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# Analysis Siam Citrus Farming Business And Supply Chain In Grogot Land District Paser Regency

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***Abstract.***
*East Kalimantan Province is an area which designated as a citrus development area among 34 provinces in Indonesia. Paser Regency is one of the citrus development areas, namely in the Tanah Grogot sub-district as a center for citrus development. From these locations, Padang Pengrapat Village was chosen. The total population of citrus farmers in the village is 241 farmers, of which 15% of the total population is taken, namely 36 samples using a simple random technique. Collector traders are taken by snow ball sampling technique. Furthermore, for citrus consumers used accidental sampling technique as many as 36 farmers. The results showed that the average cost incurred by farmers was IDR 5,554,777 per farming business/year. The income earned by farmers is an average of IDR. 19,922,916 per farming business/year, so that an income of IDR. 14,368,139 per farming business/year is obtained. The farmers already understand customers well, so farmers are able to properly provide citrus production. Dividing the profit margin which consists of 3 marketing patterns, pattern 1 is better than pattern 2 and pattern 3. Relatively good logistics. Communication and information between marketers are quite good. The relationship between supply chain actors is quite good.*

***Keywords:*** *citrus farming business, citrus supply chain, marketing margins*

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## I. INTRODUCTION

**Background**

East Kalimantan Province is an area designated as a citrus center development area among 34 provinces in Indonesia with an area of 2,000 Ha. The location of its development in East Kalimantan covers 350 Ha of Berau Regency, East Kutai 300 Ha, Kutai Kartanegara covering 500 Ha, and the rest being developed in North Penajam Paser 710 Ha and Paser Regency 376 Ha.

Citrus is the main commodity in Tanah Grogot District in Padang Pengrapat Village, this can be happening because of the support and cooperation between the government and citrus farmers in developing citrus farming business with the hope of "Prosperous Society". This condition will strengthen the development of horticultural commodities in Tanah Grogot Subdistrict, so that it can compete with production from the South Kalimantan Province, namely Barito Kuala Regency, and it is able to substitute imported citrus which is now almost flooding areas including in Tanah Grogot Subdistrict.

The citrus farming business in Tanah Grogot District has been developed since 2012. It requires a large investment cost, especially for initial costs, such as land preparation, buying seeds and planting costs, as well as maintenance costs. On the other hand, it takes time for citrus to produce. Besides that, citrus production fluctuates relatively every year, so it is necessary to do research on citrus farming which includes citrus production, costs incurred by farmers, revenue and income, citrus supply chain and marketing systems.

Citrus fruits in Tanah Grogot District have been producing for quite a long time and are now 11 years old, so the initial investment costs will be calculated as explicit costs.

This research also analyzes the supply chain, because it is closely related to the production system of citrus farming business and the income of citrus farmers. Farmers' income is closely related to the production produced by farmers and the prices received by farmers. By the fixed production, if the price of citrus increases, the income of farmers will also increase.

**Objectives and Benefits**

There are two objectives underlying this research to be conducted, namely: (1) Analyzing the costs, revenues, income of citrus farming business in Tanah Grogot District, Paser Regency. and (2) Analyze the supply chain starting from understanding customers and consumers, providing the right product, dividing profit margins, logistics and distribution, communication and information on citrus farming business from producers to consumers and effective relationships between supply chain actors in Grogot Land District, Paser Regency.

This research is expected to provide benefits for the following: (1) Providing information and knowledge to the community, especially Siamese citrus farming business. (2) Provide an overview to farmers about the marketing supply chain of Siamese citrus in Paser Regency in an effort to increase their production and income; (3) Material information for agencies involved in making policies on efforts to increase revenue, repair, growth and development Siamese citrus farming business; (4) For other interested parties, this research can be used as additional information for further research development.

## II. RESEARCH METHOD

**Data Types and Sources**

In this study the data used is primary data by way of direct interviews with farmers. Secondary data is sourced from the Food and Agriculture Security Service (DKPP), the Central Statistics Agency (BPS), Agricultural Field Extension (PPL).

