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Analysis of Factors Causing Fluctuations in Tomato Prices for Farmers in Landono District, South Konawe Regency

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Abstract

This study analyzes the factors that cause fluctuations in tomato prices in Landono District, South Konawe Regency, Southeast Sulawesi Province. Price fluctuations that are often experienced by tomato farmers are a crucial issue that affects the economic stability of farming households. The research method used was qualitative descriptive with data collection techniques through in-depth interviews with 30 tomato farmers in Landono District and observation. The results of the analysis show that fluctuations in tomato prices are influenced by two main factors: first, local production, where surplus production during abundant harvests tends to lower prices, while production scarcity causes prices to increase. Second, supply competition from outside the region, especially from Enrekang, which enters markets in Kendari such as Baruga Market, also suppresses the price of local tomatoes when the supply is abundant. To address this price volatility, farmers need to consider better marketing strategies, such as product diversification, the formation of strong farmer groups for negotiation, and the exploration of alternative markets.

Keywords: Analysis of Causative Factors, Price Fluctuations, Tomato Crops, Farmers in Landono District

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INTRODUCTION

Agriculture is a vital sector that is the backbone of the economy of many countries, including Indonesia. In the agricultural sector, horticultural commodities such as tomatoes play an important role as a source of food, nutrition, and income for the community, especially farmers. Tomatoes (*Solanum lycopersicum*) are not only consumed fresh, but also processed into various derivative products, making them a commodity that has high economic value and promising market prospects. In Indonesia, tomato production is spread across various regions, and Southeast Sulawesi is one of the provinces that also cultivates this commodity to meet the needs of local and regional markets.

However, like many other agricultural commodities, the tomato cultivation sector is also faced with various challenges, one of which is the phenomenon of price fluctuations. These price fluctuations refer to significant changes in commodity prices over a period of time, which can be caused by a variety of factors, both on the supply and demand sides. The price of a good and the quantity traded are determined by the interaction between demand and supply for the goods. Therefore, to understand the mechanism of price formation and the number of goods traded simultaneously, it is necessary to analyze the demand and supply of an item available in the market (Sukirno, 2010). For farmers, this price instability is a crucial issue that directly affects their income and welfare. When prices plummet, farmers are often forced to sell their crops at unfavorable prices, sometimes even unable to cover production costs. Conversely, when prices soar, farmers have the opportunity to make greater profits, but this often does not last long and depends on the availability of supply.

Landono District, South Konawe Regency, Southeast Sulawesi Province, is one of the tomato cultivation centers in the region. Farmers in this area also feel the direct impact of tomato price instability. In general, the agricultural product market applies the principle of the law of one price, which is the difference in prices caused by distribution or transfer costs from one region to another. Trade or exchange activities occur due to price differences and imbalances in demand and supply between regions (market over space) (Bahari, 2017). Based on initial interviews with farmers in Landono District, it was identified that price fluctuations are a challenge that they often face. The main causes they mentioned included abundant production during the harvest which led to oversupply in the market, as well as the influx of tomato supplies from other regions, especially from Enrekang, which competed in the main markets in Kendari, the provincial capital close to their location. Baruga Market, as one of the central markets for vegetables and horticulture in Kendari, is an important point that accommodates not only local production

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but also from outside the region, thus indirectly affecting the price of tomatoes of Landono farmers.

This condition raises fundamental questions about how these factors specifically work and cause fluctuations in the price of tomatoes for farmers in Landono District. A comprehensive understanding of price dynamics is essential, especially in understanding the market equilibrium price that is achieved when the quantity of supply is equal to the quantity of demand (Soeharno, 2007). This is important for farmers to be able to take strategic steps in marketing and also for the government and academics to formulate appropriate policies and recommendations to improve the welfare of farmers. Therefore, this study aims to comprehensively analyze the factors that cause fluctuations in tomato prices for farmers in Landono District.

