## Equivalence Analysis Of Agricultural Commodity Factors In The Farmer's Exchange Tool Standard In Ramba Village Wayu Sigi Regency

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#### **Abstract**

This study aims to provide an overview of the use of agricultural commodities as a potential alternative medium of exchange for cash equivalents, as well as to study the area and environment in which a commodity can be selected as a medium of exchange. This research method uses a descriptive approach, interviews, focus group discussions, and also determines the respondents from productive farmers in the village. The results of the study in 3 (three) target villages showed that 1) several commodities, corn, coconut, candlenut, and native chicken, can be an alternative medium of exchange other than cash. The effect of this choice is that these commodities have a fairly high level of production and distribution of ownership. 2) Cash reserves for productive farmers are not balanced with the amount of production of some of these commodities which tend to be higher when converted to local cash prices.

#### **Keywords**; Production Scale, Commodities and Exchange

#### 1. INTRODUCTION

The movement of farmers' production functions through two strategic things, namely, agricultural commodities and medium of exchange. Commodities are the result of farmers' production activities that have a high and specific level of diversity. The medium of exchange referred to here is the method used to obtain or exchange goods and services. These two things greatly affect the economic dynamics of farmers in rural areas.

The existence of farmers at the same time shows a production function that is connoted as actors in production activities in the agricultural sector. What is produced by farmers is commonly called agricultural commodities. The term commodity here refers to goods or products of agricultural land processing or processing of agricultural products that can be exchanged in the market. The cultivation of land and agricultural products is as old as human life on this earth. Shows a reality that farmers as a function of production, never stop producing despite facing pressure under any conditions. They live in different natural and cultural environments. Therefore the agricultural commodities they produce also have diversity.

Agricultural commodities will get more Value in the form of profits or other benefits for farmers' lives if they have been absorbed in the exchange process. Exchanges can occur through the instrument of social relations by the solidarity nature of citizens to help each other in production and social activities. On the other hand, the exchange takes place in the market through the process of trading transactions and services. Both social exchange and market exchange form the basis for the process of forming farmers' exchange rates. The general understanding of what is meant by the farmer's exchange rate is the general benchmark for the price of goods or services received by farmers compared to the amount of the Value of payments made by

farmers. The instrumentation for the formation of the farmer's exchange rate is enabled by the process of using the medium of exchange to drive the transaction process for goods and services.

Although natural conditions necessitate fairly high productivity of farmers in producing commodities, having the broad potential to access other benefits and benefits in the exchange process, the medium of exchange itself has a relative size due to various influences that can decrease or increase the quality of a good or service. This is a common condition, especially when the cash currency becomes the general benchmark that determines prices. Fluctuations in the Value of the rupiah currency, as the main medium of exchange by various economic influences, can cause instability in the exchange rate of farmers who are based on agricultural commodity prices. Contraction of farmers' commodity prices caused by fluctuations in the rupiah currency will ultimately greatly affect the movement of farmers' investment, which tends to weaken.

At this time, currency-based cash exchange is still very dominant in influencing the economic life of farmers, Because this is the main factor that connects farmers' production and markets. In addition, capital formation and the use of technology and management are still highly dependent on the availability of cash for financing services and production equipment. The currency has led to a large dependence of farmers on the external world, which provides various access to capital absorption, production equipment, market advantages, and others. An acceptable consequence is that the flexibility of cash exchange allows farmers to choose various options to use or obtain goods or services that are indispensable in investment management. High accumulation in the cash supply system on an institutional and individual scale can result in an accelerated production process. On the other hand, it can experience a very drastic change towards negative growth if there is a cash shortage due to the influence of various factors.

The practical fact that can be illustrated is that cash scarcity for farmers causes delays in production turnover and increases the quality of their production. This negative impact can be experienced by farmers when the commodities they harvest are mostly directed to the market by domestic and export trading activities. The market suppressed the prices of agricultural commodities so strongly to the point that farmers suffered crop losses due to production costs that were higher than their sales value. In such conditions, there will be a shortage of cash. As a result, it becomes an inhibiting factor for the weak purchasing power of farmers towards production facilities, labor costs, consumption, and life cycle social costs. Of course, even farmers' investment is difficult to move.

