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ARTICLE

A Sustainability of Village Unit Cooperatives Established through Government Policy to Implement the National Rice Procurement Program

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ABSTRACT

This study aimed to identify the role of the village unit cooperative (VUC) in implementing the national rice procurement program and assess the potential sustainability of the VUC business. This study used a qualitative method with a case study approach. Participants, including administrators and internal auditors, were selected using a purposive sampling, while employees and members were selected using snowball sampling. The data collection technique was in-depth interviews and focus group discussions. Data credibility testing involved triangulation and member checks. Data analysis used an interactive model. The results included: (1) The role of VUC was to provide rice according to the quota agreed upon by the VUC administrator with the government-owned Logistics Depot. (2) The key success of the rice trading and rice milling services was the government policy that provided buyers and loan facilities from Bank Rakyat Indonesia (BRI). (3) The key success of the savings and loan business was the government policy that provided loan facilities from BRI. (4) The sustainability of the rice trading and rice milling services business was more determined by government policies. (5) The savings and loan business has been able

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to maintain its sustainability until now because it has members who are loyal customers. The study implies that to develop VUC, a government policy is needed that involves VUC in running specific programs, such as becoming a food supplier in the free nutritious meal program starting in early 2025.

Keywords: Loan Facilities; Business Capital; Rice Milling Business; Rice Trading Business; Savings and Loan Business

1. Introduction

The VUC was formed on the initiative of the government, with farmer members in a particular sub-district area, aiming to implement government programs and meet the need for staple foods, especially rice, at the farmer level [1,2], unlike other cooperatives established by members to work together to achieve economic benefits. The VUC has members who are farmers with related types of businesses in the agricultural sector, and it is also known as an agricultural cooperative. Government intervention in the formation of VUC aims to increase farmer income.

Several previous studies have shown that cooperatives are capable of developing businesses that provide economic benefits to their members. The agricultural cooperative system was a crucial pathway for farmers to enhance their financial status [3]. The benefits of cooperatives for farmers included playing a positive role in the rural economy [4] and improving farmers' working conditions and market access [5]. Cooperatives increased bargaining power and the added value of agricultural products [6], increased farmer income [7,8], increased net returns and return on investment [9] and provided benefits from modern value chains [10]. Sellers of production inputs and buyers of harvested produce reduced exploitation and opportunistic behavior among cooperative member farmers [11] and created opportunities for cooperative members to make collective purchases [12]. Cooperatives could be a tool for sustainable economic development. Sustainable economic development combines economic benefits, environmental protection, and social justice [13] and improves rural food security [14]. Agricultural cooperatives also accelerated the dissemination of good agricultural practices [15].

The government encourages farmers to form cooperatives. Once members are registered, cooperative management must strive to improve member satisfaction. Member satisfaction with horticultural cooperatives was influenced by business participation, meeting attendance, investment value, trust in management, profitability, service diversity, and the suitability of the cooperative's location [16].

Cooperatives had the potential to be sources of creativity and innovation [17]. Flecha and Ngai [18] argued that cooperatives explore and create alternative organizational forms that address the economic, social, and democratic needs of communities. However, there was sometimes tension between cooperative values and corporate competitiveness. The most relevant elements for creating a creative work environment in cooperatives were decentralization of power, freedom of autonomy, and support for teamwork [19].

The number of VUCs has continued to increase since 1978, reaching a turning point in 1997. The economic crisis in Indonesia in 1997 led to a decline in the number of VUCs for the first time, from 9,635 VUCs in 1997 to 9,216 VUCs in 1998 [20]. The number of independent VUCs by December 1997 was 7,264 units [21]. The number of VUCs declined after the Indonesian government implemented a policy of removing subsidies and liberalizing the economy, which were prerequisites for obtaining standby credit from the International Monetary Fund (IMF).

One impact of the collaboration with the IMF was the issuance of Presidential Instruction Number 18 of 1998, which granted communities the freedom to establish cooperatives according to their aspirations and needs, thereby facilitating the development of their businesses. Since then, VUCs have been treated like non-VUC cooperatives, which lack easy access to bank credit facilities. The number of non-VUC cooperatives nearly doubled in just two years (1998–2000), while the number of VUCs decreased by approximately 25% [20].

The termination of government facilities in the form of subsidized, unsecured loans from state-owned banks for food security programs had hurt VUC business units [22]. VUC had struggled to compete with well-capitalized competitors and had faced obstacles in accessing bank credit to strengthen its capital [23]. The removal of subsidies and economic liberalization had prevented VUCs from surviving in free competition and had led to difficulties in running their businesses.

This study aimed to identify the role and benefits of VUC in implementing the rice procurement program and assess the potential sustainability of VUC business units established through government policy. The research questions included: (a) What was the role of VUC in the government's successful implementation of the national rice procurement policy? (b) What were the keys to the success of VUC business units established through government policy? (c) What was the potential sustainability of VUC business units? The results of this study are expected to be helpful for the government in developing programs that support farmers and enhance the rural economy.

2. Literature Review

2.1. Cooperative

A cooperative is an autonomous association of people united voluntarily to meet their everyday economic, social, and cultural needs and aspirations through a jointly owned and democratically controlled enterprise [24]. The International Co-Operative Alliance [24] establishes seven cooperative principles: voluntary and open membership, democratic member control, member economic participation, autonomy and independence, education, training, and information, cooperation among cooperatives, and community development. Hanel [25] proposed the "Tri-Angel Identity of Cooperatives" theory, which explains the role of members as both owners and customers. The development of cooperatives depends heavily on the participation of their members. Cooperatives are an example of collective action, where farmers contribute to the management of the cooperative, which in turn enhances market stability and improves services to farmers [26]. Cooperative businesses are considered democratic, based on participatory decision-making [27]. Agricultural cooperatives are individual farmers pooling resources to collectively achieve their production or marketing goals, are increasingly found to play a prominent role in sustainable agricultural technology adoption [28].

