

FACTORS CONTRIBUTING TO THE SHORTAGE OF UHT MILK INTHE SAMBAS REGENCY MARKET AND ITS IMPACT ON THE LOCAL ECONOMY

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ABSTRACT

This study aims to analyze the factors causing the scarcity of UHT milk in the markets of Sambas Regency and its impact on the local economy. The research employs a descriptive qualitative approach using observation, interviews, documentation, and literature review techniques. The findings indicate that the scarcity of UHT milk is caused by several factors, including distribution constraints, increasing consumer demand, limited supply from distributors, transportation barriers, and geographical conditions. The scarcity has resulted in rising prices, changes in consumption patterns, and disruptions to local trading activities. Therefore, collaboration between local governments, distributors, and business actors is needed to maintain supply stability and strengthen the distribution system.

Keywords: UHT milk, scarcity, distribution, regional economy, Sambas Regency.

INTRODUCTION

Regional economic development is a process aimed at improving the well-being of the community through economic growth, income equality, and an improved quality of life. In the process of economic development, the stability of the distribution of essential goods is one of the key factors that

must be considered. A stable supply of consumer goods can support community economic activities and maintain market equilibrium.

One phenomenon occurring in Sambas Regency is the scarcity of UHT milk in several markets and retail stores, such as traditional grocery stores, mini-markets, Alfamart, and Indomaret. UHT milk is a consumer product that is quite popular among the public because it is convenient, has a long shelf life, and is easily available. This product is widely consumed by children, teenagers, and adults alike to supplement their daily nutritional needs. Many small and medium-sized enterprises (SMEs) also use UHT milk as a key ingredient in desserts and beverages, such as tarts, custard cakes, puddings, and many other baked goods that use UHT milk. Similarly, beverage SMEs—particularly those offering trendy drinks—typically use UHT milk as their main ingredient.

However, in recent times, residents of Sambas Regency have faced difficulties obtaining UHT milk in markets such as grocery stores, Alfamart, and Indomaret. Typically, monthly stock levels for all UHT milk brands were at least four cartons—or even more—but currently, UHT milk stock is limited to just one carton, which inevitably sells out the very same day it arrives. This situation has led to rising product prices and changes in consumer behavior. This scarcity is believed to be influenced by several factors, such as disrupted distribution, limited stock from distributors, increased market demand, and transportation challenges.

From a development economics perspective, shortages of consumer goods can affect regional economic stability because they are linked to distribution, purchasing power, and trade activities. If this situation persists, it could lead to market imbalances and reduce the level of public welfare.

Based on these issues, this study was conducted to identify the factors causing the scarcity of UHT milk in the Sambas Regency market and its impact on the community's economic conditions. Drawing on various theories, this study focuses on analyzing the relationship between distribution factors, market demand, product supply, and the supply chain system to explain the phenomenon of UHT milk scarcity in Sambas Regency. This study is expected to provide a more comprehensive understanding of the causes of the scarcity and to serve as a basis for formulating strategies to strengthen distribution and supply in the region.

RESEARCH METHODOLOGY

According to Kotler and Keller (2016), distribution is a series of activities carried out to channel products from producers to consumers so that goods are available at the right time, place, and in the right quantity. Poor distribution can lead to delivery delays and imbalances in the availability of goods in the market.

Meanwhile, market demand is defined as the quantity of goods or services that consumers are willing and able to purchase at various price levels over a specific period. Mankiw (2021) explains that demand is influenced by various factors, such as the price of goods, household income, consumer preferences, population size, and expectations regarding future economic conditions. An increase in demand that is not matched by the availability of goods can lead to shortages in the market.

On the other hand, the supply of goods refers to the quantity of goods that producers are willing and able to offer at various price levels during a specific period. According to Sukirno (2019), supply is influenced by the price of goods, production costs, technology, the number of producers, and government policies. If supply is disrupted—whether due to production constraints or distribution barriers—market equilibrium will be disrupted, potentially leading to a shortage of goods.

Furthermore, the supply chain is a network that connects various parties—from raw material suppliers, manufacturers, and distributors to retailers and end consumers—in the process of providing goods. According to Christopher (2016), a supply chain is a network of organizations involved through upstream and downstream relationships in various processes and activities that generate value in the form of products and services delivered to end consumers. An effective supply chain system ensures the smooth flow of goods, information, and resources, thereby maintaining the stability of supply in the market.

