

Analysis of Microeconomic, Macroeconomic, and Maqashid Sharia Feasibility of Gerga Orange Agribusiness as a Source of New Economic Growth in Jambi Province, Indonesia

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ABSTRAK

Penelitian ini bertujuan untuk mengetahui kelayakan agrobisnis (usahatani) Jeruk Gerga di Desa Lolo Gedang dan Lolo Kecil Kecamatan Bukit Kerman Kabupaten Kerinci dengan mempertimbangkan perspektif syariah mikro, makro, dan maqashid. Teknik pemilihan sampel petani dalam penelitian ini menggunakan metode purposive sampling. Jumlah petani jeruk di kecamatan tersebut berjumlah 26 orang, banyak yang beralih menanam jeruk Madu. Penelitian ini mengkaji budidaya jeruk, khususnya menyasar jeruk yang telah mencapai umur minimal 2 tahun. Teknik analisis data yang digunakan meliputi analisis rasio B/C, saluran pemasaran, margin, *Farmer's Share*, IPCG - PL > 0, IG - AEON > 0, IPCG - RMW > 0, dan analisis Maqashid syariah. Temuan penelitian ini menunjukkan bahwa usaha budidaya Jeruk Gerga di Desa Lolo Gedang dan Desa Lolo Kecil, Kecamatan Bukit Kerman, Kabupaten Kerinci, tidak dapat dipertahankan dalam kondisi saat ini. Hal ini ditentukan oleh margin pemasaran, rasio B/C, dan farm share, serta beberapa faktor lainnya. Selain itu, agrobisnis Gerga Oranye juga masih perlu mencapai kemampuan dalam menyelesaikan permasalahan makroekonomi, antara lain pengangguran, kemiskinan, kebutuhan pokok, dan upah minimum regional. Sebagaimana ditentukan oleh pendekatan maqashid syariah, kesejahteraan produsen Jeruk Gerga pada dasarnya tidak berubah selama budidaya Jeruk Gerga.

Kata kunci : B/C ratio, farmer's share, garis kemiskinan, dan maqashid syariah.

ABSTRACT

This research aimed to determine the feasibility of Gerga Orange agribusiness (farming) in Lolo Gedang and Lolo Kecil Villages, Bukit Kerman District, Kerinci Regency, by considering micro, macro, and Maqashid sharia perspectives. The technique employed for selecting the sample of farmers in this study was using the purposive sampling method. The number of orange farmers in the sub-district was 26, as numerous have transitioned to cultivating Madu Orange. This study examined orange cultivation, specifically targeting oranges that have reached a minimum age of 2 years. The employed data analysis techniques encompass B/C ratio analysis, marketing channels, margins, Farmer's Share, IPCG - PL > 0, IG - AEON > 0, IPCG - RMW > 0, and Maqashid sharia analysis. The findings of this study indicated that it is not viable to sustain the Gerga Orange cultivation enterprise in Lolo Gedang and Lolo Kecil Villages, Bukit Kerman District, Kerinci Regency, under the present circumstances. This is determined by marketing margin, B/C ratio, and farmer share, among other factors. Additionally, Gerga Orange agribusiness still needs to achieve the ability to resolve macroeconomic issues, including unemployment, poverty, fundamental needs, and regional minimum wages. As determined by the maqashid sharia approach, the welfare of Gerga Orange producers remains essentially unchanged throughout Gerga Orange cultivation.

Keywords : B/C ratio, farmer's share, poverty line, and maqashid sharia

INTRODUCTION

Indonesia, being an archipelago and possessing an expansive territory, boasts an abundance of natural resources. Utilising natural beauty for tourism and converting natural resources into energy sources, particularly those derived from the agriculture sector, are noteworthy aspects to consider. The agricultural sector in Indonesia continues to provide opportunities for individuals with limited resources. Around 100 million individuals, which accounts for nearly half of the Indonesian population, are engaged in agricultural activities.

An area reliant on agribusiness does not necessarily need to consider the structural transformation of its economy through the implementation of manufacturing enterprises. According to a study conducted by (Werembinan et al., 2018), there has been a decline in enthusiasm among young individuals towards agriculture. The literature suggests that the manufacturing industry has been identified as a significant contributor in terms of labour absorption (Nasri Bachtiar, 1989), productivity enhancement (Grencikova et al., 2020), and export growth (Sankaran et al., 2021). However, horticulture and agroindustry strategies could be viable alternatives to alleviate poverty (Baihaqi, 2015) without transforming the agricultural sector into an industrialised zone.

Indonesia, being an expansive archipelago, possesses abundant natural potential encompassing scenic beauty and natural resources that can be harnessed as energy sources. One notable sector that contributes significantly to the country's economic growth is agriculture. In 2020, the agricultural industry played a pivotal role in augmenting the state's revenue by 13 to 17%, representing a 0.99% increase from the preceding year. Notably, the plantation crops sector accounted for the most substantial contribution (3.63%), followed by food crops (3.07%), fisheries (2.80%), livestock (1.69%), horticultural crops (1.62%), forestry (0.70%), and agricultural services and hunting (0.20%) (BPS, 2020).