Efforts to maintain the sustainability and development of cooperative businesses can be made, among other things, by providing high-quality products and attending to the personal needs of customers [29]. Cooperative business development efforts can also be enhanced by increasing member satisfaction, which includes enhancing trust in management, profitability, service diversity, and the suitability of cooperative locations [16]. Government policy interventions for agricultural cooperatives prioritized improving governance transparency, financial innovation, capacity building, and technology adoption [30]. Research has shown that strong governance, efficient communication, financial stability, and supportive policies were crucial to the sustainability of cooperatives [31]. Systematic process optimization, customer relationship management, and operational improvements significantly improved cooperative performance [32].

Cooperatives also supported farmers in adopting climate-smart agriculture [33], thereby increasing the likelihood of mechanization for soil cultivation, seed planting, and harvesting [34]. Cooperatives were also positively associated with the number of adaptation practices adopted by farming households [35]. Agricultural cooperatives played a role in providing inputs, technical support, and markets to increase production and facilitate various value-added activities [36].

2.2. Characteristics of VUC and Business Units of VUC

Characteristics of VUC based on Presidential Instruction [1,2]: (a) The establishment of VUC is a government initiative to implement government programs to meet staple food needs at the farm level, not a farmer initiative. (b) VUC has become the government's driving force for rural economic development. (c) VUC members are farmers from one sub-district and are mentored by the sub-district head, village head, and community leaders. (d) VUC receives credit facilities and interest subsidies. Another characteristic is that VUC members are only willing to deposit relatively small amounts of capital [37].

2.3. Government Intervention in VUC to Implement the National Rice Reserve Procurement Program

The government aimed to maintain sufficient rice reserves to provide rice allowances to civil servants, the armed forces, the police, retirees, and to stockpile the Logistics Agency warehouse for a minimum of three months' needs, thereby helping to stabilize rice prices. To implement the rice reserve procurement program, the government intervened with the VUC to establish rice trading, rice milling, and savings and loan business units. To ensure the success of the VUC business units, the government protects rice milling and rice trading business units by issuing regulations. First, rules from Bank Indonesia prohibit state banks at the central and regional levels from providing working capital loans to private rice milling businesses or non-VUC rice traders [38]. Second, regulations from the Minister of Agriculture also prohibit the issuance of business permits for new rice mills [39].

The established rice trading system requires farmers to sell grain to VUC at a government-set base price. VUC then dries and mills the grain into rice. VUC sells rice to government-owned logistics depots at the base price plus commission. This method prevents rice traders from taking excessively high profit margins. To carry out this task, VUC obtained credit from Indonesian People's Bank/*Bank Rakyat Indonesia* (BRI), a state-owned bank, for business capital in rice trading, rice milling, and savings and loans. VUC received loans from BRI with a 9% annual subsidy, and VUC provided loans to its members at an interest rate of 12% per annum. In addition to BRI, VUC also received loans from Bank Indonesia with an interest rate of 6% per year, specifically for the purchase and marketing of rice to maintain rice price stability. During the same period, the average loan interest rate was at least 15% per year.

3. Research Methodology

This research employed a qualitative method with a case study approach and thematic analysis. This qualitative method was suitable for understanding social interactions and understanding community sentiments [40]. Qualitative research was the process of exploring and understanding the meaning of behavior and describing social problems [41]. A case study was relevant for answering research questions that require broad and in-depth descriptions of contemporary situations and real-world contexts [42].

The qualitative methods, particularly those employing a case study approach, were suitable for researchers to obtain detailed, comprehensive information, including confidential data, which enables them to deduce the characteristics of VUC. A deep understanding of one VUC can be used to generalize the characteristics of other VUCs, as the formation and operation of VUC businesses throughout Indonesia were based on government regulations, not the initiative of VUC members or administrators. For example, the characteristics of the Kebakkramat VUC, the object of this study, will be relatively similar to those of other VUCs.

The object of this research was VUC of Kebakkramat, located in Kebakkramat District, Karanganyar Regency, Central Java Province, Indonesia. VUC of Kebakkramat was chosen for two reasons. First, VUC Kebakkramat has a solvency ratio far superior to the average solvency ratio of cooperatives in Indonesia. VUC Kebakkramat's total assets are IDR 10,570,000,000, and its liabilities are IDR 1,596,000,000, resulting in a solvency ratio (Debts: Assets) of 15% [43]. The average national cooperative solvency ratio is 54% [44]. The lower the solvency ratio, the better. A solvency ratio of 15% means that Rp 15 finances Rp 100 in assets, which is better than Rp 100 in assets financed by Rp 54 in debt. Second, having two administrators, retired employees of the Cooperatives Service, who have a strong concern for the sustainability of cooperatives, thus providing a positive response to the research activities. This research was conducted from March to September 2025.