Based on these various theories, this study focuses on analyzing the relationship between distribution factors, market demand, product supply, and the supply chain system to explain the phenomenon of UHT milk shortages in Sambas Regency. This study is expected to provide a more comprehensive understanding of the causes of the shortages and serve as a basis for formulating strategies to strengthen distribution and product supply in the region.

This study employs a qualitative approach using descriptive methods. The qualitative approach was chosen because this study aims to gain an in-depth understanding of the phenomenon of UHT milk shortages in the Sambas Regency market and to identify the factors causing these shortages. The descriptive method was used to provide a systematic overview of distribution conditions, stock availability, consumer demand patterns, and the resulting impact on the community's economic activities.

The research locations focused on several traditional markets, grocery stores, and modern retail outlets such as Alfamar and Indomaret in Sambas Regency, West Kalimantan. These locations were selected because the area serves as a hub for community trade activities and is where the phenomenon of UHT milk scarcity—the subject of this study—occurs. This

study also involved distributors and agents as sources of information to obtain a more comprehensive picture of the UHT milk supply chain.

The data used in this study consist of primary and secondary data. Primary data were obtained through direct observation and semi-structured interviews with 3 merchants, 5 consumers, and 1 UHT milk distributor in Sambas Regency. Meanwhile, secondary data was obtained from various sources, such as publications by the Central Statistics Agency (BPS), local government reports, scientific journals, reference books, and various documents related to the distribution of goods and regional economic development.

Data collection was conducted using four main techniques: observation, interviews, documentation, and literature review. Observations were conducted to directly assess the availability of UHT milk in markets and retail stores, basic foodstuffs stores, and minimarkets such as Alfamart and Indomaret. Interviews were conducted to gather information on distribution barriers, changes in market demand, and the economic impacts felt by business operators and the public. Documentation was used to gather supporting data in the form of photographs, reports, and related documents. The literature review involved examining theories of economic development, scarcity, supply and demand, as well as supply chain management concepts relevant to this study.

Data Analysis Flowchart



SOURCE OF THE CHART

Miles, M. B., Huberman, A. M., & Saldaña, J. (2014). *Qualitative Data Analysis: A Methods Sourcebook* (3rd ed.). Thousand Oaks, CA: Sage Publications.

Literature Review

Scarcity is one of the fundamental issues in economics that occurs when the quantity of goods or services available is less than the public's needs or demand. Scarcity arises from the limited resources available to meet unlimited human needs. In a market context, the scarcity of a good can lead to price increases, changes in consumption patterns, and a decline in the public's standard of living. The scarcity of UHT milk in Sambas Regency can be understood as an imbalance between consumer demand and the quantity of goods available in the market.

From a microeconomic perspective, the theory of supply and demand serves as one of the foundations for explaining the occurrence of scarcity. According to Mankiw (2018), the price and quantity of goods available in the market are determined by the interaction between supply and demand. When public demand for a product increases while the supply remains constant or even decreases, a shortage of goods occurs, which can potentially lead to scarcity. This situation can cause prices to rise as consumers compete for a limited supply of the product. In the case of UHT milk in Sambas Regency, rising public demand that was not matched by sufficient supply was one of the factors driving the shortage.

In addition to supply and demand factors, the distribution of goods also plays a crucial role in maintaining product availability in the market. Distribution is the process of channeling goods from producers to consumers through various marketing channels. An effective distribution system ensures that goods reach consumers on time, in sufficient quantities, and at a reasonable cost. Conversely, if disruptions occur in the distribution system—such as delivery delays, limited transportation fleets, or geographical barriers—the supply of goods in the market can be disrupted, leading to shortages. Sambas Regency, which covers a fairly large area and includes several regions with limited transportation access, is at risk of facing distribution issues that could affect the availability of UHT milk.

In the field of development economics, the smooth distribution of goods is one of the factors supporting regional economic growth. Todaro and Smith (2015) explain that economic development is not only related to income growth but also encompasses improvements in the distribution system, public access to basic necessities, and an overall increase in well-being. Shortages of consumer goods can hinder economic activity because they cause prices to rise and reduce people's purchasing power. Therefore, the stability of the supply of goods is a key indicator in ensuring the sustainability of regional economic development.