Optimism still tends to be more dependent on the natural productivity of farmers. By slightly ignoring the problem of the impact of the unsuccessful cash-based investment system on the processing of agricultural commodities, in fact, the activities of farming, gardening, animal husbandry, making local handicrafts, and so on, continue to fill their commodity reserves to ensure the survival of the community and each farmer's household. This great hope can, of course, be seen in its potential in the coverage of agricultural production areas in an area that gives farmers space to expand their production activities.

This study will study the lives of farmers in Sigi Regency, Central Sulawesi. The number of workers in the agricultural sector in this region is 11,422 people, spread over 15 sub-districts and 177 villages. Looking at the typology of the region, Sigi Regency has two regional characteristics, namely plains and mountains. So, farming activities are divided into two categories, namely rice fields, fields, and plantations. Therefore, in general, the background of the farmers consists of rice farmers, field farmers who cultivate crops, horticulture, and garden farmers who cultivate plantation

crops; chocolate, cloves, candlenut, coconut, and others.

Based on general observations in Sigi Regency, the use of farmer credit facilities to finance production facilities such as fertilizers and medicines, most of them are not reached by farmers using cash exchange due to limited cash supply. On the other hand, the prices of these goods are considered expensive, especially if the goods are freely sold in agricultural equipment and drug stores. As a result, farmers do not use optimal inputs from production infrastructure and medicines, thus causing the quality and yield of their production to be less than optimal. This condition shows that cash shortages are being experienced by farmers, even though credit facilities from the Sigi Regency government have reached tens of billions.

However, if you look at the data on agricultural commodities in Sigi Regency, the yields of both food crops, secondary crops, livestock, and horticulture show significant figures. Potentially the medium of exchange for farmers is quite large from the commodity reserves they have. Two-sided medium of exchange; the Value of agricultural commodities and cash value, a relationship that requires a value conversion process that ensures farmers can use all available alternatives to access management and production infrastructure in order to provide optimal inputs in their agricultural production. The research question that arises here is to what extent agricultural commodity goods can be an alternative medium of exchange to overcome the cash shortage experienced by farmers.

#### 1.1. Problem.

Based on the research questions above, the problems raised in this study are;

- 1. How is the equivalence of the Value of agricultural commodities to the standard of cash exchange in the process of transactions of goods and services carried out by farmers?
- 2. How can the trend of the equivalence value of agricultural commodities be input in the management of microfinance institutions?

#### 1.2. Research purposes

- 1. To illustrate the use of agricultural commodities as an alternative medium of exchange for cash equivalents in goods and services transactions carried out by farmers in agricultural production activities.
- 2. To provide input on the management of microfinance institutions in implementing the bookkeeping system for converting the Value of cash equivalent commodities.

#### 2. METHODOLOGY

#### 2.1 Nature of Research

This research is descriptive. The data of this study are more likely to expand the explanation of the scope of production carried out by the community to produce commodities that affect their ability to process transactions for goods for their daily needs. The explanation also includes the background of the economic resource environment that distinguishes the form of the Value of certain commodities that have the qualitative equivalent of the medium of exchange used by farmers as an alternative payment, especially when facing cash scarcity.

#### 2.2 Population and Sample

This study targets rural communities with different socio-economic conditions. The socio-economic conditions in question are specifically related to the types of their production activities in producing the types of commodities that are carried out by each member of the community. Since the object under study is the village community as a whole, as the owner and user of the medium of exchange in the context of buying and selling relationships, accounts payable, or other transactions, it is necessary to attract respondents as the main data source.

#### 2.3 Data Collection Technique

Data is collected through two processes; observations and questionnaires. Observations were made to obtain a background picture of the geographical and environmental conditions of the village strategically located in the form of a certain production area that can provide information about the characteristics of the village area that is the object of research. Also, to obtain preliminary information about the sociocultural conditions and mobility of the people in their production activities. But it is better to know closely the patterns of social communication that have become their habits in social life. The interview list is used to explore production data and habits in transactions, especially cash and commodity inventories that have a medium of exchange capacity.