Participants included administrators, internal auditors, members, and employees of VUC of Kebakkramat who had experience as customers of VUC business units and therefore possessed the necessary data for this study. Administrators and internal auditors were selected using a purposeful sampling method. Members and employees were selected using a snowball sampling method. Before meeting the participants, the researcher submitted a research assignment letter from Sebelas Maret University, the research institution, to the VUC administrators. The researcher explained the type of data needed, the collection method, and the participants. The VUC administrators permitted the researcher to conduct the data collection activities because they were deemed not to be detrimental to the participants.

Figure 1 illustrates the stages in data collection, related to data analysis. These stages begin with data collection, followed by data reduction, data presentation, and culminate in a conclusion. The data collection technique was in-depth interviews and focus group discussions (FGD). In-depth interviews have the advantage of providing more profound and more detailed insights into the research topic [45]. In FGD, participants engage in synergistic discussions, gaining multiple perspectives that enrich their understanding of the topic at hand [46]. The research instrument was the researcher and an interview guide. The interview guide avoided closed-ended questions to prevent participants from being influenced by the researcher's preferences, instead allowing them to answer according to their own choices [47]. The researcher conducted interviews, which lasted between 60–90 min each. The FGD was led by the researcher and attended by 10 participants. Data from the interviews and FGD were presented, analyzed, interpreted, and summarized in the FGD.

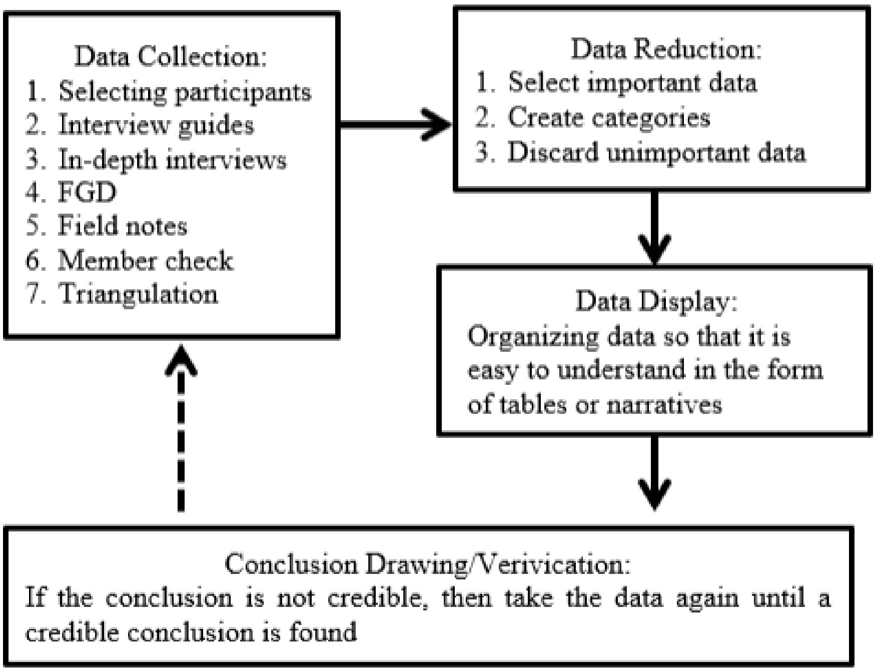

Figure 1. The Steps of Research Data Analysis.

The data from the interviews and FGD were presented, analyzed, interpreted, and summarized by the researcher. Data credibility was tested using triangulation and member checking. Triangulation was conducted by comparing data from in-depth interviews with administrators, members, and employees with FGD. Member checking provided a way for researchers to ensure an accurate portrayal of participants' voices by allowing them to confirm or deny the accuracy and interpretation of the data, thereby increasing the credibility of the qualitative study [41]. Member checking was conducted at the end of the interviews and FGD by rereading the data obtained to obtain confirmation from participants. Qualitative data were analyzed using an interactive model [48]. The research process of drawing conclusions involved repeated activities of data collection, data presentation, data reduction, and drawing/verifying conclusions.

4. Results

4.1. General Overview of Kebakkramat VUC as a Research Object

A VUC member was a rice field owner who voluntarily registered as a member of the VUC. Male and female members had the same rights and obligations according to the VUC statutes. Rice field owners were generally male, so most members and administrators were male. Male and female members had equal roles as owners, managers, and customers of VUC. Male and female members can perform all VUC roles and activities. There were no barriers to women participating in VUC. Participants were generally older because the requirement for farmer membership was that farmers own rice fields. When VUC was established, farmers who owned rice fields were encouraged by the government to join VUC. As a result, there have been relatively few new members since the establishment of VUC. New members emerge when a member dies, and then the child who inherits the rice field registers as a VUC member. Or when a member sells a rice field, and then the buyer registers as a VUC member. New members were not selected as participants due to a lack of understanding of VUC.

The obstacle facing young people who wish to join VUC stems from the current disinterest in becoming farmers, a requirement for VUC membership. The reasons cited for this disinterest include: first, the limited availability of rice fields (less than 0.3 ha) that cannot meet household needs. Second, young people are more interested in working in the industrial or service sectors outside of agriculture, with a steady salary and a more comfortable workplace. The VUC Kebakkramat administrators once applied for a fertilizer distributor permit from the Karanganyar Regency Ministry of Agriculture. Still, their application was rejected because they considered there were already enough distributors in the Kebakkramat District. VUC was established under government regulations, but since 1998, it has been required to operate independently, like other private companies. Rural communities still need VUC because it offers credit with easy requirements and competitive interest rates compared to rural banks.