The phenomenon of UHT milk shortages can also be analyzed using the concept of Supply Chain Management (SCM). Supply chain management is a system that integrates all activities, from raw material procurement and production processes to distribution, until the product reaches the consumer. The primary goal of SCM is to ensure that goods are available in the right quantities, at the right time, and at an efficient cost. If any component in the supply chain experiences a disruption, it can affect the entire distribution system and lead to limited stock in the market. In this study, the supply chain management approach was used to understand the distribution flow of UHT milk from producers to consumers in Sambas Regency and to identify potential points that could cause shortages.

Based on these various theories, this study focuses on analyzing the relationship between distribution factors, market demand, product supply, and the supply chain system to explain the phenomenon of UHT milk shortages in Sambas Regency. This study is expected to provide a more comprehensive understanding of the causes of the shortages and serve as a basis for formulating strategies to strengthen distribution and product supply in the region.

Some previous related studies are listed in the table below

Table 1. List of Previous Studies

No.	Author	Year	Location	Research Topic	Results
1.	Sari dan Putra	2021	Pontianak	Distribution of Consumer Goods	Distribution affects the availability of goods
2.	Hidayat	2020	Kalbar	Food Shortages	The shortage was caused by distribution bottlenecks
3.	Yuniarti	2022	Sambas	Supply Chain for Goods	The supply chain affects market stability
4.	Arifin	2019	Indonesia	Supply and Demand	Imbalances lead to scarcity
5.	Rahman	2021	Kalimantan	Distribution of Consumer Products	Transportation is a key factor
6.	Mulyadi	2020	Jawa Barat	Market Availability	Distributors have an

				of Goods	impact on inventory levels
7.	Prasetyo	2023	Indonesia	Food Product Supply Chain	Coordinating distribution to increase supply
8.	Sukirno	2016	Indonesia	Changes in Consumption Patterns	Limited Resources
9.	Makiw	2018	America	Supply and Demand	Prices of Goods Are Rising
10.	Tjiptono	2019	Indonesia	Distribution System Disruptions	Effective Distribution System
11.	Todora dan Smith	2015	America	Shortage of Consumer Goods	Stability of the Supply of Goods
12.	Heizer	2020	America	Product Availability	Supply Chain Management

RESULTS AND DISCUSSION

Based on the research findings, the supply chain for UHT milk distributed in Sambas Regency remains heavily dependent on products sourced from national-scale dairy processing companies located outside West Kalimantan. The product distribution flow begins with the producer, then moves through a main distributor or regional distributor before being forwarded to agents, wholesalers, minimarkets, and grocery stores in Sambas Regency, eventually reaching consumers. This relatively long supply chain structure means that the availability of UHT milk in the local market is heavily influenced by the smoothness of the distribution process at every level.

The analysis results show that the UHT milk supply chain in Sambas Regency still faces various challenges, including dependence on supplies from outside the region, a limited number of distributors, and high logistics costs influenced by the region's geographical conditions. This situation makes the UHT milk supply vulnerable to various disruptions, such as delivery delays, limited stock at distributors, and increased demand in other regions, which can reduce the supply allocation to Sambas Regency.

Nevertheless, there is significant potential to strengthen the UHT milk supply chain in the region. Possible measures include expanding the