#### 2.4 Data Analysis Technique

Data analysis is carried out by using a simple calculation of the Value of commodities that have the potential to become a medium of exchange. In addition, compiling production data is needed to calculate a simple index of alternative currency of the Value of each commodity produced by the community. The detailed data needed in a simple calculation of the commodity exchange index is formulated as follows;

# 3. CALCULATE THE VALUE OF COMMODITIES AS A TOOL OF EXCHANGE

#### 3.1 Production scale. (Total Weight = 4)

a. Production volume;

#### 1) Total village production in kg.

Production volume scores three if 75 - 100% of the highest commodity production. Production volume scores two if 50 - 74% of the highest commodity production. Production volume score one is>25 - 49% of the highest commodity production.

<24 does not count = 0.

**Procedure**; determine the highest production volume of a commodity. For example, Village A has the highest commodity production, which is 5000 kg of cocoa per year.

#### 2) Commodity price value /kg.

How much is the commodity price per kg

Commodity price Score 3 if 75 - 100% of the highest commodity price Score 2 if 50 - 74% of the highest commodity price Score 1 if > 25 - 49% of the highest commodity price.

<24% not counted = 0

**Procedure**; find out the highest commodity price per kg.

#### 3) Farmers' ownership of commodities.

Commodity ownership scores three if 75 - 100% of the highest total distribution of ownership.

Commodity ownership scores two if 50 - 74% of the highest total distribution of ownership.

Commodity ownership scores of 25 - 49% of the highest total distribution of ownership.

<24 does not count = 0

**Procedure**; knowing the highest distribution of farmer ownership of commodities. How many farmers own a particular commodity?

#### 3.2 Vulnerability. (Total weighted weight = 4)

## a. Shrinkage

Depreciation of goods because the product quickly rots or is prone to damage. The maximum length of sale is seven days; the minimum is one day. The depreciation time score is the estimated depreciation days divided by the maximum depreciation days.

#### b. Sales duration.

Goods require adequate sales time. The maximum length of sale is one day, minimum of seven days. The length of sale score is the maximum number of sales days divided by the estimated minimum sales days.

#### 3.3 Research sites

This research was carried out in 3 villages as a representation of each of the three subdistricts; Wayu Village, Marawola District, Ramba Village, South Dolo District, and Sidondo III Village, East Dolo District.

#### 4. THEORY FRAMEWORK

#### 4.1 Exchange Tool

A movement of goods from one person to another by exchanging something that is considered to have an equivalent value is stated as an exchange process. Usually, in economic relations, everyone can obtain goods needed from other people to the extent that the exchange process occurs with reference to the standard Value of goods agreed upon in general or between individuals. The most commonly known process is a method of payment in which a person is obliged to give a certain value to the owner of the goods after receiving acknowledgment and acceptance from him.

The payment process using this medium of exchange is called a medium of exchange, which is a means of payment or a medium of exchange that can be used to buy and sell goods. Buying and selling goods has become a basic need for the community or even traditional groups and is a permanent way to channel goods to household needs, markets, work infrastructure, various construction activities, production, social services, and so on.

Money is generally recognized as the main medium of exchange. Using money simplifies the exchange process. Without a medium of exchange, we need to find people who are willing to exchange the goods being sold for the goods we want to need. However, the use of money is not without problems, especially with regard to the accumulation of ownership and the range of its distribution to people with socioeconomic levels who are considered vulnerable.

People everywhere need a medium of exchange to cope with all the necessities

of life because of the scarcity of supplies. Traditionally, people use their products in the form of agricultural products, crafts, or goods that have a fixed and reliable value, such as gold, and silver, as a medium of exchange. Commodity goods like that tend to be more evenly owned in various inventories, easy to obtain because they are related to production activities that are continuously carried out by the community.

The use of money as a medium of exchange has so far influenced our view of the function of the medium of exchange for all transaction purposes. But, almost everyone understands that money is the most complex meaning to be the foundation of all hope for the ability to overcome the scarcity of life's necessities. Therefore, various writers and even monetary and banking experts also provide different limits depending on the approach and point of view they use. This is in line with what was once stated by an economist,

AP Andrew (in Latumaerissa 2012) with a statement that is still relevant today, namely: "It is a curious and utterly palpable fact that although money was the first subject of economics to attract the attention of intelligent people, and it is a major focus of economic research, there has been no sign of agreement or agreement as of yet on what it should show. By that word (money)."