The government intervened in the formation of VUC Kebakkramat by merging the Savings and Loan Cooperative associations from villages in Kebakkramat District in 1973. The VUC formation meeting stipulated a basic deposit of Rp 25,000, paid once for membership, and a mandatory annual deposit of Rp 12,000, which was deducted from the profits distributed to members. Yearly operating profit was distributed as follows: 60% to members, 10% to administrators and internal auditors, 10% to employees, 5% to education, 2.5% to social assistance, and 12.5% to reserves and development. VUC of Kebakkramat shares the same fate as VUC nationally, experiencing business volume growth from 1978 to 1997, followed by a decline since 1998.

The 2024 management accountability report, presented at the cooperative's annual membership meeting on January 25, 2025, reported that VUC members numbered 1,175 farmers from 10 villages in Kebakkramat District. There are three administrators, three internal auditors, and nine employees. **Table 1** presents the balance sheet of December 31, 2024. Total assets are Rp 10,569,999,380, liabilities Rp 1,596,148,817, or 15% of assets, and equity Rp 8,973,850,563, or 85% of assets. The majority of capital comes from accumulated undistributed profits over 46 years (1978 to 2024), amounting to Rp 8,700,985,902, or 97% of total equity. Equity from member deposits is Rp 29,375,000, equivalent to 0.33% of the total equity. VUC of Kebakkramat's solvency ratio (debt: assets) of 15% was excellent, exceeding the national average of 54%. Net profit is Rp 98,898,674, or 1% of total equity.

The VUC working area encompasses the Kebakkramat District, comprising 10 villages (**Figure 2**). The Karanganyar Central Statistics Agency in 2023 reported that Kebakkramat District has 5,642 heads of farmers with a rice field area of 4,398 ha. The average rice field ownership was 0.7795 ha per household. Farmers planted rice three times per year. Kebakkramat District had the highest rice paddy harvest area and the highest rice production in Karanganyar Regency. The VUC of Kebakkramat office is located in Kemiri Village, Kebakkramat District, Karanganyar Regency, Central Java Province, Indonesia.

Table 1. Balance sheet of December 31, 2024, VUC of Kebakkramat.

Assets	Rp	Liabilities and Equity	Rp
Cash	240,325,224	Current Liabilities	444,896,563
Bank	3,098,079,850	Long-Term Liabilities	1,151,252,254
Members' Accounts Receivable	6,727,464,144		
Allowance for Doubtful Accounts	(278,919,303)	Total Liabilities	1,596,148,817
Short-Term Investments	641,042,795	Equity:	
		Equity from Members' Deposits	29,375,000
Total Current Assets	10,427,992,710	Equity from Members' Share of Profit	243,489,661
Land (purchased 1978)	49,633,613	Total Members' Equity	272,864,661
Buildings (1979–1991)	257,834,415		
Vehicles	31,200,000	Retained Earnings	8,602,087,228
Office Equipment	61,120,500	Profit of 2024	98,898,674
Acc. depreciation of fixed assets	(257,781,858)		
		Total Retained Earnings	8,700,985,902
Fixed Assets	142,006,670	Total Equity	8,973,850,563
Total Assets	10,569,999,380	Total Debt and Equity	10,569,999,380

Source: VUC of Kebakkramat [43].

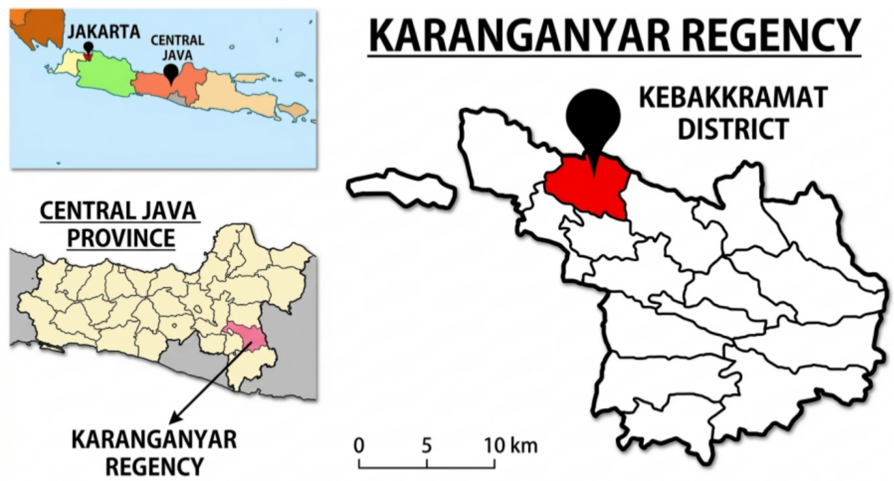

Figure 2. Map of the Research Location.

4.2. Participant Profile

Participant profiles were presented in **Table 2**. There were 12 participants: three administrators, one internal auditor, four employees, and four members. The educational levels of the participants were as follows: one master's degree, three bachelor's degrees, and eight high school graduates. Participants ranged in age from 45 to 76, with an average of 57 years. Participants became members between 1979 and 2004. The duration of their VUC membership ranged from 21 to 46 years, with an average of 30 years. Participants 1 and 4 were highly motivated to develop VUC as they were retired from the Karanganyar Regency Cooperative Office. All participants owned rice fields and engaged in other occupations besides farming.