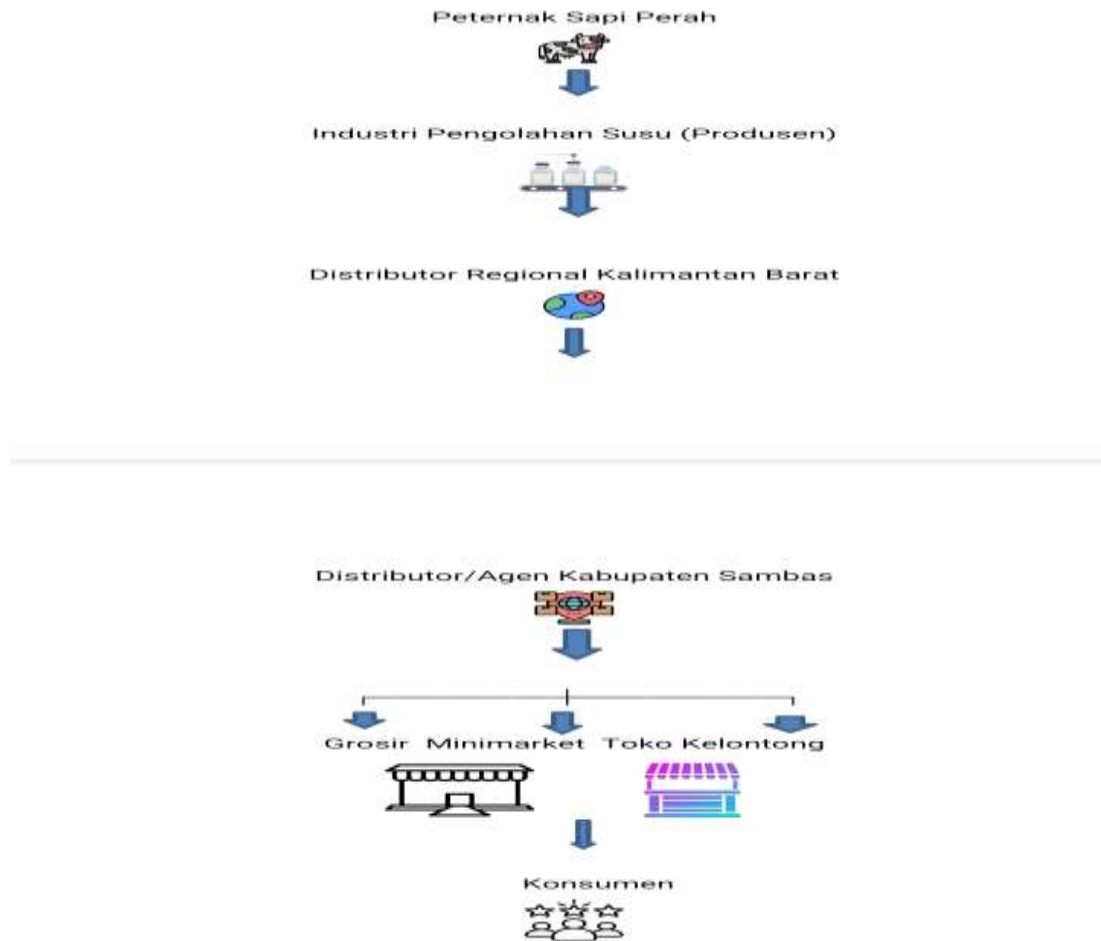
supplier network to reduce reliance on specific distributors, improving coordination and cooperation among supply chain stakeholders, and leveraging information technology to monitor inventory and market demand more accurately. Additionally, support from local governments through improvements to transportation infrastructure and increased efficiency in the logistics system are also strategic steps toward creating a stronger and more sustainable supply chain.

By strengthening these various aspects, it is hoped that the UHT milk supply chain in Sambas Regency will operate more effectively and efficiently, thereby ensuring a stable supply in the market. This, in turn, will not only reduce the potential for shortages but also help maintain price stability and support improved well-being for the local community and businesses.

2. Preliminary analysis and potential for strengthening the UHT milk supply chain in the Sambas Regency market.

Based on the research findings, the UHT milk supply chain in Sambas Regency still relies on products manufactured by national-scale dairy processing companies located outside West Kalimantan. These products are distributed through major and regional distributors, then forwarded to agents, wholesalers, minimarkets, and grocery stores scattered throughout Sambas Regency before finally reaching end consumers to meet household needs. This situation indicates that the availability of UHT milk in the Sambas Regency market is heavily influenced by the smoothness of the distribution process and coordination among actors in the supply chain.

In general, the UHT milk supply chain in Sambas Regency can be described as follows:



The study findings indicate that the most vulnerable points in the UHT milk supply chain in Sambas Regency are the distribution processes from producers to distributors and from distributors to retailers. The long distance between production centers and marketing areas leads to increased logistics costs and heightens the risk of delivery delays. As a result, distribution disruptions or limited distributor inventory can directly reduce the availability of UHT milk in the market and trigger shortages.