Price fluctuations are an inherent phenomenon in the agricultural commodity market. This condition occurs because agricultural production is greatly influenced by natural and biological factors, as well as changing market conditions. Agricultural products have several distinctive characteristics, including being seasonal, easily damaged because their freshness must be maintained, having a large volume but relatively low economic value, vulnerable to pest and disease attacks, and not always easy to market or distribute to other areas. In addition, agricultural products are generally local or depending on certain regional conditions, have various functions and uses, require special skills in their management whose experts are not always available, and can be used as raw materials for other products and have a social function in society (Soekartawi, 1993).

According to basic economic theory, the price of a good or service is formed through the interaction between demand and supply in the market. Any changes that occur in either or both of these curves will affect the price shift as well as the amount of equilibrium in the market (N. Gregory Mankiw, 2018). In the context of agriculture, major changes on the supply side (e.g. a big harvest or crop failure) are often the main drivers of price fluctuations

Fluctuations in the price of agricultural commodities are influenced by various interrelated factors, including:

- Seasonality and Weather: any type of agricultural product cannot be continuously available without being supported by good management, inventory or stock management (Soekartawi, 1993).

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- Production Costs: Every farmer as a producer always incurs production costs in carrying out their farming activities. Rational producers will try to adjust the production of agricultural commodities to the expected price level (Bahari, 2017).
- Product Quality: In general, every type of agricultural product is produced in fresh conditions or still contains high moisture content, so it cannot be stored for a long time. If the product wants to be stored longer, additional handling is required, such as drying processes and other post-harvest treatments (Soekartawi, 1993).
- Market Opportunities:This can be interpreted as an opportunity for farmers to market their agricultural products by making a profit. However, not all marketing agency players are able to take advantage of these opportunities, so only parties who can take advantage of market conditions well will get profitable opportunities (Soekartawi, 2005).
- Role of Intermediaries (Collectors): In many cases, farmers market their crops through intermediary traders who then distribute the products to a wider market. The existence of intermediary traders, including the amount of profit margins they take, can affect the final price received by farmers and consumers (Firdaus, 2007).
- Government Policy:The policy can be in the form of providing support or buffer to the price of agricultural products so that farmers do not suffer losses, or in the form of providing certain subsidies directly to farmers (Rochaeni, 2014).
- Demand Changes:It is necessary to forecast the demand for tomato plants. Forecasting activities are the process of estimating the level of demand for an item in a certain period and in a certain marketing area (Mahendrawathi, 2010).

Tomatoes are one of the agricultural commodities that are very familiar in people's lives, especially as a complementary ingredient in cooking. Tomato plants can be found in different parts of the world with a wide distribution area, ranging from tropical to subtropical. In addition, this plant can grow all the time without depending on a specific season, making it easily available at any time (Stephanie Endey, 2022). Tomatoes are perishable after harvest, which demands good post-harvest handling, including proper storage and transportation methods to keep them fresh. This perishable nature is also one of the factors that can affect prices, because farmers are often in a hurry to sell their crops before the quality declines.

High price fluctuations and declining consumption demand are challenges in maintaining the sustainability of tomato production in Indonesia (Eka Riskawati, 2024). Tomatoes are one of the most traded horticultural commodities in the world. Stable market demand, both for fresh consumption and as raw materials for the food processing

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industry (sauces, pasta, juices), make tomatoes an economically attractive commodity. The economic value of tomatoes can also be increased through the development of superior varieties, improvement of cultivation techniques, and diversification of processed products.

Farmers' income includes rewards for family labor, farmers' wages as business managers, interest from their own capital, and profits obtained after deducting the cost of using external facilities and interest on external capital. Such income can be differentiated into gross income or receipts and net income (profits). Gross income is all revenue obtained from farming activities during a period, both based on sales results and reassessment results, while net income is the difference between gross income and total farming costs. The amount of costs and revenue is influenced by various factors that are quite complex, which can generally be grouped into internal-external factors as well as management factors (Suratiyah, 2015).