4.3. The Role of Kebakkramat VUC in the Implementation of the Rice Reserve Procurement Program

The government was implementing a national rice reserve procurement program in collaboration with BRI and all VUCs, including the VUC of Kebakkramat. BRI, a state-owned bank, was tasked with disbursing loans to VUC at a subsidized interest rate of 9% per year, without collateral. For comparison, BRI's interest rate on loans to the general public is 15% per year. The government-established Cooperative Credit Guarantee Institution guarantees the loans.

The Kebakkramat VUC was responsible for providing rice in accordance with the quota agreed upon by the VUC management and the government-owned logistics depot, at a base price set by the government. To prevent failure, the government implemented policy interventions within the VUC by requiring it to establish business units for rice trading, rice milling services, and savings and loans.

The VUC of Kebakkramat was a government partner in implementing the national rice reserve procurement program. In 1978, Kebakkramat VUC obtained a loan from BRI, which was used to finance its rice trading business unit, rice milling services, and savings and loans, primarily providing loans to members who were grain traders. The loan was also used to construct a rice milling building and warehouse, purchase rice milling machines and moisture meters, and build a rice drying floor.

Table 2. Participant profiles.

No.	Participant	Education	Age	Status in VUC	VUC Entry	Duration (Years)
1	Participant 1	Masters	65	Administrator	1987	38
2	Participant 2	Bachelor	60	Administrator	1990	35
3	Participant 3	Senior high school	70	Administrator	1983	42
4	Participant 4	Bachelor	65	Internal Auditor	1992	33
5	Participant 5	Senior high school	50	Employees	2000	25
6	Participant 6	Senior high school	50	Employees	2000	25
7	Participant 7	Senior high school	47	Employees	2003	22
8	Participant 8	Bachelor	45	Employees	2004	21
9	Participant 9	Senior high school	50	Members	2001	24
10	Participant 10	Senior high school	50	Members	2002	23
11	Participant 11	Senior high school	76	Members	1979	46
12	Participant 12	Senior high school	55	Members	1995	30
		Average	57			30

4.4. The Government Policy to Establish Rice Trading Business Units at VUC

The members or administrators did not initiate the establishment of a rice trading business unit at VUC Kebakkramat; instead, it was part of a government policy to ensure the success of the national rice reserve program. VUC administrators purchased grain from grain traders at the government-set base price. They then process the grain into rice and sell the rice to government-owned Logistics Depots at the government-set base price. Government policies provide credit facilities for working capital, offer customers agreed quotas, and provide favorable selling prices, making the rice trading business unit easy to operate and profitable for VUC.

Kebakkramat VUC administrators collaborated with grain traders. VUC administrators were unable to purchase grain directly from farmers due to limited staff and the inability to accurately estimate the quantity of grain harvested from each member's rice field, which was sold using the "tebas" system. The rice trading business unit was a straightforward operation that is easy for administrators to manage, offers significant economies of scale, generates substantial profits for VUC, and benefits its members. The VUC of Kebakkramat administrators collaborate with VUC members who were grain traders. The VUC administrators were unable to purchase grain directly from farmers due to the limited number of administrators and employees, as well as the difficulty in estimating the quantity of grain harvested from each member's rice field, which was sold using the "tebas" system.

The "tebas" system involves grain traders estimating the number of kilograms of grain per plot of rice and then submitting a price offer to the rice field owner. Rice field owners cannot estimate the yield per kilogram. They typically compare prices with those of other farmers who have already sold, taking into account the ratio of rice area and rice quality. Estimating the number of kilograms of grain harvested requires specialized skills and experience; therefore, few individuals possess these skills. To avoid losses, administrators purchase dry-milled grain from grain traders by the kilogram at the government-set price for grain. The grain was then processed into rice by the rice milling unit.

VUC of Kebakkramat sells rice to government-owned logistics depots at the government-set base price. Administrators find it easy to sell rice to logistics depots because all the rice has been purchased; they were guaranteed a profit, and they receive a commission. From 1980 to 1996, the rice trading unit experienced high business activity and high profits, as recounted by several participants below.

> "In 1990, I became a member, replacing my father, who passed away. Other farmers and I sold our harvest to collectors by cutting, not by the actual kilogram of grain. Selling the harvest was easy, and the price was relatively stable. The collectors then dried the grain on the VUC drying floor. I saw a lot of activity on the drying floor." (Participant 1).

> "I've been an employee since 1992, when I was in charge of recording rice deliveries to the logistics depot. During harvest season, I was busy preparing rice shipments because rice was delivered to the logistics depot every two or three days." (Participant 4)

> "I've attended several Annual Meetings (RAT) as a representative of Tuban Village. I believe I benefited from being a member of VUC because I received a cash profit share. I only deposited Rp 25,000 once when I registered, but at every annual membership meeting, I received Rp 30,000 to Rp 40,000 in profit sharing." (Participant 5)

The results of the FGD on the theme "The golden age of VUC of Kebakkramat," which was attended by three administrators, one internal auditor, three employees, and three members, led by researchers, yielded several important insights. First, the rice trading business unit reached its peak during the period of VUC, coinciding with Kebakkramat's success. Business activity was high, and profits were substantial. Second, the rice trading business was easy for the administrators to run. Third, members felt they benefited from the ease of selling their harvest at the base price set by the government. Fourth, members thought they benefited from a one-time capital deposit of Rp 25,000 and received an annual profit share of approximately Rp 45,000. Fourth, members felt they benefited from a one-time capital deposit of Rp 25,000 and received a yearly profit share of approximately Rp 45,000. Fifth, the profits distributed to members were reduced by Rp 12,000 as equity from members' share of profit. For example, if each member's profit entitlement was Rp 45,000, Rp 33,000 would be distributed to the members, and Rp 12,000 would be used as equity from the members' share of the profit.

