2.157.249	64	-

6	Panai Hulu	3.088.139	56	1
7	Panai Tengah	3.746.507	80	-
8	Rantau Utara	3.195.278	80	1
9	Rantau Selatan	4.377.627	72	-

Source: Data Processed, 2019

After the survey, the traders and the MCC were successfully interviewed from the number of samples planned as much as 256 or 32% of the total plan of the respondent. At the price transmission, the research results show the elasticity of the transmission price measured from the price and changes at the MCC level and traders collector shows that the elasticity value of the transmission of FFB price of 1.67; Thus the demand for FFB elasticity shows more than 1 value, hence the demand for FFB is said to be elastic where the amount of FFB demanded is strongly influenced by the price. However, price changes to consumers are not perfectly transcast to producers. While the marketing function shows that marketing functions according to Asmarantaka (2012) in Tambunan&Ratna (2017) can be classified into three basic functions: Transaction function (buying and selling), physical function (transport and warehousing) and supporting functions (grading, financing, risk-bearing, and market information). Of all the indicators of the marketing function traders charge 13% which can be seen in table 2.

**Table 2.** Cost, Margin marketing, and Efficiency in Labuhanbatu year 2018

No	Marketing Institutions and Margin components	Total(Rp/Kg)	Percentage (%)
1	Collector Merchants		
	a. Buy price	1000	83%
	b. Marketing costs	150	13%
	c. Profit	50	4%
	d. Selling price	1200	17%
2.	POM		
	Marketing costs	1200	20%
	Selling price of CPO	6000	80%

Source: Data Processed, 2019

Then on the share of the profit listed in table 3 above explains that there is a profit received by the collector Trader is 4%, while the MCC gives 20% of the selling price of the CPO to the merchant. While the price of FFB and the factor "K" is 84.80% dated 13 March 2019 which is based on the price obtained from the Oil Palm Marketing center PT. Plantation Nusantara, GAPKI and market prices for the price of FFB in North Sumatra (Naibaho& N, 2019). While the other cause is the lack of price applied by the palm farmers. Based on the findings, the institution is required to provide information on the current price of palm oil, as well as the results of the research Pasaribu, Sihombing, &Sebayang (2013) which suggests to achieve price transmission elasticity , farmers need to have an institutional to provide market price information to smallholders so that the farmers know it.

#### IV. CONCLUSION

From the research results on the impact of loss, when the installation of electrical houses and buildings is not standard, then:

1. Real fire arising from gross negligence and electricity consumption, which can result in substantial damage to the material and can also result in loss of life, especially in historic buildings.
2. One of the abuse in the utilization of typical electrical installations is an improper use of electrical installation, and is a common problem among power users in Indonesia
3. Electrical installation shall be held regularly examination and testing by the competent authorities against misuse, malfunction or execution of unstandardized installations.
4. The equipment selected to be installed in the electrical installation must meet the prevailing standards and obey the provisions of PUIL 2000, and must match its use of the environment, and follow the instructions of the manufacturer of such equipment.

The vitality and strategic power of the function and role of electricity, for those who provide and use it, the availability must meet the basic reliable, safe and familiar environment.

#### REFERENCES

- [1] Bisuk, P. (2009). Analisis Tataniaga dan Elastisitas Transmisi Harga CPO Internasional terhadap Harga FFB Kelapa Sawit (Studi Kasus Desa Mananti Kecamatan Sosa Kabupaten Padang Lawas). Univeristas Sumatera Utara.
- [2] Dar, M. H., Sarkum, S., Nasution, A. P., & Mustamu, N. E. (2018). Strategies to Overcome the Selling Price Fluctuations of Palm Oil Fresh Fruit Bunches (FFB): the Farmers Efforts in Welcoming Industry 4.0. In P. Srisuk (Ed.), Proceeding 1st ICUTK