Jambi, situated in Indonesia, is a province that relies significantly on the agricultural industry as a critical driver of its economic development. In 2021, the agriculture sector made a significant contribution of 30.85 % to the Gross Domestic Product (GDP) of Jambi Province. The aggregate expanse of agricultural land within the province amounts to 237,252 hectares. In Jambi, the agricultural sector is crucial in generating revenue for the local population. Specifically, around 30.85 % of the total income is derived from agricultural activities. A significant proportion of the impoverished population, precisely 293.86 thousand individuals or 8.09 %, consists primarily of farmers. This group, despite its relatively small size, represents a substantial portion of the overall population, amounting to 45.44 %.

Agriculture holds significant importance within the Islamic faith. It is believed that land can be acquired through *Ihya'ul Mawat*, which involves revitalising barren land (*al-ardhu al-maitah*) through individual efforts. Additionally, historical records indicate that the Prophet Muhammad instructed the government to take control of abandoned land for three years, after which it would be redistributed to others (Nugraha, 2017). These practices highlight the emphasis placed on maintaining the productivity of owned land.

According to a study conducted by (Hasan, 2016), agricultural activities have a significant impact on the augmentation of community income. Additionally, it has been demonstrated that these activities also contribute to the alleviation of poverty, as highlighted by the *Against East Java Poverty* report in 2016. Nevertheless, farmers overcome challenges that hinder their well-being, primarily related to limited land area (Muslimin et al., 2020) and fluctuating prices (Meifrima et al., 2016). Consequently, farmers continue to grapple with poverty.

Islam also addresses the issue of enhancing the well-being of its adherents, particularly in the realm of economic activities (Cantika, 2013). This includes involvement in horticulture (Ulya, 2018) and the attainment of material and non-material benefits (Muslimin et al., 2020) through business endeavours (Kamaruzzaman, 2022). Additionally, Islam promotes the notion of fair pricing (Muslimin et al., 2020), the eradication of poverty in all business ventures (Norvadewi, 2015), and the fulfilment of basic necessities by the principles of *sharia muqashid* (Riyanto, 2010).

All economic activities must adhere to Islamic indicators, specifically *muqashid Sharia*, to fulfil basic needs. These indicators safeguard the soul and preserve human life, maintain rationality and intellect, uphold religious principles and freedom of worship, protect the institution of family and offspring, and safeguard individual and communal property and wealth. Similarly, within the realm of agribusiness endeavours about Gerga Orange, the outcomes achieved must align with the fundamental requirements of the five *muqashid sharia* indicators.

Enhancing agricultural productivity and fostering economic growth within the agricultural sector are crucial factors for promoting the welfare of farmers in Jambi Province (Lestari, 2022). Among the potential horticultural products in Jambi Province that can contribute to the industry without generating chemical waste, Gerga Orange stand out. Gerga is a cultivated hybrid resulting from the crossbreeding of *Osbeck Sinensis* *Osbeck* Orange and *Acitrus Reticula* *Blanco* Orange. This hybridization process occurred in the Jambi province, as documented by (Irawan & Yuristia, 2021).

Nevertheless, the agricultural sector in Jambi province has not effectively addressed the issue of poverty among farmers (Yulismi & Damayanti, 2012). The poverty statistics for Jambi province in 2019, 2020, 2021, and 2022 were recorded as 273.37, 288.10, 279.86, and 279.37 individuals, respectively. These figures suggest that there has been only a marginal change in the poverty rates. The cultivation of Gerga Orange was initially introduced in Jambi, and it has now expanded to Jambi province, namely in Kerinci Regency. In addition to serving as a marketable commodity, Gerga Orange growers in Kerinci Regency have transformed their orange fields into tourism destinations for the local community. However, according to the findings derived from our preliminary investigations, which involved conducting interviews with numerous orange farmers in the Bukit Kerman District, it has been reported that a significant number of Gerga Orange cultivators have transitioned to cultivating Madu Orange over the past three years. This shift can be attributed to intricate marketing dynamics and the comparatively elevated production expenses associated with Gerga Orange compared to Madu Orange. The local government should have allocated greater attention to the Gerga Orange agribusiness, as it possesses significant potential within the agricultural industry.

Multiple factors contribute to the potential economic growth of Gerga Orange in the Jambi province: (1) gerga orange producers in the province of Jambi have recognised the export potential's promise (Rasyid, 2019); (2) an increasing number of individuals are drawn to orange and vegetables; in 2020, Jambi province produced 2,593.384 tonnes of Siam Orange, which accounted for 1.2% of the country's total production, and 3.9 tonnes of large oranges (BPS, 2020); (3) the number of producers in Jambi province engaged in the production of Gerga Orange has increased by 336,873 (BPS Jambi Province, 2022), from 285,844Kw in 2018 to 372,516 Kw in 2019 (BPS Jambi Province, 2022); (4) the presence of trade and investment collaboration between the provinces of Jambi and East Java (HaloJambiNews, 2022) presents orange producers with a prospect to engage in regional commerce; (5) the superior vitamin content of Gerga Orange in comparison to other orange varieties (Mikasari, 2015) will have an impact on market purchasing power (Utami, 2021); (6) employment creation; and (7) orange farmland serves as a family tourism destination and is utilised for orange cultivation.