What was stated by AP Andrew, if we trace the history of money where money has been used as money in the history of human life, then we will realize that the history of money is very confusing to us because there are a number of objects of various shapes, types, and properties that have functioned. as money. These objects include mining products, animals, and vegetables.

Apart from the above, the most important thing is that we must have a handle on what is called money in the real sense and how money functions. Departing from that thought, several definitions of money will be put forward by the experts.

Money is nothing but anything that can be used or received to make payments for goods, services, and debts (Nopirin, 1996). And it is also often seen as the wealth it has which can be used to pay a certain amount of debt with certainty and without delay (Iswardono 1999). Money is also something that is a medium of exchange or a generally accepted means of payment (Paul A. Samuelson, William D. Nordhaus, 1992).

In the book Economics, McConnell and Brue (2002) state: "In a general sense, anything that performs the function of money is money. According to the Encyclopedia Americana, as quoted by Rahmad Firdaus and Maya Arianti (2011), namely "Money can be anything that is generally and universally accepted for the payment of goods, services or debts." (money can be anything that is generally and widely accepted for payment of goods, services, and debts).

#### 4.2 Commodity Money

Commodity money is money whose Value comes from a particular commodity. This means that commodities are used as means of payment that have intrinsic Value, which is beyond their function as money. Commodity money has been used as a means of payment throughout the world besides gold and silver, namely; salt, pepper, tea, alcohol, silk and cocoa, and so on, covering most of the production of agricultural goods, mining, and various industrial products. Commodity money has an innate value that can be used directly according to the Value of the object.

The intrinsic Value of a commodity is a very important aspect in terms of building the level of public confidence in the commodity in question. Several centuries ago, some commodities such as tobacco and salt were used as commodity money because their function was very high at that time. People can use it for buying and selling transactions because these two objects can be used widely. So, no one wants to take this commodity as money, and the owner can still use it for their own purposes. For example, there is someone who brings tobacco to the market, but it turns out that there is no seller who wants to accept it, then the owner of the tobacco.

Public confidence in commodities is growing from year to year. So, even though the traders are no longer willing to accept it as money, they believe that the commodity can still be used for other things. Part of the belief in certain commodities is also influenced by the level of rarity, or at least as people assess the rarity. Some commodities, such as gold, are usually considered rare, and because of that, gold has an increasingly high value. On the other hand, other commodities, such as salt and tobacco, which had a high value in the past, were highly dependent on the level of public consumption and the level of production of the commodity itself.

Compared to paper money that is used as a means of payment today, of course, commodity money is unique because of the various types. Although there are different forms and many kinds, here are some of the main characteristics possessed by commodity money.

#### a. Resistance

Commodity money in the form of food such as meat cannot last long. Over time, the quality will deteriorate and make the commodity lose its Value. If this is the case, then the commodity in question can no longer be used as a medium of exchange. So it is essential for a commodity to be able to maintain its intrinsic Value to maintain trust between the two people who transact.

#### b. Can be measured

Commodity money must be measured in certain units, for example, ounces or kilos, according to the type of commodity used for transactions. If the Value of the commodity money has been determined, it will be easier to buy and sell.

## c. Easy to exchange

Not only of intrinsic Value, but commodity money must also be easy to exchange. For example, it is impossible to use cattle as a commodity even though it has great intrinsic Value. Bringing cows to the market to be exchanged for other goods is certainly very inconvenient. Therefore, gold coins are preferred because of their smaller size and making them more practical.

## d. Scarcity

Commodity money must be scarce and in limited supply. If this is not the case, then the amount of money can become out of control and cause massive inflation. Nevertheless, the supply of commodities must be able to meet market demand. So when the economy begins to grow, the supply of commodities must also grow for smooth transactions that occur in society.

#### 5. RESULTS AND DISCUSSION

#### **5.1** General description

One thing that becomes a major concern is that agricultural commodities are the most dominant production sector in the exchange of goods between people and outside them. At the same time as the most dominant cash absorber compared to other sectors such as handicrafts, trade, services, and others. Based on the fact that rural areas have different ecosystem characteristics from each other, of course, there are differences in areas and types of activities and results of farming carried out by farming communities. If so, then the characteristics of the ecosystem are different from each village, indicating the capacity and quality of production, which are also different from

each other.

