

Gaduh goats in rotation and poverty alleviation efforts: A case study in a mountain village in Indonesia

Muhammad Hanif^{1*}, Pujiati², Ani Sulistyarsi³

¹Postgraduate of Social Studies Education Study Program, Universitas PGRI Madiun, Madiun, Indonesia; hanif@unipma.ac.id (M.H.).

^{2,3}Biology Education Study Program, Universitas PGRI Madiun, Madiun, Indonesia.

Abstract: The aim of this research is to determine the effectiveness of implementing the goat-raising model in increasing the income of the poor residents of Sodong, Indonesia. This research sought various types of information: goat-raising models, surveys, and interviews with low-income individuals. The results of the research show that the appropriate goat-raising model for increasing the income of the poor residents of Sodong Hamlet is the rotational goat-raising model. The rotational model of goat raising involves raising goats owned by the community with a profit-sharing system in the form of baby goats or money from sales profits. The increase in income is obtained from sharing the results of goat kids from parent goats (females) or sharing profits from the sales of feeder goats (males). Apart from that, the goat raisers also received additional income from selling goat dung and wages for finding feed for others.

Keywords: Goat rowdy model, Increase in income, Poor Population, Rotating rowdy, Sodong Hamlet.

1. Introduction

Nowadays, poverty has become an important and urgent matter to be resolved [1]. This was made worse by the Covid-19 disaster and almost all parts of the world experienced it [2-4]. This also happens in Indonesia, one of which is in Sodong Hamlet, Ponorogo.

Sodong Hamlet is one of the hamlets in the Gelangkulon Village area, Sampung District, Ponorogo Regency, East Java Province, Indonesia. Sodong Hamlet is located in the hills at an altitude of 368 meters above sea level. This hamlet is separate from other hamlets, namely Gelang, Darat and Kroya. The three hamlets are in the lowlands. The mountain slopes occupied by the residents of Sodong Hamlet are the slopes of Mount Deng, Mount Deng, and Sangha Hill. This area is in coordinates 7051'36" and 1111'17" [5]. There are only two land routes that can be used to get to or leave Sodong Hamlet, namely the north route and the south route. Residents generally use the northern route rather than the southern route, because the northern route is gentler and the road is better than the southern route. This can be seen in Figure 1.



Figure 1.
Map of Sodong Hamlet, Gelangkulon, Sampung, Ponorogo, East Java [5].

The population of Sodong Hamlet is 482 people and the majority of their education level is up to junior high school. The livelihood of the population is generally farming. They grow corn, cassava and other tubers. Apart from farming, some residents raise livestock (goats and cows). Not a few families/households live in the vulnerable category of poverty and below the poverty line (of IDR 354,547 per capita per month) [6]. This is as per the data in Table 1.

Table 1.
Sodong Hamlet Family Data Based on Economy in 2022.

No.	Economic level	Amount Family	Information
1	On	4	Expenditures above Rp. 6,000,000 per month
2	Intermediate	26	Expenditure Rp. 1,000,000-6,000,000 per month
3	Towards intermediate	22	Expenditure Rp. 532,000-1,000,000 per month
4	Vulnerable to poverty	20	Expenditure Rp. 355,000-531,000 per month
5	Poor	24	Expenditures below Rp. 354,000 per month
	Amount	96	

Source: Badan Pusat Statistik (BPS) & Statistics Indonesia [7].

The data in the table above illustrates that the population of Sodong Hamlet lives below the poverty line (vulnerable to poverty and poverty) as many as 44 families (48.83%). Currently, many policies have been implemented to alleviate poverty, especially in Sodong Hamlet. Rahayu and Fitriani [8] stated that one of the efforts to eradicate poverty is the existence of a poverty alleviation program, namely Non-Cash Food Assistance (BPNT). Afiyanto [9] stated that the Sodong people have carried out agricultural businesses to reduce poverty levels. Based on the results of the implementation of these policies, no goat noise policy has ever been expressed. The residents of Sodong Hamlet who are economically capable (middle and upper) pay attention and care about the fate of the poor. One form of his concern is to share his goats with poor people using a profit sharing system.