Marketing in the agricultural sector has a dual role. First, marketing serves as a liaison in the process of forming and distributing prices between producers and consumers. Second, marketing plays a role in the movement of products, both physically and non-physically (price), from production locations such as farmers or producers to where consumers make purchases. Price differences between regions can be influenced by several factors, including limited price information, inter-island transportation barriers, low entrepreneurial spirit, and oligophany market structure (Bahari, 2017).

Marketing channels are a set of organizations that are interrelated and involved in the process of providing products or services so that they can be used or consumed by consumers. Marketing channels function to distribute goods from producers to consumers. The functions and roles of marketing channel members include: collecting information about customers, competitors, market players, and marketing environmental conditions; develop and disseminate persuasive communications to encourage purchases; reach agreements regarding prices and other conditions; placing an order with the manufacturer; obtaining funding for the provision of stock of goods in marketing channels; bear the risk of implementing marketing activities; provide facilities for the smooth storage and distribution of products; provide a payment system for purchase transactions; and supervise the transfer of product ownership rights. Manufacturers or companies that sell goods and services generally need three types of channels, namely sales channels, distribution/delivery channels, and service channels.

Intermediary traders, such as collectors, have an important role in connecting farmers to the wider market. They usually have better capital, marketing networks, and

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market knowledge than farmers. However, the existence of intermediary traders can also cause price differences between the price received by farmers and the prices paid by consumers, and even have the potential to cause price manipulation if there is not adequate supervision (Sarwoto, 2023).

This study uses a qualitative approach with a descriptive type of research. A qualitative approach is used to understand individual perceptions, motivations, and experiences in natural situations. In the field of agribusiness, this approach can be applied to examine farmers' views on sustainability and the application of new technologies (Nurmaya, 2025). The descriptive method is used to provide a detailed and structured picture of the findings obtained from the field, without performing variable manipulation or statistically rigorous hypothesis testing.

The research was conducted in Landono District, South Konawe Regency, Southeast Sulawesi Province. The selection of this location was based on initial information that farmers in this region often experience fluctuations in tomato prices and this location is one of the centers of tomato cultivation in the area. This research will be carried out in April 2026.

The data collection techniques used include: In-depth Interview and observation. The data obtained from interviews and observations were analyzed using qualitative data analysis techniques. The steps of data analysis include: Data Reduction, Data Display, Conclusion Drawing and Verification.

DISCUSSION

In-depth interviews with 30 tomato farmers in Landono District showed various profiles of respondents. The majority of farmers have more than 5 years of tomato farming experience, which shows that they have a fairly good understanding of the dynamics of cultivation and the market of this commodity. The average age of the respondents was in the productive range (between 30-55 years). The educational background of the respondents varied, but most had primary to secondary education. The area of land managed by the sample farmers also varied from 0.05 Ha – 0.25 Ha, reflecting the diversity of farmer structures in the region. These characteristics are important to understand because they can affect the capacity of farmers to deal with price fluctuations and adopt marketing strategies.

During the data collection period, farmers in Landono District reported significant fluctuations in tomato prices. Based on information from respondents, the selling price of tomatoes tends to fluctuate between Rp. 3,000 – Rp. 5,000 per kilo gram and increase

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by Rp. 8,000 – Rp. 12,000 per kilogram, depending on harvest time and market conditions. When the harvest season arrives, the supply of tomatoes in local markets and markets in Kendari such as Baruga Market becomes abundant. This surplus condition directly suppresses the selling price. On the other hand, outside of the harvest season or when production constraints occur, the scarcity of supply causes the price of tomatoes to increase. Most farmers agree that production volume is the main determinant of price fluctuations.