This study was conducted in three villages in three sub-districts in the Sigi Regency area. Among others; are Ramba Village in South Dolo District, Sidondo II Village in North Dolo District, and Wayu Village in Marawola District. These three villages have different ecosystems. In relation to the target of this research, the extent to which agricultural commodities from different production areas provide significant differences in terms of the dominant production covered by farmers' activities to produce money as a medium of exchange. Regional conditions are also considered to affect the dynamics of the exchange of goods, both in terms of markets and production activities.

#### **5.2 Production Scale**

Research on the commodity of exchange, as desired by this study, requires that the approach to farmer productivity be the main concern. Assuming that farmers always work on crops to produce commodities that can be exchanged specifically in the market. Therefore, research must explore up-to-date data on what farmers are doing in their agricultural production activities. A particular challenge in this research process is the absence of up-to-date official data from the target village databases (Ramba, Sidondo II, and Wayu), especially the productivity of farmers according to data that is considered updated.

Table 1. Types of Commodities Cultivated by Farmers in Ramba. Village

No	Commodity		Ownership Distributio n (Org)	Price/kg	Total
1	Coconut	10,500	30	1200	126,000,000
2	Chocolate	612	9	24000	14,688,000
3	Corn	30,000	50	4000	120,000,000
4	Peanuts	150	2	5000	750,000
5	Rica	200	10	13000	2,600,000
6	Chicken	2,790	152	25000	69,750,000
				Amount	333,788,000

Source; 2021 Primary Data

Table 2. Types of Commodities Cultivated by FarmersIn Sidondo II Village

No	Commodity	Productio n (tons)	scatter Ownershi p (Person)	Price/kg	Total
1_	Corn	750000	250	4300	3,225,000,000
2	Rica	50	4	25000	1,250,000
3	Coconut	560	9	2300	1,288, 000
4	Banana	20000	60	7500	150,000,000
5	Sweet potato	1600	7	8500	13,600,000
6	Ginger	500	100	15000	7,500,000
7	Chicken	650	250	25000	15,000,000
				Amount	3,413,638,000

Source; 2021 Primary Data

Table 3. Types of Commodities Cultivated by Farmers In Wayu Village

No	Commodity	Producti on (tons)	Ownership Distributio	Price/kg	Total
			n (Persons)		
1 F	Hazelnut	30,000	100	6000	180,000,000
2 (	Coconut	1500	50	3000	4,500,000
3 F	Rica	100	3	8000	800,000
4 (	Chicken	500	60	25000	12,500,000
5 T	Γaro Potato	400	150	15000	6,000,000
6 (	Clove	300	9	85000	25,500,000
			_	Amount	229,300,000

Source; 2021 Primary Data

In Ramba Village, the highest ownership is found at 152 people who are inventoried owning chickens. The results of the interview confirmed that chicken farming is the minimum unit of agricultural commodity ownership in Ramba Village. Furthermore, the number of productive farmers in Sidondo village is 250 people, namely the owners of corn and chicken farms. In Wayu village, the number of productive farmers is 150 people who own the sweet potato plant. This figure includes 100 people who own candlenut plants.

If you compare what productive farmers produce in Sidondo II Village, it can be seen that it is almost ten times the current production in Ramba Village. Productive farmers in Sidondo II reached a commodity cash price of Rp. 3,413,638,000 or 3.4 billion. The biggest contribution of village income is from corn, banana, cassava, and chicken commodities. Agricultural land can be said to have a major influence on the output of productive farmers in Sidondo II Village, as has been noted. Just to compare this condition with the output of productive farmers in Wayu Village, which is Rp. 229,300,000. Candlenut plants cover the majority of productive farmers' ownership, in addition to yams, taro, and chickens. These two commodities are; candlenuts and chicken, are very potential to become commodities of exchange in Wayu Village.

#### 5.3 Classification of Cash Reserves.

The position of cash on anyone, especially farmers, is a standard of ability for someone to obtain an item that is only obtained through cash transactions. The input of cash for each person will depend on the achievement of production in various sectors, especially the agrarian and industrial sectors. In rural communities, in general, production achievements are obtained from the agricultural sector or agribusiness more broadly.