The nutritional composition of Gerga Orange exhibits a comparatively superior profile in comparison to that of other varieties of oranges. Gerga Orange exhibit the highest levels of energy and protein content compared to lime, sweet, tangerine, and grapefruit varieties. Similarly, the vitamin C and carbohydrate levels of this particular orange fruit are superior to other varieties, as indicated in Table 1. According to Suwantoro in (Mikasari, 2015), Gerga Orange exhibit continuous fruit production throughout the year. These oranges are characterised by their yellow-orange colour and notably big fruit size, ranging from 200 to 350 grammes. On average, Gerga Orange have a larger fruit size than other domestic orange varieties. Additionally, they possess a high juice content.

Table 1
Nutritional Content of Various Types of Orange Per 100 Grams of Orange Fruit

Type of Orange	Energy (kcal)	Protein (gram)	Fat (gram)	Carbohydrate (gram)	Vitamin C (mg)
Lime	37	0,8	0,1	12,3	27
Sweet orange	45	0,9	0,2	11,2	49
Tangerine	44	0,8	0,3	10,9	31
Grapefruit	48	0,6	0,2	12,4	43
Gerga Orange	52	1,4	0,2	11,4	46

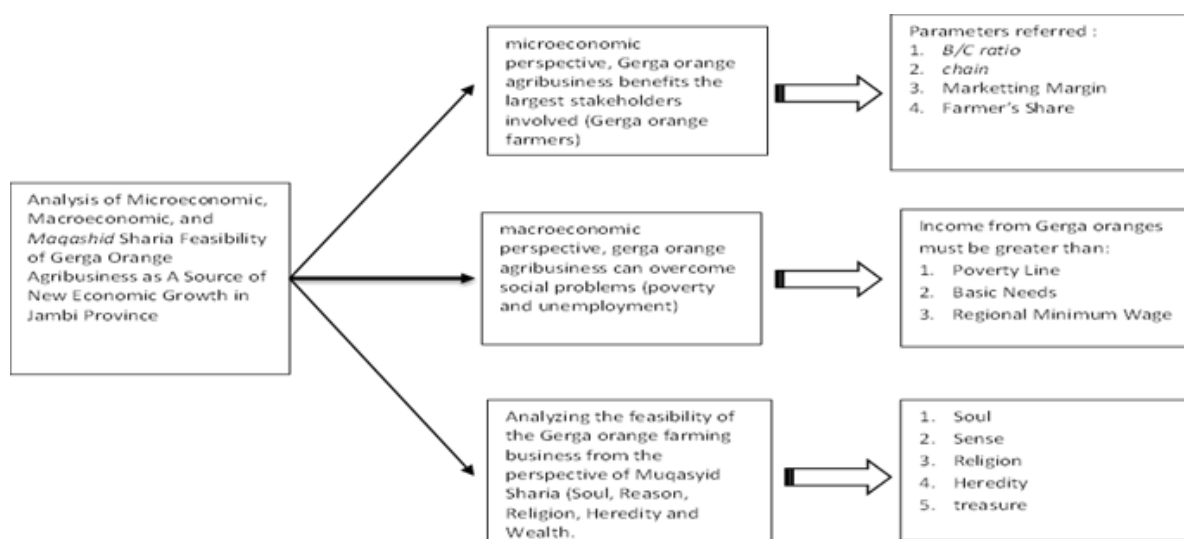
Source: Mikasari (2015)

In order to harness the full potential of Gerga agribusiness as a catalyst for economic growth in Jambi Province, further efforts are required. Moreover, it is imperative to assess the economic viability of establishing the Gerga agribusiness. The examination of economic feasibility can be conducted using various metrics. The study conducted by (Kamali et al., 2017) examines the role of the agribusiness supply chain in generating advantages for critical stakeholders, particularly farmers. The economic viability of a venture can be assessed by considering specific parameters. One such parameter is the Benefit-to-Cost (B/C) ratio, which evaluates the venture's profitability for the owner (Cita et al., 2016). Another parameter to consider is the Farmer's Share, which represents the proportion of the total amount consumers pay for agribusiness products that farmers receive

(Samoggia et al., 2021). Furthermore, it is imperative for agriculture supply chains to actively assist towards the mitigation of social issues, including poverty and unemployment (Christin et al., 2018).