**Sampling Method**

Determination of the population in this study were all citrus farmers in the village of Padang Pengrapat, Grogot Land District with a total of 241 farmers. 15% or 36 samples from that total were taken using a simple random technique. Supply chain marketing channel sample using *snowball sampling* where the first information is obtained from the farmers who sell their produce to the collecting traders then it is traced that the collecting traders sell to other collecting traders and so on. To get a sample of citrus consumption behavior, technique that used is *accindental sampling* by way of interviews to the consumer citrus found in the market and then used as samples up to 36 people.

**Data analysis method**

To determine the first objective, namely the analysis of costs, receipts and income, various formulas are used.

The costs used in this study use the concept of explicit costs, namely costs actually incurred by citrus farmers such as depreciation costs for tools, taxes, initial costs of planting and use of production facilities, with the following formula.

$$TEC = Xj \, . \, Pxj$$

With :

TEC : Total explicit costs (IDR/year)
Xj : The cost of fertilizers, pesticides, labor outside the family to-j
Pxj : The price of the input to-j

Citrus plants are annual plants so the initial costs are also taken into account as an indirect one. The cost for citrus plants uses the concept of the initial total cost divided by the economic life of the plant (Tba) which is formulated as follows:

$$TBa = \frac{\text{Initial Cost}}{\text{Economic Life of Citrus}}$$

Furthermore, the results of the total initial costs/plant depreciation (TBa) are then put into the total explicit costs (TEC) with the costs of fertilizers, pesticides, labor outside the family, so it obtained:

$$TECt = TEC + TBat$$

With :

TECt : Total explicit costs in full
TEC : Total explicit costs
TBat : Total initial cost/depreciation

The total income of citrus farming is the multiplication of the production amount (Y) and the selling price (Py) and is expressed by the following formula:

$$\text{Acceptance } (TR_t) = Py \, . \, Y_t$$

With :

TRt : Total *Revenue* (Penerimaan Total) tahun ke-t
Py : Harga produk
Yt : Jumlah produksi tahun ke – t

Income is the result of reducing the total revenue from citrus farming results with the total explicit costs actually incurred by farmers. Income can be formulated as follows:

$Income\ (I_t) = TR_t - TEC_t$

With :
$I_t$ : Income per year to-t (IDR)
$TR_t$ : Total Revenue per year to-t (IDR)
TEC : Total explicit costs (IDR)
t : year at the time

To analyze the second objective, that is supply chain citrus in the sub-district, consisting of understanding customers and consumers, providing correct product results, dividing profit margins, adequate logistics and distribution, communication and information, and effective relationships between supply chain actors, using descriptive analysis, which is made in tabular form and then carried out a descriptive analysis, or the detailed analysis as described below.

**Understanding Customers and Consumers**

Understanding customers and consumers correctly means that farmers as producers should know in detail the specifications of the commodities that consumers like. It is so that the production produced is in accordance with consumer needs, so that the resulting production will sell well. In this analysis, the data required is in the form of citrus consumer profiles as customers consisting of: age, number of family members, average income. For consumer preferences the necessary data consists of the color quality of citrus fruits. After the data is collected, it is then analyzed descriptively or in detail.

**Properly Provide Products**

Providing the right product is closely related to the citrus fruit production process. The data required consists of: farmer's age, education, farming experience, number of dependents and then analyzed descriptively.

**Sharing Profit Margins**

Creating a proportional profit margin, which means that if the capital spent is large, the profit obtained is also expected to be large so that the citrus supply chain can run well and can increase production and also affect market demand. In analyzing dividing the profit margin, several analyzes are used as described below:

**Analyzing marketing channels.** which happened to the Siamese citrus farming with identify the marketing agencies involved and then make a marketing chart for the identified citrus.