In Ramba Village, 70% of productive farmers keep cash reserves on average of Rp. 624500 per month. The lowest range of this group is those who can only hold cash of Rp. 500,000, and above those with cash reserves of Rp 700,000. There are 15% who have cash amounting to an average of Rp. 872,500, 10% of productive farmers have cash on average of IDR 1,122,500, and 5% have cash in the range of an average of IDR 1,250,000 per month.

Commodities that contribute dominantly to cash gains for productive farmers in

Ramba village are obtained from the sale of whole coconuts and bald-shelled coconuts. Part of it is obtained from the sale of raw/dried corn and chickens with a fairly even distribution of ownership.

Cash reserves in Sidondo II Village, 65% of productive farmers have an average of Rp. 1,622,500 per month. Meanwhile, only 3% of productive farmers have cash on average of Rp 1,122,500. In this village, the average cash reserve is Rp. 2,500,000, there are 5% of productive farmers. Then, about 10% of them have cash on average of Rp. 2,122,500. Under this classification, it reads that 10% of productive farmers have an average cash reserve of Rp. 1,870,000. The income of cash in this village can be said to be evenly distributed from corn production.

Apart from these two villages, In the villages of Ramba and Sidondo II, the lowest cash reserves are owned by productive farmers in Wayu village. Most of the productive farmers in this village, i.e., 67%, have cash on average of Rp. 372,500. There are 13% of productive farmers in this village able to hold cash of an average of Rp. 622,500. Meanwhile, the highest cash holder in this village is only 6.6% of the range of owners with an average amount of Rp. 1,245,000. Seeing the condition of cash holdings in this village, it is understandable that the natural conditions in this area are classified as critical. Based on the classification of the ownership of cash reserves from the three target villages, it is known that productive farmers receive cash predominantly from farm production with commodity ownership that is evenly distributed in the community. In general, the large amount of production is also related to the distribution of ownership, which is more than the number of productive farmers. It also describes the potential cash price of the cumulative production of each commodity. However, based on the fact that the ratio of cash to cumulative production is based on possible cash prices locally, it has not shown a fair balance.

In Ramba Village, the ratio of cash ownership compared to the distribution of production value for each productive farmer is 28%. So the cash that is in the ownership of farmers is not comparable to the Value of potential commodity prices. On average, productive farmers have a cash on average of Rp. 624,500, while the potential price of local commodities for each productive farmer is around Rp. 2,195,000.

The Value of cash absorption in Sidondo II Village is also considered low. The potential price of local commodities according to the average productive farmer is Rp. 13,654,000. Meanwhile, the average cash holdings for each productive farmer are in the range of Rp. 1,622,500, this amount only reaches 12% of the potential Value of commodity production owned by the average productive farmer. Desa Sidondo II revealed a very prominent reality about the scarcity of cash for farmers.

The case in Wayu Village shows that the ratio of cash ownership compared to the average potential production value of each productive farmer reaches 24%. If the potential production is divided equally among each productive farmer, it is converted to a local scale cash price, and the production value is around Rp. 1,528,000. Meanwhile, the average cash owned by productive farmers is Rp. 372,500. The Value of cash holdings in this village is significantly lacking.

From the three target villages, the ownership of cash in the hands of productive farmers looks very different. One thing that the condition is due to the productivity of farmers is much different. This is influenced by the condition of the natural environment which is a source of productive land.

The average cash holding ratio in the three target villages is lower than the average Value of production holdings based on local prices. Several problems were found. Namely, farmers depend on middlemen who tend to buy their products at low prices. There are accomplices of outside traders, namely traders who run the capital of wholesalers. Transactions are usually converted to the Value of daily necessities so

that farmers do not take cash home. In addition, farmers more often pay their debts by cutting the total price of goods that go to traders. This is one of the problems that cause the cash holding ratio to be very low.