Several compelling arguments serve as motivation for this scientific endeavour. Previous research on the viability of agricultural enterprises has been focused on assessing their financial feasibility and examining them from a microeconomic standpoint. Nevertheless, our study endeavours to not only assess viability at a micro level but also investigate it at a macro level, taking into account the principles of maquis sharia. Furthermore, numerous research findings about the viability of Gerga Orange agribusiness demonstrate the exceptional and viable nature of this agricultural enterprise for sustainability purposes. Nevertheless, the observed phenomena exhibit an inverse relationship with the prevailing conditions within our designated research domain. This indicates a notable trend wherein numerous orange farmers specialising in Gerga Orange have transitioned to cultivating Madu Orange in recent years.

METHODS



Source: processed data

Figure 1
Research model

The methodology employed for data analysis was the quantitative data analysis technique. The present study was carried out in the Kerinci Regency. The selection of the research site was purposeful, considering regions in Jambi that are known for their Gerga Orange production centres. The data was collected in the year 2023. Sampling is conducted in the following manner: (1) selecting the sampling place involves identifying the primary production hubs of Gerga Orange, specifically the Bukit Kerman District in Kerinci Regency. The data collected from respondents in the villages of Lola Gedang and Lolo Kecik can serve as a representative sample for the overall production of Gerga farmers in Jambi Province. The cultivation of Gerga Orange in this village serves as a benchmark for Gerga Orange producers in other regions of Jambi; and (2) a sample size of 26 orange growers from Lola Gedang and Lolo Kecik Villages, located in the Bukit Kerman District, was gathered for the study. The present study examines orange cultivation, specifically oranges that have surpassed a minimum age threshold of 2 years. The consideration of age similarity in this context is based on the understanding that the B/C ratio analysis alone captures disparities in orange farming practices and does not account for variations in plant age. The selected sample of farmers consists exclusively of individuals who possess land for Gerga farming. Given the current circumstances, it is deemed appropriate to regard farmers as autonomous agents with complete authority over their agricultural enterprises. Farmers have full responsibility for the risks and advantages associated with agricultural activities.

Data

The primary data that have been gathered from farmers include the following: 1) the farmer profile includes several demographic characteristics such as gender, level of education, participation in farmer groups, number of families and farms, and age; 2) costs and expenditures (encompass procuring production supplies, including seeds, fertilisers, insecticides, and workforce); 3) fixed costs refer to the expenses incurred by farmers concerning fixed inputs, such as land tax and the acquisition of farm equipment, during the specific year in which data collecting takes place; 4) farm income is derived by multiplying the price of oranges per kilogramme by the quantity of oranges produced at each harvest in the given year. Subsequently, this data is turned into monthly income by dividing (the total money from Gerga Orange in a year by 12 months); and 5) income is quantified as the difference between total revenue and total costs, (which encompasses fixed costs and variable costs).

Subsequently, the researcher employed purposive sample techniques to identify and recruit respondents with a comprehensive understanding, knowledge, and practical experience about the Gerga Orange supply chain while excluding individuals involved in farming activities. In this study, the researchers employed a purposive selection strategy to pick a sample of five stores and one collector carefully. The traders in question procure items from a diverse range of farmers, as determined by the information gathered directly from these farmers during field visits.

The secondary data utilised in this study comprised information about the rural poverty line in Jambi Province, obtained from the Central Bureau of Statistics, as well as data about the regional minimum wage level of Jambi Province (BPS, 2017). The secondary data collection encompassed information about the demographic and socioeconomic characteristics of the research sites, obtained explicitly from the subdistricts within Jambi Province.

Model Development

To measure the feasibility of Gerga Orange farming, B/C ratio analysis was used. Mathematically,

$$B/C = \frac{\text{Total Revenue (Rp)}}{\text{Total Cost (Rp)}}.$$

The feasibility of Gerga agribusiness was assessed by using B/C ratio analysis. Feasibility in agribusiness refers to the potential for farmers to achieve financial benefits by engaging in the industry. By undertaking this feasibility research, the potential for failure in the marketing of the product can be mitigated. The B/C ratio is a quantitative metric used to assess the relative significance of two factors: the cost and income (total revenue minus total cost) generated by the Farmer. The costs incurred are represented by the variable C, which stands for cost. The monetary gains obtained are represented as B (benefit). When the benefit-to-cost ratio (B/C ratio) equals zero, the generated income will be equivalent to the incurred costs. When the B/C ratio >0, it indicates that the income earned is lower than the costs incurred. This implies that the viability of agribusiness is questionable. According to (Cita et al., 2016), a business is considered to have financial viability if the B/C ratio is greater than 0.

The feasibility of orange farming in various research locations has been evaluated using B/C ratio analysis. For instance, (Gautam et al., 2020) conducted a study on the feasibility of mandarin orange cultivation in Gulmi, Nepal. In this study, the B/C ratio was assessed for a single year, namely during the data collection period. It is imperative to provide a clear disclosure of the limitations inherent in this study due to the absence of multi-year data in the B/C ratio analysis. Hence, it is possible that the research findings could vary when utilising data collected over multiple years. The inability to gather multi-year data for the B/C ratio analysis was due to limitations in time and budget.