- International Conference 2018 (IIC 2018) "Globalization and Current Business Trends in Industrial Revolution 4.0" November (pp. 74–81). Bangkok: Organized by International College Rajamangala University of Technology Krungthep.
- [3] Data Luas Areal, Produksi dan Produktivitas Perkebunan Rakyat Tahun 2017 Komoditas Kelapa Sawit di Labuhanbatu. (2017). Statistik Perkebunan. Retrieved from [http://disbun.sumutprov.go.id/statistik\\_2019/web/index.php?r=site%2Fflaporan-komoditi&tahun=2017&kabupaten=14&komoditas=2](http://disbun.sumutprov.go.id/statistik_2019/web/index.php?r=site%2Fflaporan-komoditi&tahun=2017&kabupaten=14&komoditas=2)
- [4] George, P. S., & King, G. A. (1971). Consumer Demand for Food Commodities in the United States with Projection for 1980. Monograph (Vol. 26). California Agricultural Experiment Station.
- [5] Harahap, G., Simanullang, E. S., & Romadon, M. (2017). Analisis Efisiensi Tataniaga Tandan Buah Segar (FFB) Kelapa Sawit (Study Kasus : Petani Perkebunan Inti Rakyat Desa Meranti Paham Kecamatan Panai Hulu, Kabupaten Labuhan Batu). Wahana Inovasi: Jurnal Penelitian Dan Pengabdian Masyarakat UISU, 6(2), 11. Retrieved from <http://penelitian.uisu.ac.id/wp-content/uploads/2017/09/11.-Gustami-Harahap-dkk-vol-6-no-2-des-2017.pdf>
- [6] Kohn, M. G., & Shavell, S. (1974). The Theory of Search. Journal of Economic Theory, 9, 93–123. Retrieved from [http://www.law.harvard.edu/faculty/shavell/pdf/3\\_Theory.pdf](http://www.law.harvard.edu/faculty/shavell/pdf/3_Theory.pdf)
- [7] Kumala, A. F., Tetty, E., & Tarumun, S. (2015). Analisis Pemasaran Dan Transmisi Harga Pada Petani Bokar Di Desa Lubuk Batu Tingga Kecamatan Lubuk Batu Jaya Kabupaten Indragiri Hulu. Jurnal Online Mahasiswa Fakultas Pertanian Universitas Riau, 9860(2), 1–13. Retrieved from <https://jom.unri.ac.id/index.php/JOMFAPERTA/article/view/7728/7400>
- [8] Lubis, F. R. A., & Tinaprilla, N. (2016). Sistem Tataniaga Tandan Buah Segar di Kecamatan Wampu, Kabupaten Langkat, Sumatera Utara. Agrica (Jurnal Agribisnis Sumatera Utara), 4(2), 126–139. Retrieved from <http://ojs.uma.ac.id/index.php/agrica/article/view/545>
- [9] Minyak Kelapa Sawit. (2017). Retrieved June 26, 2017, from <https://www.indonesia-investments.com/id/bisnis/komoditas/minyak-sawit/item166?>
- [10] Nahmias, S. (1982). Perishable Inventory Theory: A Review. Operations Research, 30(4), 680–708. <https://doi.org/10.1287/opre.30.4.680>
- [11] Naibaho, P. M., & N, H. (2019). Rekapitulasi Penetapan Harga FFB Kelapa Sawit. Retrieved from [http://disbun.sumutprov.go.id/harga\\_komoditi/web/index.php?r=site%2Fflaporan-mingguan&id=142](http://disbun.sumutprov.go.id/harga_komoditi/web/index.php?r=site%2Fflaporan-mingguan&id=142)
- [12] Noor, D. A. (2013). Analisis Pemasaran Tandan Buah Segar Kelapa Sawit di Kecamatan long Ikis Kabupaten Paser. Jurnal Ekonomi Pertanian Dan Pembangunan, 10(1), 35–42. Retrieved from <http://agb.faperta.unmul.ac.id/wp-content/uploads/2017/04/jurnal-vol-10-no-1-dedy-adhan.pdf>
- [13] Nugroho, A. E. (2015). Analisis Pemasaran Tandan Buah Segar Kelapa Sawit Di Kabupaten Kutai Kartanegara (Studi Kasus Pada Petani Swadaya Kecamatan Muara Muntai). Jurnal Magrobis, 15(2), 47–70. Retrieved from <http://ejournal.unikarta.ac.id/index.php/magrobis/article/view/152/135>
- [14] Pasaribu, M. M., Sihombing, L., & Sebayang, T. (2013). Integrasi Pasar Tandan Buah Segar Kelapa Sawit Perdesaan Asahan Dengan Pasar Nasional. Journal on Social Economic of Agriculture and Agribusiness, 2(5). Retrieved from <https://jurnal.usu.ac.id/index.php/ceress/article/view/7868/3331>