**Marketing Margins**. Is the difference between the prices received by farmers and prices at the end consumers from various marketing channels, using the following formula :

$M = Pk - Pp$

With :
M : citrus marketing margin (IDR)
Pk : Price at the end consumer (IDR)
Pp : Manufacturer's price (IDR)

**Marketing Institution Profits**. To analyze the profits received by the marketing agencies involved in marketing the citrus from various marketing channels, use the following formula :

$KP = PK-Pp-RB$

With :
KP : Seller's profit
Pk : Price at the end consumer (IDR)
Pp : Manufacturer's price (IDR)
RB : Total cost breakdown (IDR)

**Profit Section of citrus marketing agency**. To analyze the share of profits received by marketing agencies from various marketing channels, namely the value of the seller's profit (marketing channel) divided by the marketing margin value in percent using the following formula :

BK = KP/ M . 100%

With :
BK : Profit share (IDR)
KP : Seller's profit
M : Marketing margins

**Marketing costs section.** To analyze the share of marketing costs incurred by farmers, namely the total of the detailed costs incurred by the marketing agency divided by the marketing margin in percent, use the following formula :

BB = LP/M . 100%
With :
BB : Cost part
LP : Marketing fee agency
M : Marketing margins

**Farmer's share.** is the share of the price received by the farmer (farmer's share), namely the ratio between the price received by farmers and the price at the end consumer, with the following formula:

FS = PP/PK . 100%
With :
FS : Profits received by farmers (IDR)
PP : Producer level prices
PK : Prices at the consumer level

**Market shares**. Market share or market share is the part of the market controlled by a company and all potential sales, generally expressed as a percentage (%).

MS = M / Pk . 100%
With :
MS : Market Share
M : Citrus marketing margin (IDR)
Pk : Price at the end consumer (IDR)

**Adequate Logistics and Distribution**

Citrus marketing activities in Paser Regency function to bring various horticultural product commodities originating from farmers to consumers, especially consumers in Paser Regency. The process starts from collectors, retailers to consumers. The required data is the number of marketing institutions such as collectors and retailers that form a marketing chain network. Then analyzed descriptively.

**Communication and Information**

In the supply chain system, communication between producer farmers and collectors is very important, especially information about the selling price of citrus at both the producer and consumer levels. The data needed is in the form of the number of mobile phones for each farmer and the use of the cellphone owned by each farmer. Then analyzed descriptively.

**Effective Relations Between Supply Chain Actors**

Effective or well-run relationships between supply chain actors are highly expected and greatly affect supply chain flow activities, supply chain is a concept in which there is a management system related to product flow, information flow, and marketing channel flow. Effective relationships are important given the many links involved in the supply chain and think too Siamese citrus is not products that last long but it is easily damaged.

## III. RESULTS AND DISCUSSION

**Characteristics of Farmers**

The characteristics of the respondents in the citrus business are different varied from one to another. The characteristics of the respondents can describe the ability of farmers to cultivate citrus. The characteristics of the respondents consisted of age, formal education, area of citrus orchard ownership, and number of family dependents. In detail as in the following description.

**Age.** Based on the results of the study, it was shown that the largest age of farmers was in the age range of 30-45 which reached 55.55%, or more than half of the farmers were relatively young, this would show the ability and working activities of farmers in running a farming business. The next age is between 46-60 years which reaches 27.78%. The rest who are more than 60 years old is only 16.67%.

**Farmer education.** as one of the characteristics of the respondents who can describe the ability of farmers to assess, calculate and analyze. The higher the farmer's education, the ability will increase. Based on the results of the study, it was shown that the education of citrus farmers in the sub-district was relatively low, at 72.31% only up to junior high school, in fact there were as many as 11.11% of citrus farmers who did not get educated.

**Farm land.** as a very important asset for citrus farmers. In general, all citrus farms (100%) are owned by themselves. There are no farmers who rent land for citrus farming, because this plant requires a long time, so renting costs quite a lot. The largest area of citrus farming carried out by farmers is between 0.25 ha-0.50 ha and between 0.51 ha - 1.00 ha, respectively 47.22% and 44.44%. The rest is with an area of citrus farming business of more than 1.00 ha to 2.00 ha which reaches 8.34%.