The rice trading business unit's sales turnover began to decline starting in 1997. This was due to the economic crisis in Indonesia and changes in government policy. The government implemented a policy of subsidy removal and economic liberalization, which were prerequisites for obtaining stand-by credit from the International Monetary Fund (IMF). One impact of the IMF collaboration was the issuance of Presidential Instruction No. 18 of 1998, which gave communities the freedom to establish cooperatives based on their aspirations and needs to develop their businesses. Since then, VUC have been treated like non-VUC cooperatives, which were not easily accessible to bank credit.

VUC of Kebakkramat experienced difficulty obtaining bank credit. BRI stopped lending to VUC of Kebakkramat. As a result, VUC lacked sufficient capital to purchase grain. The rice trading unit ceased operations in 1999, and grain and rice prices fluctuated outside the government-set price for grain, as described by the following participant.

> "Since VUC stopped purchasing grain from middlemen, grain prices have fluctuated, sometimes high, resulting in significant profits for farmers, and sometimes low. Usually, farmers who harvest first receive relatively higher prices than those who harvest later." (Participant 4).

> "After VUC stopped purchasing grain, farmers were in a weak position when selling their grain because they needed funds, and traders were not prohibited from buying

> below the government-set floor price, resulting in high profits for traders." (Participant 11).

Grain prices follow market prices, which tends to be detrimental to farmers. During harvest season, grain prices were often below the government-set price, and then increased after the harvest was over. This situation benefits traders with relatively large capital. They purchase during the harvest season, store it as dry grain, and sell it when prices are above the government-set price.

4.5. Government Policy to Establish Rice Milling Services Business Units

The establishment of a rice milling service business unit at Kebakkramat VUC was not an initiative of the members or management, but rather a government policy aimed at ensuring the success of the national rice reserve program. This business required extensive land and buildings, which VUC cannot afford. The rice milling service business unit was easy to operate and profitable for VUC because the government provided loan facilities for capital and had a sufficient customer base. The loan facility was utilized to purchase land, construct buildings, establish a rice drying area, and acquire rice milling machines. The rice milling business unit's primary customer was the rice trading business unit. The rice milling service was easy for administrators to operate, has significant economies of scale, generates substantial profits for VUC, and benefits members.

The VUC of Kebakkramat administrators found it easy to run the rice milling services business unit because it had a loyal customer base, namely the VUC of Kebakkramat rice trading business unit. The rice milling services business unit used 90% of its capacity to mill the VUC's own grain and 10% to mill members' grain for their own consumption. The rice milling services business unit suffered a relatively similar fate to the rice trading business unit.

The rice milling services business unit experienced a decline in sales turnover in 1997, coinciding with a downturn in the rice trading business. After the government lifted the ban on establishing rice mills, many rice traders opened rice milling businesses. They imitated the VUC's business model, which involved purchasing grain from traders, drying it, milling it into rice, and selling it to the market. The VUC rice milling services business unit ceased operations in 2000, as the following participant explained.

> "VUC's rice milling and drying floor operations have become quiet." (Participant 7)

> "I saw several people who were able to open rice milling businesses and buy grain from collectors by providing a place to dry the grain. This is exactly what VUC does." (Participant 12).

The results of the FGD on the bankruptcy of the rice trading and rice milling services business unit, led by the lead researcher and attended by two administrators, one supervisor, three employees, and four members, yielded several important pieces of information. First, the VUC of Kebakkramat administrators and members did not anticipate that the national rice reserve procurement program would be discontinued. Second, the retained earnings accumulated over the 46 years since the business unit began operating in 1978 until its closure in 2000 were used to pay debts for land purchases and building construction, leaving them with no funds to continue the rice trading business. Third, the VUC of Kebakkramat administrators were less active in seeking bank loans due to concerns about being outcompeted in the market. The logistics depot no longer purchased rice from VUC. Fourth, the rice milling machine was sold in 2005. Fifth, the building and drying floor were not used and were dismantled in 2023.

4.6. Government Policy to Establish Savings and Loan Business Units

The establishment of the savings and loan unit at Kebakkramat VUC was not an initiative of the members or management, but rather part of a government policy aimed at ensuring the success of the national rice reserve program. The savings and loan unit was easy to operate and profitable for VUC because the government provided loans for capital and had a loyal customer base, namely the rice trading unit.

The VUC of Kebakkramat used loans from BRI to fund its savings and loan unit, primarily providing loans to members who were grain traders. VUC obtains loans from BRI at a 9% annual interest rate, without requiring collateral. VUC provided loans at 12% interest per year, without collateral, but requires the sale of grain to VUC. The primary risk associated with a savings and loan business was the risk of bad debts. For VUC, the risk of bad debts was easily mitigated by deducting debtors' bills when selling grain. This savings and loan business was running well because both grain traders and VUC enjoyed profits, as stated by the following participant.

"As an employee responsible for recording members' receivables since 2005, I have not encountered any bad debts from collectors." (Participant 8)

"I used to be a collector. Borrowing from VUC at 1% interest per month was cheaper than borrowing from individuals at 2% interest per month. Being a grain trader at that time was easy and provided a satisfactory profit." (Participant 10)

The savings and loan unit experienced a significant decline in lending turnover, similar to the rice trading unit, because VUC of Kebakkramat did not receive loans from BRI starting in 1999. The savings and loan unit was able to continue operating with a small loan turnover, using capital from allocated profits not shared with member customers for farming or consumption needs. The risk of non-performing loans was relatively greater than lending to grain traders, so the interest rate was increased to 2% per month, and collateral was required, including land certificates or proof of vehicle ownership. The market value of the collateral must exceed the loan amount. This savings and loan unit is still operating today (2025).