- [15] Pedoman Penetapan Harga Tandan Buah Segar Kelapa Sawit Produksi Pekebun, Pub. L. No. 01/PERMENTAN/KB.120/1/2018 (2018). Indonesia. Retrieved from <http://www.iopri.org/wp-content/uploads/2018/03/PERMENTAN-NO-1-THN-2018-TTG-FFB.pdf>
- [16] Pinem, L. J., Safrida, & Nasution, M. P. (2018). Analisis Saluran Dan Margin Pemasaran Kelapa Sawit di Desa Tenggulun Kabupaten Aceh Tamiang. Agriprimatech, 1(2), 17–22. Retrieved from <http://jurnal.unprimdn.ac.id/index.php/Agriprimatech/article/view/176/131>
- [17] Pohan, M. (2015). Dampak Penurunan Harga Sawit Terhadap Kesejahteraan Petani Sawit di Pantai Timur Sumatera Utara. Ekonomikawan: Jurnal Ilmu Ekonomi Dan Studi Pembangunan, 15(2), 113–129. <https://doi.org/10.30596/ekonomikawan.v15i2.1036>
- [18] Pratama, A., Eliza, & Tety, E. (2016). Analisis Saluran Pemasaran Tandan Buah Segar (FFB) Kelapa Sawit Pada Petani Swadaya di Desa Simpang Kelayang Kecamatan Kelayang Kabupaten Indragiri Hulu. Jurnal Ilmiah Pertanian, 12(2), 1–9. <https://doi.org/10.31849/jip.v12i2.981>
- [19] Rachman, A., Nurmali, R., & Harmini. (2012). Integrasi dan Transmisi Harga pada Pasar CPO dan Minyak Goreng di Indonesia. IPB. Retrieved from <http://repository.ipb.ac.id/handle/123456789/59087>
- [20] Rahmanta. (2017). Analisis Pemasaran Kelapa Sawit di Kabupaten Labuhan Batu Selatan. Jurnal Agrica Ekstensia, 11(1), 32–38. Retrieved from [http://polbangtanmedan.ac.id/pdf/Jurnal\\_Vol\\_11/05/RAHMANTA\\_17.pdf](http://polbangtanmedan.ac.id/pdf/Jurnal_Vol_11/05/RAHMANTA_17.pdf)
- [21] Sumartono, E., Badrudin, R., & Suryanty, M. (2018). Analisis Pemasaran Tandan Buah Segar Kelapa Sawit di Kecamatan Putri Hijau, Kabupaten Bengkulu Utara. AGRARIS: Journal of Agribusiness and Rural Development Research, 4(1), 28–35. <https://doi.org/10.18196/agr.4157>
- [22] Sumiati, Rusida, & Idawati. (2017). Analisis Saluran Pemasaran Kelapa Sawit Di Desa Baku-Baku Kecamatan Malangke Barat Kabupaten Luwu Utara. Journal TABARO Agriculture Science, 1(1), 38–50. Retrieved from <http://ojs.unanda.ac.id/index.php/jtas/article/view/13/14>
- [23] Tambunan, F. I. H., & Ratna, W. (2017). Analisis pemasaran tandan buah segar kelapa sawit di Kecamatan Tapung, Kabupaten Kampar, Provinsi Riau. IPB (Bogor Agricultural University). Retrieved from <http://repository.ipb.ac.id/handle/123456789/85470>
- [24] Tety, E., Maharani, E., & Deswita, S. (2013). Analisis Saluran Pemasaran dan Transmisi Harga Tandan Buah Segar (FFB) Kelapa Sawit pada Petani Swadaya di Desa Sari Galuh Kecamatan Tapun Kabupaten Kampar. Pekbis Jurnal, 5(1), 13–23. Retrieved from <https://ejournal.unri.ac.id/index.php/JPEB/article/view/1477>
- [25] Wulandari, & Salman. (2014). Hubungan Patron-Client Dalam Pemasaran Tandan Buah Segar (FFB) Kelapa Sawit di Desa Hangtuah Kecamatan Perhentian Raja Kabupaten Kampar. Jurnal RAT, 3(3), 501–510. Retrieved from <http://jurnal2.webuir.com/index.php/mydoc8/article/view/304/247>
- [26] Yeni.R, M., & Girsang, R. N. (2019). Analisis Elastisitas Transmisi Harga Tandan Buah Segar PT Jamika Raya Dan Koperasi Unit Desa di Kecamatan Limburlubuk Mengkuang Dan Kecamatan Bathin II Pelayang Kabupaten Bungo. Jurnal Akrab Juara, 4(1), 96–106. Retrieved from <http://akrabjuara.com/index.php/akrabjuara/article/view/458/381>

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