**Number of family dependents.** is one of the factors that also determine the activities in managing the businesshis farm, the more family members who are covered, the greater the demand to meet family needs, but the more family members who can be used in managing the businessagriculture and the more land that can be managed. Based on the results of the study, it was shown that the number of dependents of a citrus farmer's family was relatively large, namely between 3-5 people which reached 75%, while the number of dependents of a family between 0-2 and greater than 6 people was relatively small, each of 16.67% and 8.33%.

**Explicit Costs, Acceptance and Income of Citrus FarmingBiaya Eksplisit**

**1. Explicit Cost**

Explicit costs are costs incurred in citrus farming, such as equipment depreciation costs, land and property taxes, initial planting costs, and use of production facilities. The results showed that the total costs incurred by citrus farmers amounted to IDR 5,554,777 with an average farming area of 0.93 ha, or IDR 5,971,386 per hectare (Table 1).

**Table 1. The Explicit Cost of the Siamese citrus farming business in Tanah Grogot District, Paser Regency 2022**

| No | Cost component | Value | Percentage (%) |
|---|---|---|---|
| 1 | Property tax | 41.875 | 0,75 |
| 2 | Tool depreciation | 489.569 | 8,81 |
| 3 | Fertilizer | 2.662.778 | 47,94 |
| 4 | Cost of Plant Depreciation | 604.861 | 10,89 |
| 5 | Pestisida score | 47.500 | 0,85 |
| 6 | Winder pesticide | 85.000 | 1,62 |
| 7 | Labor outside the family | 1.250.000 | 23,07 |
| 8 | Bag | 355.278 | 6,56 |
| 9 | Such | 17.917 | 0,33 |
| | Total | 5.554.777 | 100,00 |

Source: Primary Data (Processed), 2022

**Acceptance**

Revenue from citrus farming is multiplied between production and price. Based on the results of the study, it was shown that with a production of 4,033/farming business and the average price of IDR. 5.33/kg, the amount of revenue from citrus farming business was IDR. 19,922,916/farm, or IDR. 21,417,135/ha per year. (Table 2)

**Table 2. Siamese citrus farming business revenue in Tanah Grogot District 2022**

| No | Component | Production (kg) | Price | Revenue (IDR) |
|---|---|---|---|---|
| 1 | Per farming business | 3.736 | 5.333 | 19.922.916 |
| 2 | per hectare | 4.334 | 5.333 | 21.417.135 |

Source : Primary Data (Processed), 2022

**Income**

Citrus farming income is the reduction between the total revenue costs and the total explicit costs. Based on the results of the study, it was shown that with revenues of IDR. 19,922,916/farming business, while the explicit costs incurred by farmers in citrus farming were IDR. 5,554,777 per farming business, citrus farming income business was IDR. 14,368,138 per farming business or IDR. 15.44.749. (Table 3).

**Table 3. Income of citrus farming in Tanah Grogot District 2022**

| No | Component | Farming Business | per hectare |
|---|---|---|---|
| 1 | Reception | 19.922.916 | 21.417.135 |
| 2 | Total Explicit Cost | 5.554.777 | 5.971.386 |
| Farming business income | | 14.368.139 | 15.445.749 |

Source : Primary Data (Processed), 2022

**Supply chain management**

The results of the analysis in this study, the discussion of the results of the second research objective is the supply chain (SCM), consisting of understanding customers and consumers, providing the right product, dividing profit margins, adequate logistics and distribution, communication and information on citrus farming business from producers to consumers as well as effective inter-island supply chain relationships The key to successful implementation of SCM, uses 6 principles namely :

1. Understanding the customers and consumers properly
2. Providing the right product results
3. Creating and distributing profit margins across all chains
4. Adequate logistics and distribution
5. Smooth communication and information
6. Effective relationships between supply chain actors

These six principles of SCM should be implemented for food marketing in Tanah Grogot District, Paser Regency. Based on the results of field research studies on these six principles, the following descriptive analysis can be followed.