The Farmer's Share metric quantifies the price differential between the producer and consumer levels in percentage value. In their study, (Putri et al., 2014) presented the formulation of the Farmer's Share as follows:

$$fs = \frac{Pf}{Pr} \times 100\%$$

Fs represents a fraction of the revenue acquired by producers. Pr: The final price paid by the consumer (IDR/Kg); Pf: The price at the agricultural level (IDR/Kg). Prior research has yet to determine the extent of the proportion held by Gerga Orange farmers. This parameter necessitates verification to ascertain the proportion of revenue generated for Gerga Orange producers from the final consumer's purchase. From a macroeconomic standpoint, the potential for Gerga agriculture to contribute to economic growth hinges on its ability to effectively tackle the poverty concerns of the primary participants in this sector, specifically the farmers (Kamali et al., 2017). Hence, the income derived from Gerga Orange farming by farmers must surpass the poverty threshold of Kerinci Regency, the geographical area in which the agribusiness is situated. The present condition is expressed in the following manner:

$$\text{IPCG} - \text{PL} > 0$$

Where IPCG (income per capita per month from Gerga's orange farming) : income per capita per month from Gerga's orange farming, PL (poverty line) : The rural per capita poverty line in Jambi province as stated in BPS. The measurement of well-being can be determined by the household income derived from Gerga agriculture, provided that said revenue is sufficient to satisfy the monthly basic needs of agricultural households, including but not limited to clothes, food, shelter, education, and (Minkin & Reyes-García, 2017). The present scenario is expressed in mathematical terms as follows:

$$\text{IG} - \text{EON} > 0$$

Where IG (income from Gerga's orange farming per month): income from Gerga's orange farming per month, EON (Expenditure on necessities): Expenditure on necessities (clothing, food, shelter, health, education, housing) per month. The cultivation of Gerga Orange by farmers has the potential to mitigate urbanisation in neighbouring cities, particularly in Kerinci Regency, Bengkulu, by providing a source of income. Therefore, the income generated by Gerga Orange cultivation must surpass the established Regional Minimum Wage (UMR) of Kerinci Regency. The present condition is expressed in the following manner:

$$\text{IPCG} - \text{RMW} > 0$$

Where IPCG (income per capita per month from Gerga's orange farming): Per capita income per month from Gerga's orange farming, RMW (Regional Minimum Wage): Regional Minimum Wage of Kerinci Regency. Imam Al-Ghazali maintains that the concept of Maqashid Sharia entails the preservation of the underlying intentions and objectives of Sharia. This encompasses a fundamental endeavour to ensure survival, counteract detrimental influences, and foster prosperity. The primary objective of Sharia implementation is to promote *maslahah*, which refers to the overall welfare of humanity. This entails ensuring that individuals receive protection and advantages from all aspects of Sharia while also striving to prevent harm, known as *daf'ul mafsadah*. The concept of Maqashid Sharia encompasses a range of dimensions, as initially outlined by Ash-Syatibi through *ad-dharuriyah al-khamsa*. These dimensions include safeguarding religion (*hifdzu ad-din*), preserving life (*hifdz an-nafs*), defending reason (*hifdz al-'aql*), ensuring the continuity of progeny (*hifdz an-nasl*), and securing property (*hifdz al-maal*).

RESULTS

Financial Feasibility Analysis of Orange Gerga Agribusiness

The B/C ratio value of all land areas is more than 1, even for small-scale land (<0.5 hectares) whose B/C ratio is 4.9. This B/C ratio value means that every IDR1 of the cost farmers incur can generate an income of IDR4.9.

Table 2
B/C ratio values for different Gerga Orange farm sizes

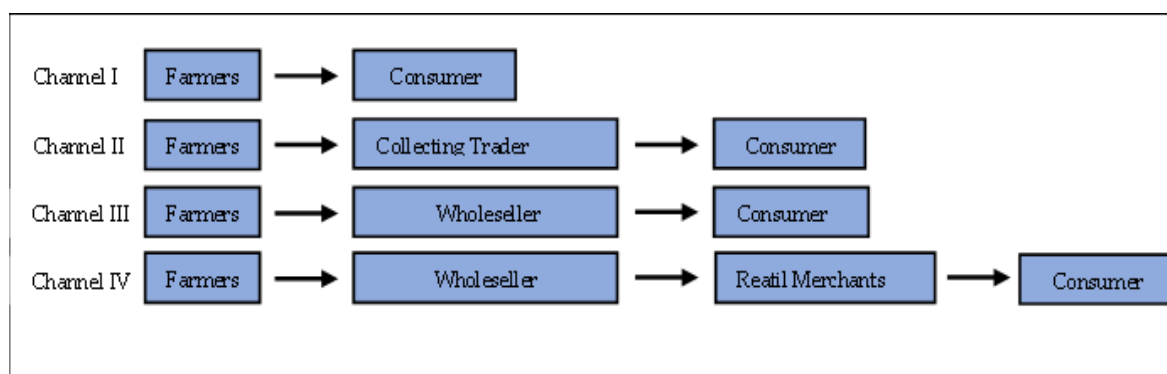
Land Area (Ha)	Number of Farms	B/C ratio value
0,5	11	4,9
1	11	1,4
1,5-3	4	6,3
Total	26	