The results of the FGD on saving the savings and loan business unit, led by the lead researcher and attended by 12 people: three administrators, one internal auditor, four employees, and four members, yielded several important insights. First, the VUC of Kebakkramat administrators and members agreed to maintain the savings and loan business unit. Second, the interest rate was reduced from 2% to 1.5% per month. Third, the number of members applying for loans has decreased. Fourth, VUC has not yet identified a new business unit to utilize the deposits in banks and buildings that are currently underutilized.

5. Discussion

5.1. The Benefits, Keys to Success, and Sustainability of Rice Trading Business Units

The establishment of the rice trading, rice milling, and savings and loan business units was not the intention of the VUC members and administrator, but rather the government's, thus deviating from the cooperative principles of "autonomy and independence" [28,32]. However, because government policy shares the same goal as VUC, namely improving farmer welfare, these three business units were easy to operate. They provided positive benefits to both members and the government.

The rice trading business unit has several roles. First, it contributed to the success of the national rice reserve procurement program. Second, it stabilized grain and rice prices at the farm level. Third, it facilitated VUC member farmers in selling their harvests at profitable prices. These findings align with previous research that has concluded cooperatives facilitate member market access [5], increase agricultural bargaining power [6], and enhance farmer income [7,8]. Additionally, agricultural cooperatives have also increased household income in rural areas [49]. Fourth, it enables farmers to secure a guarantee that they will sell their harvested grain to VUC at a price no lower than the government-set price. Thus, farmers received protection from exploitation and opportunistic behavior by harvest buyers, in accordance with previous research that concluded sellers of production inputs and buyers of harvests reduced exploitation and opportunistic behavior towards cooperative member farmers [11] and created opportunities for cooperative members to make collective purchases [12]. Fifth, reducing the cost of marketing the harvest because VUC could sell directly to logistics depots, not through wholesalers who were suppliers to logistics depots. This finding was consistent with previous studies that reported the cost of marketing the harvest for cooperative members to be lower than for non-members [50]. Sixth, increased VUC's profits.

The key success of the VUC Kebakkramat rice trading business unit was: (a) Government policy that provided loyal customers who buy all rice sold by VUC at government-determined prices, which already provides a reasonable profit for VUC; (b) Government policy that provided loan facilities from BRI to VUC in an amount appropriate to VUC's capabilities with subsidized interest, without collateralizing VUC assets for rice trading business capital; and (c) VUC Kebakkramat's management was honest and did not engage in corruption of VUC's assets.

The government's policy of halting the rice reserve procurement program caused the trading business unit to face three problems: (a) VUC lost its only customer, namely the Logistics Depot. (b) VUC did not receive loan facilities with subsidized interest from BRI. (c) Administrators were unable to compete for customers with other rice traders in the free market. VUC Kebakkramat's administrator was unable to compete with rice traders due to a lack of capital, weaker motivation to develop the business compared to its competitors, limited business networks, and inferior business competencies.

The implication of the administrator's inability to address these three issues, particularly the failure to compete for customers, was that the rice trading unit could not continue to operate. The sustainability of the VUC Kebakkramat rice trading unit was more determined by government policies that facilitated rice trading operations than by the management's performance. The termination of the rice trading unit poses a threat to the sustainability of the rice milling unit.

The administrators must find another business unit or involve the government in other government programs. In 2025, suitable government programs for involving VUC include becoming a food supplier for the free nutritious meal program, which began in early 2025, a subsidized fertilizer distributor, and a distributor of rice and cooking oil donated by the government to people experiencing poverty.

5.2. The Benefits, Keys to Success, and Sustainability of the Rice Milling Services Business Unit

There were four benefits to the rice milling service business. First, it played a role in supporting VUC's success in meeting its rice sales quota to logistics depots. Second, it played a role in increasing VUC's undistributed profits. Third, it played a role in improving the value of agricultural products, specifically allowing farmers through VUC to sell in the form of rice instead of grain, thereby increasing the value of the product. This finding was consistent with previous research that concluded cooperatives increased the added value of agricultural products [6]. Fourth, it provided a relatively large annual profit to VUC.

The key to the success of the rice milling business unit was two. First, there was a rice trading business unit that served as the primary customer. Second, the honest and trustworthy nature of the VUC of Kebakkramat administrators in managing the rice milling unit has resulted in profits for the VUC, leading to an increase in VUC assets that far exceeds the debt and capital contributed by members.

The government's policy of halting the rice reserve procurement program had caused the rice milling service unit to face three problems. First, the loss of a key customer, specifically the rice trading business unit, which had ceased operations. Second, rice traders who had been VUC customers have formed their own rice milling service businesses because the government has lifted the moratorium on rice milling business permits. Third, there was a change in farmer habits. Farmers no longer reserve part of the harvested grain to use as seed for the next harvest, but instead choose to sell all the harvested grain and buy rice when needed. As a result, farmers no longer need rice milling services.

The implication of the administrators' inability to address these three problems was that the rice milling service unit would be unable to continue. The sustainability of the VUC Kebakkramat rice trading business unit was more determined by government policies that facilitated rice milling service operations than by the administrator's performance.