The capacity and quality of cash management for productive farmers can be seen from their cash spending behavior. The option to spend cash is, of course, based on the ability cash to stock goods needed in households and for production activities. Actually, by paying attention to the data on cash ownership in the three target villages of this study, with low cash values, farmers find it difficult to meet their daily needs as long as they have to use cash to earn. Farmer spending must be interpreted as a form of financial governance. It will show the conditions of real farmers' transactions on what needs are considered to be a priority. From here can be obtained an overview of the extent of the contribution of cash in farmer transactions. Farmers' expenditures also provide information on cash flows that move within the farmer's environment. It is almost certain to what extent the cash flow drives the dynamics of transactions between them which causes the accumulation of cash stored in reserves their cash. On the contrary, their cash reserves are considered low by a transaction process that causes cash to turn out, mainly absorbed by trading activities.

Spending behavior also shows whether cash is used proportionally according to farmers' needs. It may be that the lack of cash to meet the needs can cause the use of cash as a medium of exchange cannot be the only option. It needs to be tested whether the spending behavior of farmers reflects this vulnerability.

Of the use of cash for productive farmers in Ramba Village, 55% is allocated for consumption needs. Consumption needs, especially basic goods; sugar, oil/gas, salt, laundry soap/bath, and others. Consumption spending is estimated to absorb half of the cash on traders who carry cash from villages to cities. It reads that 20% of the cash allocation is for the needs of production facilities, of course, with an inadequate allocation of goods, considering that optimal production facilities require sufficient funds. In addition, other needs in the form of social costs absorb 20% and health is also allocated 20%. Social costs in the form of participation in the implementation of the life cycle that requires self-help donations. In addition, there are efforts to obtain medicines such as flu, fever, cough,

Cash expenditure in Sidondo II village shows that there is a balance between production and consumption advice expenditures. Allocation of production facilities is 30%, while consumption expenditure gets a share of 45%. In Sidondo II Village, the use of cash for productive activities is actually a value-added process that can absorb the Value of benefits into the productive sector.

In Wayu Village, the use of cash as a medium of exchange is allocated 60% for consumption needs. Production facilities get a share of 20%. The Value added process in the productive sector tends to stagnate. Cash expenditures for social costs reached 13.3% of the cost of the traditional procession for the salvation of souls with offerings. They are also obedient to the Christian ritual process. Observing the cash management of the three target villages of this study, cash management for productive farmers does not significantly affect the development of added Value, especially in the productive sector. The high consumption expenditure from their cash reserves actually causes their cash to flow outside the village.

#### 5.4 Utilization of Commodity Exchange Tools

The data presented shows that the potential cash price of commodities is far greater than the cash reserves of productive farmers, which only cover 12 - 28%. Thus, it is estimated that between 72-88% of potential commodity prices are considered more

worthy of being a medium of exchange for farmers.

To what extent can all the outputs of productive farmers in the three Target Villages (Ramba, Sidondo II, Wayu) become a medium of exchange? To become a generally accepted medium of exchange, a medium exchange must be used by everyone. Therefore, the amount of commodity production that will be used as a medium of exchange must be large and better spread evenly among the people. Every farmer has the same opportunity to get commodity money organized in the exchange process. In addition to the distribution of commodities that tend to be evenly distributed among all productive farmers, the amount of production of commodities in the medium of exchange must be high. Although the distribution of ownership tends to be less dominant, if the product is high, then the scope of commodities used as a medium of exchange can absorb the needs of many people. For example, coconut ownership does not reach 50% of productive farmers, but coconut production is quite high, so the use of coconut as a medium of exchange allows it to be used by many people through the process of exchanging goods between them.

In addition, the research uses an approach to the vulnerability of each selected commodity -- to depreciation and selling opportunities in the market. The assumption used is that an exchange of goods as long as the Value of the goods still has an optimum price and benefit. The indicators of price resilience and optimum benefits are largely determined by the shrinkage and the opportunity to sell a commodity. Commodity vulnerability analysis is formulated as follows; Matrix X.0

### **Commodity Vulnerability Analysis**

Risk	Optimum Value (score)	Quality
		The optimum
Shrinkage	Day 7, 6, 5, 4, 3 2, $1 = (/7)$	Value of
		shrinkage is
		getting better
		An optimum
Long Sold	Day 1, 2, 3, 4, 5, 6, $7 = (1/)$	probability value
		of goods sold
		better