**Understanding Customers and Consumers**

Understanding customers and consumers has meaning, so that farmers as producers should know in detail the specifications of the commodities that consumers like. This is so that the production produced is in accordance with consumer needs, so that the resulting production will sell well. To understand customers correctly, it is closely related to consumer profiles as citrus consumers, and consumer preferences.

**Table 4. farming business and supply chain**

| No | Age | Total | Percentage (%) |
|---|---|---|---|
| 1 | 23-33 | 20 | 55,56 |
| 2 | 34-44 | 15 | 41,67 |
| 3 | 45-55 | 1 | 2,78 |
| | Total | 36 | 100,00 |

Source : Primary Data (Processed), 2022

**Understanding customers and consumers.** Consumers of citrus in Paser Regency are households. Households generally buy sweet citrus, because they are consumed directly. The profile of citrus consumers based on the age of the research shows that the majority of consumers are aged between 23-44 years, which is 98.22%. The remaining 2.78% is for consumers aged 45-55 years. In other words, all citrus consumers in this district are of productive age as shown in (Table 4).

Consumers based on the number of family members. More number of family members, especially those of productive age, there is a possibility that consumption of citrus will increase. The results of the study show that the ideal number of family members is in accordance with the BKKN concept, namely 3 people consisting of 1

wife and 2 children. Based on this, the ideal number of family members reaches 52.77% and families with more than 3 family members reach 47.23% (Table 5).

**Table 5. Characteristics of citrus consumers based on family members**

| No | Nominal of Family | Total | Percentage % |
|---|---|---|---|
| 1 | 1-3 | 19 | 57,77 |
| 2 | 4 | 12 | 33,34 |
| 3 | 5 | 5 | 13,89 |
| Total | | 36 | 100,00 |

Source : Primary Data (Processed), 2022

The demand for citrus is determined by consumer income, with higher consumer income, the potential demand for citrus will increase. This needs to be known by citrus farmers.

Based on the results of the study, it is shown that the largest orange consumers are in the intermediate income IDR. 1.000.000 to IDR. 2.500.000, which reached 88.89%. This means that the income of citrus consumers is relatively not too high, so there is a possibility of consuming citrus not too much. The remaining 11.11% with income above IDR 2.500.000 to IDR 5.000.000 per month (Table 6).

**Table 6. Characteristics of citrus consumers based on total income**

| No | Nominal Consumer Income (IDR) | Total of Consumer | Percentage (%) |
|---|---|---|---|
| 1 | 1.000.000-2.500.000 | 32 | 88,89 |
| 2 | 2.600.000-3.500.000 | 1 | 2,78 |
| 3 | 3.600.000-4.500.000 | 2 | 5,56 |
| 4 | 4.600.000-5.000.000 | 1 | 2,78 |
| Total | | 36 | 100,00 |

Source : Primary Data (Processed), 2022

Along with the largest citrus consumer income with income reaching IDR. 1.000.000 to IDR. 2.500.000, consumers buy citruses relatively not too large. The amount of citrus purchased between 0.33 to 0.93 kg per month which reached 66.67%. This shows that the biggest consumer of citrus with the number of purchases of less than 1 kg per month. Meanwhile, consumers who buy more than 1 kg of citrus per month are relatively small, only 33.33%, or only one-third of the total consumers (Table 7).

**Table 7. Characteristics of citrus consumers based on the number of purchases (kg/month)**

| No | Total of consumers | Purchase (kg/month) | Percentage (%) |
|---|---|---|---|
| 1 | 10 | 0,33 | 27,78 |
| 2 | 14 | 0,93 | 38,89 |
| 3 | 12 | 1,20 | 33,33 |
| Total | 36 | 2,46 | 100,00 |

Source: Primary Data (Processed), 2022

Consumer preferences are assessed using a variety of indicators, including: citrus consumer preference for the appearance of orange color. Siamese orange is a fruit that can be developed to fulfill consumer demand. About 70 to 80% of the types of citruses developed by Indonesian farmers are Siamese citruses (Dimyati, 2005). Siamese citruses are popular because they have a sweet taste, contain high enough vitamin C. Siamese citruses have a smooth and shiny skin surface. Based on the results of the study, it was shown that consumers' preference for purchasing orange color displays, the largest consumers bought citrus, orange yellow and greenish yellow, with a total of 30 consumers who reached 83.33%, while those who bought citrus with a dark green appearance were only 6 consumers. only reached 16.67% (Table 8)