5.3. The Benefits, Keys to Success, and Sustainability of Savings and Loan Business Units

There were five benefits to a savings and loan business. First, they supported VUC's success in meeting its rice sales quota to logistics depots by providing loans to VUC member grain traders who were its suppliers. Second, they facilitated VUC members' access to unsecured loans. This finding aligns with previous research, which found that becoming a cooperative member can address collateral issues that hinder farmers' access to formal credit [51]. Third, they facilitated members' access to straightforward procedures and fostered a more humane relationship with employees and administrators when applying for loans. This aligns with previous research, which found that cooperatives have simpler, less bureaucratic structures and maintain closer relationships with their members [52]. Fourth, they facilitated VUC members' access to loans with simpler requirements and larger amounts than non-VUC members. This finding is consistent with previous research, which has shown that cooperative members have easier access to credit [53], and tend to increase their loan amounts more than non-cooperative members [54]. Fifth, they contribute annual profits to the VUC. Savings and loan cooperatives demonstrate higher average technical efficiency than banks, as well as greater resilience during the Covid-19 health crisis [55].

The keys to the success of the savings and loan business unit were five. First, it had a low-interest loan from BRI. Second, it provided a guarantee that VUC purchases grain from grain traders who have loans to VUC. Third, VUC offers easy loan terms, low interest rates, and no collateral to grain traders. Fourth, VUC provided members with loans for agricultural capital or consumption through simple procedures, with interest rates comparable to those offered by rural banks or agricultural input traders. Fifth, administrators must be honest and refrain from misusing VUC assets.

The government's policy of halting the rice reserve procurement program caused the savings and loan business unit to face the problem of losing loan facilities from BRI as capital for its savings and loan business. Management was able to overcome this problem by using undistributed profits as capital for the savings and loan business. The savings and loan business unit only experienced a decrease in loan turnover. Furthermore, administrators were also able to socialize the principle that cooperative members should have roles as users, owners, and decision-makers [55].

The implication of the administrators' ability to overcome the loss of loan facilities from BRI was the continuation of the savings and loan business unit. The administrators offered three reasons for maintaining the savings and loan business. First, VUC consistently generated profits due to its substantial retained earnings, which served as working capital, resulting in higher interest income than operating expenses. Second, members maintain high customer loyalty, believing they benefit from it. Each member deposits Rp 25,000 once and receives approximately Rp 45,000 annually. This was because the capital component consists of 3% member deposits and 97% accumulated retained earnings. The accumulated profits are primarily derived from profits from the rice trading and rice milling business units.

The 1999 cooperative members' meeting set the interest rate on loans to members at 2% per month. This 2% interest rate was equivalent to the interest rate at rural banks or loans at agricultural supply stores. The VUC management was firmly committed to developing the savings and loan business unit. Furthermore, the 2023 cooperative members' meeting revised the interest rate on loans to members to 1.5% per month, effective starting in 2023. This interest rate policy was expected to increase loan turnover.

The administrators had successfully maintained the sustainability of the savings and loan business without government policy assistance. However, the administrators were only trying to keep the existing conditions and had no plans to establish other business units, as they felt they were losing out to other entrepreneurs. On the other hand, members feel they have greatly benefited from the current VUC situation, as they can easily obtain loans and earn profits exceeding their invested capital.

5.4. Suggestions for Further Research

Further research is recommended to explore the potential of viable business units for VUC other than savings and loans for two reasons. First, savings and loans carry a high risk of non-performing loans. The risk of non-performing loans in VUC is higher than in banks because cooperative members are familiar with one another, so if some members default, others are likely to follow suit. Second, VUC currently holds cash and bank assets, as well as buildings and land of relatively high value, which are not utilized for business purposes.

6. Conclusion

The role of the VUC Kebakkramat in the national rice reserve procurement program was to provide rice in accordance with the quota agreed upon by the VUC administrator with the government-owned Logistics Depot at a government-determined base price. To ensure the success of the rice reserve procurement program, the government established a rice trading, rice milling, and savings and loan business unit.

The rice trading and milling business unit generated relatively large profits for the VUC, but ceased operations when the national rice procurement program was discontinued in 1998. The savings and loan business unit has survived until now (2025) due to its relatively large retained earnings capital, which contributes annually to the VUC. The administrators have struggled to establish new business units to utilize bank balances, land, and buildings that are currently underutilized. The sustainability of the rice trading, rice milling, and savings and loan business units at the Kebakkramat VUC is more determined by government policies that streamline business operations than by the administrators' performance.

The implication of this research is that to develop the VUC, government policies involving the VUC are needed to implement specific programs. Conditions: In 2025, suitable government programs involving VUC include becoming a supplier of food ingredients for the free nutritious meal program starting in early 2025, as a trader of subsidized fertilizer, and as a trader of nine essential goods donated by the government to people experiencing poverty.

Author Contributions

Conceptualization, S.H.; methodology, S.H. and S.; data analysis, S.H., S.A. and H.S.; investigation, S.H., S.A. and A.A.; data curation, S.H., S.A. and A.A.; writing—original draft preparation, S.H.; writing—review and editing, S.H. and S.; supervision, S.; validation, S. and H.S. All authors have read and agreed to the published version of the manuscript.

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Data Availability Statement

The data presented in this study are available on request from the corresponding author.

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Conflicts of Interest

The authors declare no conflict of interest.

AI Use Statement

The authors declare that no artificial intelligence (AI) tools were used in the preparation of this manuscript.

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