Source: Processed data

The B/C ratio of the entire sample of farmers, categorised by land area, exhibits a value greater than 0. This suggests that the Gerga Orange farm has financial viability for further development. Specifically, when considering the average income and costs incurred by Gerga Orange farmers within the land area group, it is evident that their income surpasses the expenses associated with operating this agribusiness. However, based on the B/C ratio values of the 26 samples, it is seen that only ten respondents have a B/C ratio value over 1, indicating that their worth is justified. On the other hand, 16 respondents have a B/C ratio value below 1, suggesting that their worth is not currently justified. The primary factor contributing to the challenges faced by farmers in the production of Gerga Orange is the exorbitant cost associated with their cultivation. Moreover, the intricate nature of marketing these oranges further exacerbates the issue, resulting in insufficient profits and, in some cases, even financial losses for farmers.

Elaboration Analysis of Farmer Participation Level in Gerga Orange Agribusiness Marketing Channel of Gerga Orange Agribusiness

Marketing channels refer to a sequence of marketing entities that facilitate the movement of commodities from producers to consumers. Once the Gerga Orange have been collected from the farmers, the subsequent step involves the distribution of such oranges. Based on the data gathered from interviews conducted with respondents from the villages of Lolo Gedang and Lolo Kecil, it has been identified that there exist four distinct marketing channels.



Source: Processed data

Figure 2
Marketing Channel for Gerga Orange in Lolo Gedang and Lolo Kecil Villages

The diagram 2 presented above illustrates the marketing process of Gerga Orange in the villages of Lolo Gedang and Lolo Kecil. Farmers engage in the commercialization of Gerga Orange through four distinct channels, namely: direct sales to end customers, sales to consumers facilitated by intermediate traders, and sales to consumers facilitated by two intermediaries, namely major merchants and thinners. The marketing channels utilised for Gerga Orange in Lolo Gedang and Lolo Kecil villages exhibit a diverse variety, which can be attributed to the relatively expansive marketing area. Marketing practitioners utilise numerous channels to illustrate the movement of items from producers to ultimate customers. The individuals involved in the marketing process of Gerga Orange from respondent farmers include intermediate dealers, wholesalers, and diluents. The marketing strategy employed for Gerga Orange has distinct characteristics, wherein the choice of marketing

channels is determined by several factors such as selling price, buying price, transportation expenses, procurement source, and destination of purchase.

Marketing Margin

In order to ascertain the marketing approach for Gerga Orange, individual traders employ distinct strategies aimed at maximising their earnings, regardless of whether they operate as collectors, wholesalers, or retailers. The price received by farmers from customers varies across different channels.

Table 3
Margin of Orange Marketing Channel in Lolo Gedang and Lolo Kecil Villages in 2023.

Marketing Channel	Marketing Institution	Value (IDR/Kg)
I	Farmer	
	- Selling price	12.000
	- Purchase price	8.000
	- Margin	4.000
II	Farmer	
	- Selling price	8.000
	- Purchase price	-
	- Margin	-
	- Collecting trader	
	- Selling price	12.000
	- Purchase price	8.000
	- Margin	4.000
III	Farmer	
	- Selling price	12.000
	- Purchase price	8.000
	- Margin	4.000
	- Wholesaler	
	- Selling price	15.000
	- Purchase price	12.000
	- Margin	3.000
IV	Farmer	
	- Selling price	8.000
	- Purchase price	-
	- Margin	-
	- Collecting trader	
	- Selling price	10.000
	- Purchase price	8.000
	- Margin	2.000
	- Wholesaler	
	- Selling price	15.000
	- Purchase price	10.000
	- Margin	5.000
	- Retailer	
	- Selling price	20.000
	- Purchase price	15.000
	- Margin	5.000

Source: Processed data

The Table 3 presented above illustrates the margin variability achieved by different marketing institutions. Wholesalers and retail traders in marketing channel IV exhibit the highest marketing margins, amounting to (IDR5,000 per kilogramme.) Conversely, collecting traders in marketing channel IV demonstrate the smallest marketing margins, totalling (IDR2,000 per kilogramme.) This phenomenon occurs because small-scale orange producers in the agricultural sector and intermediary dealers receive relatively low buy prices and selling prices from major traders. Conversely, significant marketing margins are achieved as major and retail traders offer the oranges at elevated prices to the final consumers.