- Production Surplus: Farmers explain that at the peak of the harvest, their orchards simultaneously produce large quantities of tomatoes. "If the harvest is huge, sir, everyone sells tomatoes. In the market, the tomatoes spill out, traders also know so they just bargain cheaply," said Mr. A, one of the farmers. This condition causes oversupply at the farmer and market levels, leading to a significant decrease in selling prices.
- Production Scarcity: Conversely, when there is crop failure due to bad weather (e.g., a pest or disease attack, or a prolonged dry season), production becomes low. "If the weather is bad, the harvest is very small, sir. Those who have a few tomatoes can sell at a high price," said Mrs. B. This scarcity of supply provides higher bargaining power for farmers who still have stock, so they can sell at a better price. In addition to local production factors, farmers also consistently mention the role of supply from outside the region as an important cause of price fluctuations, especially when local production is abundant.
- Supply Entry from Enrekang: Many farmers complain about the influx of tomato supplies from other areas, especially Enrekang, to markets in Kendari, including Baruga Market. "In Kendari there are a lot of tomatoes from Enrekang, sir. If tomatoes from here (Landono) harvest a lot, and tomatoes from Enrekang continue to come in, our prices have fallen once," explained Mr. C. This shows that the local market is not only influenced by the dynamics of domestic supply but also by regional supply. The presence of supply from other regions enlarges the total supply available in the market, thus further suppressing the selling price of tomatoes of local farmers when both are harvested at the same time. This indicates that the tomato market in Kendari is more extensive than just accommodating local production.
- Influence of the Central Market: Farmers realize that the Baruga Market in Kendari plays a central role as a central market that affects price movements in the surrounding area, including Landono District. "We sell to the Landono market or through middlemen to the Baruga Market. If there are a lot of tomatoes from outside

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in Baruga, yes, the price here also decreases," said Mrs. D. This emphasizes the importance of the main market as a price reference and how the dynamics in the central market have an impact on farmers in the supplier area.

Although the above two factors are the most dominant, some farmers also mention other factors that also influence, although the impact is considered to be smaller:

- Tomato Quality: Poor quality tomatoes (for example, some are rotten or not smooth) are forced to sell at a lower price.
- The Role of Intermediary Traders: Some farmers feel that intermediary traders sometimes provide unfair prices, especially when farmers are in dire need of cash or perishable crops. However, farmers also acknowledge that without intermediary traders, access to wider markets will be more difficult
- Limited Market Information: Farmers' lack of access to accurate and up-to-date market price information also makes them less likely to have a strong bargaining position

Fluctuations in tomato prices have a very significant impact on the income and economic stability of farmer households in Landono District. Farmers consistently report a stark difference in income between periods of high and low prices.

- When Prices Are High: When supply is low and demand is stable or increases, farmers can sell tomatoes at a fairly favorable price. "If the price is good, sir, the results are not bad. You can pay for your child's school, buy fertilizer again," said Mr. E. In this condition, the farmer's net income can be positive and provide an adequate profit margin.
- When Prices Are Low: Quite the opposite, when there is a surplus of local production or an abundant supply from outside the region, the price of tomatoes plummets. "If the harvest is very large, then tomatoes from Enrekang also enter, we are forced to sell them cheaply. Sometimes the cost of fertilizer and medicine does not come back," complained Mrs. F. In such conditions, the gross income received by farmers is often unable to cover the total cost of production, so they suffer very small losses or profits.

The majority of farmers state that fluctuations in tomato prices directly affect the welfare of their families. Income uncertainty makes it difficult for farmers to plan routine expenses such as children's education costs, health, and investments for the next planting season. "If the price is uncertain like this, sir, it is very difficult to make a plan. If you want to buy expensive fertilizers, you want to go to school, your children also have to think about it," said Mr. G. This emphasizes that price volatility is not only an economic issue, but also has social implications for the stability of farmer families.

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The findings of this study show that fluctuations in tomato prices in Landono District are influenced by a combination of internal factors (local production) and external factors (regional supply competition). The dominant factors identified by farmers are the surplus of production during the harvest and the entry of supplies from other regions. When the supply side increases dramatically, especially when supply from outside the region floods the market, then prices will tend to fall. This is exacerbated by the perishable nature of tomato commodities, which forces farmers to sell their crops immediately, reducing their bargaining power in the presence of middlemen.