**Table 8. Preference of orange consumers to the appearance of orange color**

| No | citrus quality display | Total | Percentage (%) |
|---|---|---|---|
| 1 | Dark green | 6 | 16,67 |
| 2 | Yellow Orange | 14 | 38,89 |
| 3 | Greenish Yellow | 16 | 44,44 |
| Total | | 36 | 100,00 |

Source : Primary Data (Processed), 2022

Consumer preferences for the appearance of citrus fruits vary, based on the color of the skin. Consumers prefer oranges that are yellow-green in color with bright shiny skin which indicates that the citruses are ripe on the tree. Consumers do not like citrus with an unattractive appearance as is the case with local citrus fruits which are relatively unattractive to consumers.

**Providing Proper Production Results**

Based on the results of the research, it shows that part of the producer side of citrus produced by farmers so that their products are in accordance with consumer demand, it is characterized by the characteristics of farmers as citrus producers such as age, education, farming experience. With a productive age, education is good enough and farming experience is sufficient, then the oranges produced by farmers will adapt to consumers. The farmer profile is quite good, this is indicated by all citrus farmers being in the productive age with an average education.

One of the factors in providing production according to consumer demand is the profile of the farmers which includes the age of the farmer, education, experience in farming and the number of family dependents. With a good farmer profile, the products produced also tend to be of better quality in the future.

From the research results show, the average age of farmers between 31-40 years has a greater percentage of 44.44%, meaning they are still in productive age.

The results of data analysis show that around 47% of farmers on average have graduated from elementary school and junior high school. To improve this capacity, training is necessary.

The low level of farmer education can be offset by experience in farming. Even though the education level of farmers is still low, with longer citrus farming experience, the management of their farming business is better.

The results of the analysis show that the average experience of farmers in farming is quite good between 10 to 30 years with this experience citrus farming in Paser Regency is in accordance with consumer needs.

The main obstacle in citrus farming is the limited labor in the family owned by citrus farmers. The point is that the number of dependents of farmer families who are all of productive age is very helpful in farming, while for citrus farmers the number of dependents is large and most of them are in non-productive age. business burden. The results of the analysis show that the number of dependents of farmers is between 0 and 5 people and most of them are still in the non-formal ageproductive of this number who work in citrus farming around 2 to 3 people.

**Membagi Profit Margin**

Dividing the profit margin to all market participants is an effort to distribute the profit margin proportionally, which means that if the capital spent is large, then the profit obtained is also expected to be large so that the orange supply chain can run well.

There are three marketing patterns for citrus in Paser Regency. Marketing pattern I is citrus farmer-consumer, so there is no marketing margin because the end consumer goes directly to the farmer to buy oranges, in pattern I there are not many consumers who buy citrus directly from the farmer's land. With pattern I, then the price received by the farmer's share*farmers share* very large (100%) because the price received by farmers is the same as the price at the end consumer (Table 9).

Furthermore, from pattern I, marketing costs are also required which are relatively small, only Rp. 1,112/kg. kg or the farmer's profit share of 79.15% (Table 9)

**Table 9. Marketing pattern I (farmer-consumer)**

| No | Activity | Price | |
|---|---|---|---|
| 1 | Farmer Price | 5.333,00 | |
| 2 | Cost | 1.112,00 | |
| 3 | Seller's Profit (Rp/kg) | 4.221,00 | |
| 4 | Marketing Margin (Rp/kg) | 5.333,00 | |
| 5 | Profit Share (%) | 79,15,00 | |
| 6 | Cost Share (%) | 20,85 | |
| 7 | Farmer share (%) | 100,00 | |

Source : Primary Data (Processed), 2022

The next marketing pattern for citrus is marketing pattern II. For pattern II, the marketing institutions involved are producers-retailers-end consumers. In pattern II there is only one market actor.