This method of analysis is used to assess a commodity that is worthy of being used as a medium of exchange after calculating the amount of production and an adequate price level. The next step is to estimate the depreciation of the quality of goods by setting a maximum length of depreciation days. In matrix I, it is stated that the depreciation time is estimated to be up to 7 days at the most (optimum). So, if commodity X is estimated to depreciate less than seven days, for example, four days, the score will be calculated = 4/7. However, if commodity X is estimated at seven days of depreciation, the score will be calculated as 7/7 = 1, which is the optimum depreciation score. On the other hand, the odds of being sold are calculated differently from the depreciation score. The chance to sell out faster is considered the most optimal opportunity, given a score of 1 or 1 day. If commodity N is estimated to be able to sell in 2 days, the score will be calculated, and then the score will be 0.5.

Based on the feasibility analysis of commodity prices as a medium of exchange in Ramba village, there are 3 (three) commodities that are considered worthy of being used as a medium of exchange or called commodity money, namely, coconut, chicken, and corn. These three commodities have fairly high production and a relatively large distribution of ownership. Besides that, they have low vulnerability both in terms of depreciation of goods and ease of sale.

The calculation results used here give an index value of 1.2 for coconut commodities, chickens are stated with an index of 1.1 and corn at an index position of 0.6. The data in Matrix A1 displays the specific conditions of each commodity that meet the feasibility calculation; coconut has a high value in the amount of production, while chickens are influenced by the large distribution of ownership and high prices, then corn has a sufficient amount of production and the distribution of ownership is quite large.

Analysis of the feasibility of commodities as a medium of exchange in the village of Sidondo II shows; corn and chickens, two commodities that have a higher eligibility index than other commodities. Maize is given an index value of 1.9, and chickens at an index of 1.3.

The calculation of the feasibility of the medium of exchange commodity in Wayu Village provides information that candlenut and corn are considered worthy of being a medium of exchange in this village. Candlenut has an index of 1.6, while corn has an index of 0.8. Candlenut index, which is considered more feasible, is influenced by the amount of production, and the distribution of ownership is quite high. Corn can be considered to have a feasibility index even though the level is low compared to candlenut, and the production and distribution are considered adequate.

#### **5.5** Commodity Exchange Equivalence

This study uses a simple calculation to find the equivalent Value of each commodity when exchanged. First, it is necessary to know the local price level of each selected commodity based on current conditions. The second step is to calculate the price per kilogram of each commodity, then divide the price between the two commodities to get the difference in the weight value of each (kg). The equivalence between two commodities can be calculated by dividing the highest price and the lowest price of the two commodities. For example, corn price Rp. 4000/kg, and coconut seeds Rp. 2100/kg. Completion of the calculation is Rp. 4000 / 2100 = 1.9 converted in terms of weight = 1.9 kg. Then the equivalent Value of coconut to corn is 1.9 kg of coconut equivalent to 1 kg of corn. If calculating the equivalence of corn to coconut, the count for him is reversed, which is 2100/4000 = 0.53. This means that the price of corn to coconut seeds is 0.53 kg of corn.

If you look at the data in Matrix B1, B2, and B3, the equivalence value between these commodities will not always be considered realistic at the level of their application as a medium of exchange. The rationale for the difference in Value between one commodity and another is in a low multiple of less or not exceeding 5 kg maximum. This relates to the volume of commodity reserves provided as well as technical and distribution channels deemed adequate by the parties to the transaction.

#### 6. CONCLUSION

- 1. Productive farmers have a variety of production outputs based on the characteristics of the local ecosystem. Each village area with ecosystem characteristics has one or two dominant commodities with optimum production capacity.
- 2. There is a potential medium of exchange for commodities with certain qualifications in terms of productivity and vulnerability. These goods are deemed worthy of being a medium of exchange in the transaction process in rural areas.
- 3. In general, there are limitations in the cash supply to farmers compared to their

production reserves which have the potential for high cash prices. This shows that cash processing is not optimal in farmer transactions.

#### 7. RECOMMENDATION

- 1. The government through related sectors in agricultural production needs to direct support for intensification programs towards certain commodities that are considered dominant in an ecosystem area.
- 2. The government, through related sectors, needs to provide policy support for the management of the non-cash exchange system, or what can be called cash conversion financial management, to all villages that are considered to have a shortage of cash supplies to farmers.

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