The role of supply from outside the region, especially from Enrekang, is an important finding that shows how the current agricultural commodity market is more regionally integrated. This competition directly affects the prices received by local farmers. Limited market information and limited access to more profitable markets also reinforce farmers' weak bargaining positions in the presence of middlemen.

The impact of price fluctuations on farmers' income is very clearly visible. Periods of low prices when harvests are plentiful or external supply are high, directly cause farmers' income to be eroded, and can even reach a point of loss if production costs are not covered. This confirms that price volatility is a serious threat to the sustainability of farming and the welfare of farmers' households. Farmers who are able to survive are usually those who have a larger business scale, better access to capital, or have alternative marketing strategies. However, for most farmers in Landono, this uncertainty has become a daily challenge.

Table 1. Farmers' Perception of the Factors Causing Fluctuations in Tomato Prices in Landono District.

No.	Factors Causing Price Fluctuations	Frequency of Respondents (n=30)	Percentage (%)
1.	Local Production (Harvest Surplus)	28	93.3%
2.	Supply from Outside the Region (e.g. Enrekang)	25	83.3%
3.	Tomato Quality	15	50.0%
4.	The Role of Intermediary Traders	12	40.0%
5.	Bad Weather/Pests Disease (causing scarcity/damage)	10	33.3%

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No.	Factors Causing Price Fluctuations	Frequency of Respondents (n=30)	Percentage (%)
6.	Limitations of Market Information	8	26.7%

Source: Primary Data of Interview Results, 2024

Based on Table 1, it can be seen that the majority of farmers (93.3%) identify abundant local production at harvest as the main cause of price fluctuations. The second most frequently mentioned factor is the influx of supply from outside the region (83.3%), which reflects broader market competition. Other factors such as the quality of tomatoes (50.0%), the role of intermediary traders (40.0%), bad weather (33.3%), and limited market information (26.7%) were also acknowledged by some farmers, albeit to a smaller proportion. These findings strongly support the identification of two dominant factors.

Table 2. Identifying Marketing Obstacles Faced by Tomato Farmers in Landono District

No.	Marketing Constraints	Frequency of Respondents (n=30)	Percentage (%)
1.	Difficulty Finding Buyers during the Bountiful Harvest	27	90.0%
2.	Low Bargain Prices from Traders	24	80.0%
3.	Transportation Costs to Larger Markets	18	60.0%
4.	Lack of Access to Market Information	15	50.0%
5.	The quality of tomatoes decreases during the trip	10	33.3%

Source: Primary Data of Interview Results, 2024

Table 2 outlines other marketing obstacles faced by tomato farmers in Landono District. The biggest reported obstacle was difficulty finding buyers when the harvest was abundant (90.0%), followed by low bargaining prices from traders (80.0%). These constraints are interrelated with price fluctuations, where surplus production exacerbates marketing problems and depresses prices. Lack of access to market information (50.0%) is also a factor that weakens farmers' bargaining positions, supporting findings regarding the relevance of market information factors.

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CONCLUSION

Based on the results of the analysis and discussion that has been carried out, several main conclusions can be drawn as follows:

1. Factors Causing Tomato Price Fluctuations: Fluctuations in tomato prices in Landono District, South Konawe Regency, are mainly caused by two dominant factors identified by farmers: (a) the volume of local production, where the crop surplus when production is abundant tends to lower prices, while production scarcity increases prices; and (b) supply competition from outside the region, especially from Enrekang, which enters the central market in Kendari and helps to suppress the price of local tomatoes when oversupply occurs. Other factors such as product quality and limited market information also contribute.
2. Impact of Price Fluctuations on Farmers' Incomes: Fluctuations in tomato prices have a significant impact on farmers' incomes. When prices are high, farmers have the opportunity to make adequate profits. However, when prices are low due to surplus production or supply from outside the region, farmers' income decreases drastically, often even unable to cover production costs, which has implications for a decrease in the welfare of farming households.

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