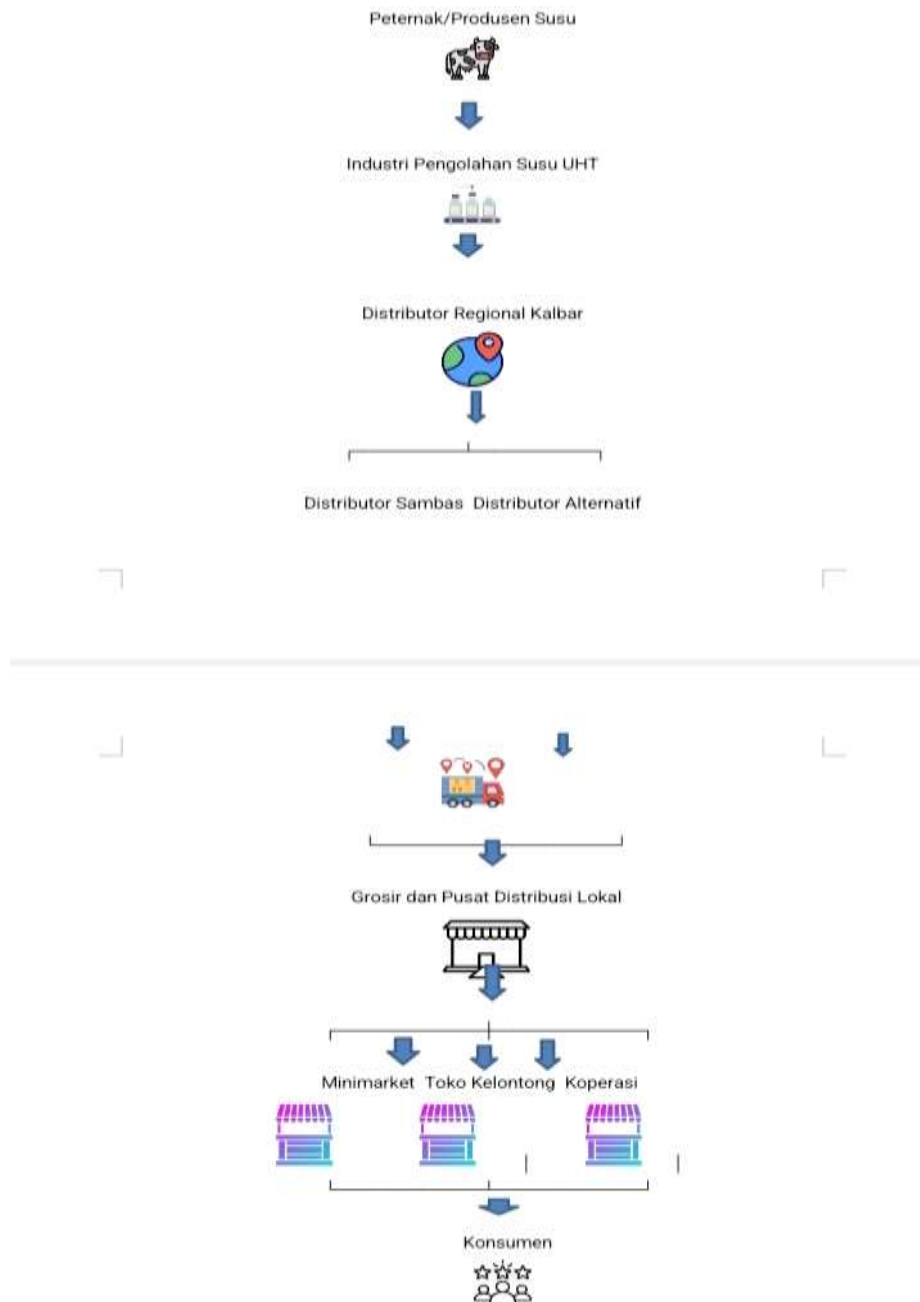
In addition, most retailers still rely on a small number of distributors, making the supply system less flexible when distribution disruptions occur. From a Supply Chain Management (SCM) perspective, this situation indicates that the UHT milk supply chain in Sambas Regency still carries a relatively high level of risk due to the limited number of alternative supply sources.

The smooth operation of the supply chain is influenced by three main components: the flow of goods, the flow of information, and the flow of funds. Disruptions to any one of these components can affect overall distribution performance. Therefore, the supply chain can be strengthened by improving coordination between distributors and retailers, diversifying suppliers, upgrading transportation infrastructure, and utilizing information technology to monitor inventory more effectively. These measures are

expected to improve supply stability and reduce the risk of UHT milk shortages in Sambas Regency.