**Table 10. Marketing pattern II (farmer-retailer-consumer)**

| No | Activity | Price | |
|---|---|---|---|
| 1 | Farmer Price | 5.333,00 | |
| 2 | Retail Traders | 13.000,00 | |
| 3 | Selling price to consumers (Rp/kg) | 13.000,00 | |

| | | | |
|---|---|---|---|
| 4 | Cost | 1.025,00 | |
| 5 | Seller's Profit (Rp/kg) | 6.642,00 | |
| 6 | Marketing Margin (Rp/kg) | 7.667,00 | |
| 7 | Profit Share (%) | 86.63 | |
| 8 | Cost Share (%) | 13,37 | |
| 9 | Farmer share (%) | 41,02 | |
| 10 | Market Share (%) | 58,98 | |

Source : Primary Data (Processed), 2022

Respondents who chose marketing pattern II, namely consumers buy through retailers so that the price obtained by the end consumer is relatively expensive, namely IDR 13,000/kg. Meanwhile, the price of citrus at the farm level is only IDR 5,333/kg, so the margin is IDR 7,667/kg.

The profits earned by retailers are quite large, reaching IDR 6,642/kg. This was due to the costs incurred by the collecting traders of IDR 1,025/kg, or 86.63%. In other words, the share of profits earned by retailers is quite large. Such conditions cause the price part or *farmer share* received by farmers is quite low, namely only 41.02 of the consumer price. This means that with the presence of retailers, then the share of the price received by farmers is quite low when compared to the marketing pattern I. Even though the total share of the price received by farmers achieves quite low yields, the risk of marketing citrus has shifted to retailers. *Market share* obtained by collecting traders in pattern II is 58.98% (Table 10).

The next marketing pattern for citrus is marketing pattern III. For Pattern III, the marketing institutions involved are Producers-Collectors-Retailers-Final Consumers. In pattern III there are two market players as follows:

**Table 11. Marketing pattern III (farmer-collector-retailer-consumer)**

| No | Activity | Price |
|---|---|---|
| 1 | Collector's purchase price at farmers | 5.333,00 |
| 2 | Collector Traders | 11.500,00 |
| 3 | Selling price of collectors to retailers (Rp/kg) | 11.500,00 |
| 4 | Cost | 1.000,00 |
| 5 | Seller's Profit (Rp/kg) | 5.167,00 |
| 6 | Marketing Margin (Rp/kg) | 6.167,00 |
| 7 | Profit Share (%) | 83,78 |
| 8 | Cost Share (%) | 16,22 |
| 9 | Farmer share (%) | 46,37 |
| 10 | Market Share (%) | 53,63 |
| 11 | Retail price to consumer (Rp/kg) | 13.000,00 |
| 12 | Cost | 900,00 |
| 13 | Seller's Profit (Rp/kg) | 600,00 |
| 14 | Marketing Margin (Rp/kg) | 1.500,00 |
| 15 | Profit Share (%) | 40,00 |
| 16 | Cost Share (%) | 60,00 |
| 17 | Farmer share (%) | 41,02 |
| 18 | Market Share (%) | 11,54 |

Source : Primary Data (Processed), 2022

Collector traders resell to retailers at a price that is IDR 11,500/kg and then retailers sell to final consumers at IDR 13,000/kg, so*farmer share* by 41.02%.*Farmer share* pattern II and pattern III are not different because the final consumer price is relatively the same between pattern II and pattern III.

The long marketing channel for oranges in pattern III is due to the wide marketing margin, the producer's price is IDR 5,333/kg, while the final consumer's price is IDR 13,000/kg. The wider the margin, the more traders will be involved in marketing.

Based on the results of the analysis in pattern III, the margin earned by the retailer is relatively small, namely only IDR 1,500/kg, while the portion of the profit earned by the retailer is only 40%, in this case it means that the share of costs borne by the retailer in pattern III by 60%. This condition causes*market share* received by retailers is relatively small, only 11.54%

.