Farmer's Share

Table 4
Average Farmer Share Value for Each Marketing Chain

Channel	Farm gate price (IDR/Kg)	Price at Consumer Level (IDR/Kg)	Share (%)
I	12.000	12.000	100%
II	8.000	12.000	67%
III	12.000	15.000	80%
IV	8.000	20.000	40%

Notes: Average price in each marketing chain

Source: Processed data

The Table 4 illustrates that farmers within the marketing channel attain the highest proportion of the Farmer's share due to the absence of marketing costs associated with Gerga Orange production. Additionally, all marketing revenues remain undivided, resulting in farmers receiving the entirety of the share, amounting to 100%. Simultaneously, the fourth marketing channel, denoted as marketing channel IV, yields the lowest % of the Farmer's share, amounting to 40%. This outcome can be attributed to the lengthier marketing chain associated with marketing channel IV, which consequently incurs considerably higher marketing expenditures than the other channels.

Comparison of Orange Gerga Income with the Poverty Line

The data provided below presents a comprehensive breakdown of the farmers in Lolo Gedang and Lolo Kecik villages, classified as either poor or non-poor, as determined by the World Bank and the poverty line specific to the Kerinci district:

Table 5 Number and percentage of poor orange farmers in Lolo Gedang and Lolo Kecik villages				
No	Poverty Line	Criteria	Number (people)	Percentage (%)
1	World Bank	Poor	17	65,4
		Not Poor	9	34,6
		Total	26	100
2	Kerinci Regency (BPS data)	Poor	14	53,8
		Not Poor	12	46,2
		Total	26	100

Source: Processed data

Based on the provided table, it can be observed that in Lolo Gedang and Lolo Kecik villages, the number of farmers falling below the poverty line established by the World Bank amounts to 17 individuals, corresponding to a percentage of 65.4%. Similarly, in the Kerinci Regency, the poverty line specific to the region indicates that 53.8% of rice farmers are classified as impoverished, constituting 14 individuals from the sample population.

Ability of Orange Gerga Income to Satisfy Basic Needs of Farmer Households

The sustainable management of agribusiness by farmers will be achieved when the revenue generated from agribusiness activities is sufficient to satisfy the fundamental requirements of their households. The fundamental necessities encompass health, education, sustenance, apparel, and housing. The findings indicated that a mere 30.8% of households belonging to Gerga Orange farmers have a total household income sufficient to cover their monthly necessities. This indicates that most farmer households in Gerga (69.2%) are categorised as households whose income derived from orange farming in Gerga is insufficient to fulfil their fundamental necessities.

Table 6
Total and Percentage Comparison of Income Per Month from Gerga Orange Farming and Basic Household Needs

	Land Area (Ha)	Income Per Month	Basic Household Needs	Number of Households (Percentage)
Farmer households whose income can fulfil basic household needs	0,5 hingga 2,5	IDR3.484.583 to IDR68.167.771	IDR2.110.000 to IDR5.400.000	8 (30,8)
Farmer households whose income cannot fulfil basic household needs	0,5 hingga 1,5	IDR1.393.604 to IDR4.048.111	IDR1.920.000 to IDR5.600.000	18 (69,2)

Source: Processed data

Comparison of Gerga Orange Farming Income with Regional Minimum Wages

The findings indicate that the monthly income derived from the Gerga Orange agribusiness falls below the Regional Minimum Wage for Kerinci Regency. This suggests that, at present, the Gerga agribusiness possesses limited capacity to mitigate urbanisation. The monthly revenue derived from Gerga farming is comparatively lower than the Regional Minimum Wage, indicating that Gerga Orange agriculture offers lower income prospects than urban employment. According to Williamson's assertion in the study conducted by Young and Deng (1998), the presence of unfavourable agricultural circumstances in rural regions, along with the potential for higher income prospects in urban areas, serve as compelling factors driving the process of urbanisation.

Table 7
Total and Percentage Comparison of Income Per Month From Orange Gerga Farming and Regional Minimum Wage

	Land Area (Ha)	Income Per Month	Kerinci Regency Regional Minimum Wage	Number of Households (Percentage)
Farmer households whose income is higher than the Regional Minimum Wage.	0,5 to 2,5	IDR3.484.583 to IDR68.167.771	IDR3.413.666	9 (34,6)
Farmer households whose income is lower than the Regional Minimum Wage.	0,5 to 1,5	IDR1.393.604 to IDR1.745.583	IDR3.413.666	17 (65,4)

Source: Processed data

Analysis of Maqashid Sharia

The development of the respondents' welfare indicators from the results of interviews and observations is as follows:

Indicator	Before Conducting Gerga Orange Business	After Conducting Gerga Orange Business	Description
Soul (daily food, housing, clothing and access to healthcare)			
Intellect (education, training)			
Religion (Prayer, Obligatory Charity, Infaq, sadaqah, and Haji/umrah)			
Offspring (education costs-health costs)			
Treasure (work and income)			

Source: Research by Dias Rizqi Wardani "The Welfare of Tenant Farmers in the Application of the Muzara'ah contract with a sharia muqashid approach in Tulung Agung"

The table above looks at the activities of farmers in fulfilling basic needs with the size of *muqashid* Sharia.