Recommended Supply Chain Model

To reduce the risk of shortages, the recommended supply chain model is as follows :



This model allows for alternative distribution channels in the event that one of the suppliers encounters difficulties. As a result, the availability of UHT milk in the Sambas Regency market can be better guaranteed, the risk of shortages can be minimized, and price stability can be better maintained. From a development economics perspective, strengthening this

supply chain is important because it can improve distribution efficiency, maintain market stability, and support community well-being through the sustainable availability of consumer goods.

3. Potential interventions that can be implemented to strengthen the UHT milk supply chain in the Sambas Regency market.

Efforts to strengthen the UHT milk supply chain in Sambas Regency require the involvement of various stakeholders, including both the local government and business operators. The local government can play a role in creating a more conducive distribution environment by improving road and transportation infrastructure to support the smooth distribution of goods. Adequate infrastructure will speed up the delivery process and reduce logistics costs, which have long been one of the factors contributing to shortages.

In addition, local governments can also monitor the distribution of essential goods to ensure that supplies are distributed evenly and that stockpiles do not accumulate in certain areas. Such monitoring is important for maintaining market stability and protecting consumer interests.

From the perspective of businesses, there is a need for greater cooperation among distributors, agents, and retailers in managing inventory. An integrated distribution information system can help businesses monitor inventory levels more accurately, enabling them to take proactive measures before stock shortages occur. Diversifying supplier sources is also necessary to ensure that the supply chain does not rely on a single distributor.

With the strengthening of the supply chain, infrastructure improvements, and better coordination among all stakeholders, the availability of UHT milk in the Sambas Regency market is expected to become more stable. This situation will not only benefit consumers but also support trade activities and drive sustainable regional economic growth.

CONCLUSION

Based on the research findings, it can be concluded that the scarcity of UHT milk in the Sambas Regency market is a phenomenon influenced by various interrelated factors, both in terms of distribution and supply. Obstacles in the distribution process, limited supply from distributors, high transportation costs, the region's geographical conditions, and rising public demand are the main factors preventing the availability of UHT milk in the market from optimally meeting consumer needs. This imbalance between supply and demand has led to a shortage that has resulted in higher product prices at the consumer level.

From a development economics perspective, the scarcity of UHT milk not only affects people's consumption patterns but also impacts local economic activity. Limited availability of goods leads to a decline in people's purchasing power for certain products, reduces consumer satisfaction, and

affects the commercial activities of vendors and business operators in the market. This situation demonstrates that the stability of the distribution and supply of consumer goods is a key factor in supporting the sustainability of regional economic development.

The research findings also indicate that the UHT milk supply chain in Sambas Regency still faces various challenges that require attention. Therefore, strengthening coordination among local governments, distributors, and business operators is a crucial step in maintaining the stability of the supply of goods in the market. With a more effective distribution system, better inventory management, and adequate infrastructure support, the availability of UHT milk in Sambas Regency is expected to be maintained, thereby meeting community needs and supporting sustainable regional economic growth.

Recommendations

Based on the research findings, addressing the shortage of UHT milk in Sambas Regency requires a coordinated approach among the local government, distributors, business operators, and other relevant parties. The local government plays a crucial role in strengthening oversight of the distribution system for basic necessities to ensure that product availability is evenly distributed throughout the region. Additionally, support in the form of improvements to transportation infrastructure and increased regional accessibility is also needed to facilitate the flow of distribution from supply centers to local markets.

Meanwhile, distributors and businesses need to enhance their cooperation in managing UHT milk inventory and distribution. More structured inventory planning and regular inventory monitoring can help anticipate potential supply shortages, especially when public demand increases. Stronger collaboration among distributors, agents, and retailers is also a key factor in building a more efficient and responsive supply chain.

In addition, supply chain resilience can be strengthened by diversifying product sourcing channels. Heavy reliance on one or a few major distributors risks causing disruptions when distribution obstacles arise. Therefore, businesses need to expand their supplier networks to ensure the sustainable availability of products.

This study also emphasizes the importance of developing a more modern and integrated supply chain management system. The use of information technology in inventory management, distribution monitoring, and market demand forecasting can improve the efficiency of the distribution system while minimizing the risk of shortages. With the implementation of these measures, it is hoped that the availability of UHT milk in Sambas Regency will become more stable and ultimately support economic activity and the well-being of the community in a sustainable manner.

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