**Proper Logistics and Distribution**

Logistics is a series of activities that carry the flow of various products from producers to consumers, especially in Paser District. The supply chain logistics for citrus farming in Paser Regency involved are the main actors and supporting actors, each supply chain carries out activities according to their respective roles (Kotler, 2006)

Adequate distribution Kotler (2006), is the development of arrangements necessary to transfer ownership of products and transport products from where they are produced to where they are ultimately consumed.

Based on the above understanding, it can be concluded that adequate logistics and distribution are relationship activities between collectors and retailers involved in the process of delivering or distributing goods to meet customer needs profitably. For the activity of delivering or distributing goods between collectors and retailers that are carried out, the impact is fast and good. It can be seen from the width of the marketing margin, the pattern of marketing channels, the longer the marketing channel, the smaller the marketing margin obtained, the more efficient the marketing activity will be. The process of distributing goods so that they reach consumers using transportation that can be reached by using a two-wheeled vehicle or motorcycle or four-wheeled car, namely a car. The condition of the country's roads is quite good with paved roads..

**Communication and Information**

Communication media is a communication channel that can deliver messages in the form of the necessary information. Communication media is an important part of ongoing communication, because it is closely related to the messages conveyed. The results of the research that has been done are related to communication channels, including through interpersonal channels or media.

Communication is a reciprocal relationship between a person and an individual who sends a message to someone with the other person who receives the message through the media which causes a certain effect so that information that does not know becomes known.

Information is part of the message in the communication process where the communicant gets messages in the form of production innovation, processing of agricultural products, product marketing and even climate and weather through the source of the communicator.

Based on the above understanding, it can be concluded that communication and information are relationship activities between farmers, collectors and retailers who are involved in conveying information on the selling price of citrus at both the producer and consumer levels. The communication and information activities between farmers, collectors and retailers have had quite a good impact. In Communication and information between farmers, collectors and retailers all use cellphone so that information can be conveyed quickly and to maintain a timely delivery of goods, all that remains is to discuss and inform them through the cellphone communication.

**Effective Relations between Supply Chain Actors**

Effective or well-run relationships between supply chain actors are highly expected and greatly affect supply chain flow activities, supply chain is a concept in which there is a management system related to product flow, information flow, and marketing channel flow. An effective relationship is important due to the many links involved in the supply chain and considering that Siamese citrus are not a product that lasts a long time but is easily damaged.

Based on field analysis, the relationship between supply actors in supply chain management plays a role in the value of goods transported and the value of the final product received by the customer. Relationships that work well can support the effectiveness of the supply chain, conversely a relationship that is not going well will disrupt the effectiveness of the entire supply chain, in Siamese citrus farming business, Paser Regency, the relationship between supply chain actors is quite good or quite effective.

## IV. CONCLUSIONS AND SUGGESTION

**Conclusion**

Based on the results of the study it can be concluded:

1. The average cost incurred by farmers is IDR 5,554,777 per agricultural business. The income earned by farmers is an average of IDR. 19,922,916 per agricultural business, so that an income of IDR. 14,468.13 per / agricultural business is obtained.
2. Farmers already understand customers well, so farmers, so farmers provide citrus production properly. Dividing the profit margin consists of 3 marketing patterns. Pattern 1 is better than pattern 2 and pattern 3 Relatively good logistics. Communication and information between marketing actors is quite good. Relations between supply chain actors are quite good.

**Suggestion**

Based on the results of the research and analysis carried out, it can be suggested as follows:

1. The development of Siamese citrus is necessary to be continue, because the income received by citrus farmers is quite large.
2. It is better for citrus farmers in Paser Regency to sell their crops to end consumers without going through several marketing agencies by renting stalls in the market or by selling around and increasing sales through online media (Social Media) considering that social media has now become a place for people to make selling transactions. Buyers and farmers also need to be more effective in finding market price information, both at the wholesaler and retail level, so that farmers can compare which marketing institutions can provide the greatest benefits for farmers.

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