Discussion of Maqashid Sharia

Indicator 26	Fixed	Increased	Decreased
Soul	20 (76%)	6 (23%)	0 (0%)
Intellect	8 (30%)	18 (70%)	0 (0%)
Religion	19 (73%)	7 (27%)	0 (0%)
Heredity	17 (65%)	9 (35%)	0 (0%)
Property	0 (0%)	14 (53%)	12 (47%)

Source: primary data processed

The table reveals that farmers who have cultivated Gerga Orange generally do not observe an improvement in their overall well-being across the five measures of well-being based on *Maqashid* shariah, namely religion, soul, mind, offspring, and property. Concerning the indicators of *muqashid* sharia about the preservation of the soul, it was seen that a significant majority of 76% did not encounter any notable increment, with only a modest 23% increase observed among Gerga Orange farmers who earn a minimum of IDR 5,000,000 (five million) every Gerga Orange harvest.

The indicators of reasoning have experienced a significant increase of 70%. This can be attributed to the efforts made by a particular group to promote the expansion of orange farming. It is worth noting that only a few Gerga Orange farmers actively pursue training in Gerga Orange cultivation. Furthermore, 30% of the farmers have yet to witness any increase in their reasoning abilities, attributed to limited access to resources. Additionally, it is observed that Gerga Orange farmers have yet to engage in the Gerga Orange cultivation group actively. Only 27% of individuals engaged in Gerga Orange farming, specifically those who earn a minimum of 3,000,000 (three million) currency units, exhibit an increase in religious indicators. This increase is attributed to their philanthropic activities, such as sedakah, infaq, and waqf. Additionally, Gerga Orange farmers who earn at least 20,000,000 (twenty million) currency units participate in property zakat and iabdah Hajj/Umrh rituals.

The proportion of *Muqashid* Sharia dedicated to the support of offspring has experienced a 35% growth, primarily attributed to the fulfilment of various educational demands of children. However, the remaining 65% allocation has remained the same. In the indicator section about property maintenance, it was observed that all participants saw a 100% gain in income after engaging in the cultivation of Gerga Orange. This increase was observed in a sample size of 26 individuals. The rise in income may be attributed to pre-existing income levels before farming Gerga Orange and the money generated during or after farming Gerga Orange. The income derived by farmers producing Gerga Orange is typically insufficient to satisfy their necessities.

CONCLUSION

Based on the findings and subsequent analysis, it can be inferred that most Gerga Orange farmers exhibit a B / C ratio below 1. This observation suggests that the present state of the Gerga Orange agribusiness lacks economic viability for further expansion or development. However, upon examination of farmers categorised by land area, it is observed that the B / C ratio exceeds 0, showing that the financial viability of this Gerga Orange farm is conducive to its ongoing development. 2) The margins achieved in each marketing institution exhibit variation. Wholesalers and retailers operating within marketing channel IV have the most substantial marketing margins, amounting to IDR5,000 per kilogramme. On the other hand, marketing institutions operating within marketing channel IV, specifically collectors, have the lowest marketing margins, amounting to IDR2,000 per kilogramme. This phenomenon occurs due to the disadvantaged position of small-scale orange farmers in the farmer channel and intermediary dealers, who receive low buy prices and selling prices from major traders. Conversely, significant marketing margins are achieved by large traders and retailers, who sell to end consumers at high prices. Farmers within the marketing channel acquire the predominant portion of the farmer's share due to the absence of costs associated with promoting Gerga Orange production. Additionally, all marketing revenues remain undivided, resulting in farmers receiving the entirety of the farmer's share, amounting to 100%. The fourth marketing channel yields the lowest farmer's share, 40%. This is attributed to the longer marketing chain and significantly higher marketing costs associated with the fourth channel than other channels. In Lolo Gedang and Lolo Kecik villages, the population of farmers falling below the poverty line set by the World Bank amounts to 17 individuals or approximately 65.4% of the total. In contrast, based on the poverty level established for Kerinci Regency, it is observed that 53.8% or 14 individuals from the overall sample of rice farmers are categorised as impoverished. The findings indicated that a mere 30.8% of households engaged in Gerga Orange farming possessed a total household income sufficient to satisfy their basic monthly needs. This implies that most Gerga farmer households (69.2%) fall under households whose income derived from Gerga Orange cultivation is insufficient to fulfil their fundamental need. In order to adequately fulfil the essential demands of their households, individuals must rely on supplementary revenue derived from numerous sources, including agricultural and non-agricultural activities. The present capacity of the Gerga Orange agribusiness in Kerinci Regency to mitigate urbanisation and the transition of farmers to the informal sector or industrial employment is limited because the monthly income derived from Gerga Orange falls below the Regional Minimum Wage in Kerinci. According to the data, a mere 34.6 % of farmers own monthly revenues that surpass the Regional Minimum Wage. At the same time, most respondents report incomes that fall below this threshold. 6) Overall, the outcomes of jerug kerga operations have yet to yield a satisfactory level of well-being for Gerga Orange producers as assessed by the muqashid sharia. Simultaneously, there has

been a 100% increase in the income indication and an 83% increase in the resourcefulness indicator overall, attributable to actions beyond the scope of Gerga Orange's income.

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