Much research has been conducted on poverty alleviation. In China, poverty alleviation, especially in rural areas, has been carried out in various ways Lee, et al. [10]; Ran, et al. [11] and Rathi and Rastogi [12]. Khanani, et al. [13] have described efforts to eradicate poverty in Ghana with equitable

infrastructure development. Poverty alleviation in Egypt is carried out by minimizing slum environments [14].

In Indonesia, research on poverty alleviation efforts using the gaduh (profit sharing) model of goat farming has been carried out by various parties, including; Nurjahroh [15]; Maharani and Ulum [16]; Hanif and Retno [17]; Purwowibowo [18]; Mahmud [19] and Miftahudin [20]. The results of these studies found several weaknesses, namely; (1) There is no certainty of profit sharing. Often those who own goats take them because they want to sell them. Even though the goat has not yet given birth if it is female and is not worth selling if it is male. So that the party who maintains or causes the noise is harmed, (2) There is no assistance, monitoring and evaluation so that the system does not work well, it even becomes the embryo of conflict, (3) The advantage is only being one of the parties, namely the owner of capital (people who are economically capable).

This also happened in Sodong Hamlet. Sodong residents who are economically well off and care about the poor people raise their goats to the poor people. However, we encountered problems or weaknesses as per the results of research in other areas as stated above. Apart from that, the number of goats involved is not balanced with the number of poor people, so the results are not yet significant. Therefore, it is necessary to develop an appropriate goat rowing model with the aim of eliminating the weaknesses of the previous rowdy model and which can increase the income of the poor.

Based on the explanation above, this research seeks to determine the effectiveness of implementing the goat rowing model in increasing the income of the poor residents of Sodong Gelangkulon Hamlet, Ponorogo, East Java, Indonesia. This study examines the process of goat fighting between the owner and the farmer. Through interviews and behavior related to the rowdy goat model, this study examines ways to increase people's income so they get out of the poverty line.

2. Literature Review

Gaduh is a Javanese word which means temporary loan [21]. Meanwhile, the term gaduh which has developed in society, especially the Javanese, is interpreted as lending livestock to other parties to be bred or bred and the results are shared (a profit sharing system from financial profits or rowdy livestock) [17]. Scheltema also conveyed a similar thing [20] that the gaduh system is a profit sharing system for work in the agricultural and livestock sectors. Thus, a person who breeds goats means a person who keeps other people's goats as his own for a certain period of time with a profit sharing system, which can be in the form of livestock or money from sales.

Goat farming is a goat farming and/or goat breeding business. Goats are medium-sized ruminants, eat grass (leaves), have even hooves, have loose horns, are usually kept as livestock for meat, milk, and sometimes fur [19, 22]. Apart from that, the skin and feces can be used as high quality organic fertilizer. Goat farming also has the advantage of being simpler to maintain compared to other livestock [23]. Often the public compares goats with sheep. Goats and sheep are two ruminant animals that look similar but are not the same [24].

The factors that cause poverty can be grouped into two, namely internal factors and external factors. Internal factors are factors that come from within a person, such as an attitude that accepts what is, not being serious about trying, imperfect physical conditions, and so on. Meanwhile, external factors are factors that come from outside a person, such as climate change, natural damage, social life, social structure, uneven government policies and programs, etc. [25]. A similar opinion was expressed by Halkos and Aslanidis [26] that poverty occurs due to several factors, including; high and uncontrolled population growth rates, low education, natural disasters and/or unpromising natural conditions, as well as unequal distribution of income.

Poverty as a social problem has a very broad impact on human life. This impact is not limited to the individual concerned but also to society. The manifestations are increasing crime, poor nutrition and inadequate health services, increasing death rates, closed access to education, and low quality of human resources Wei, et al. [27]. Hill [28] also emphasized that poverty also results in an increase in unemployment rates, many people dropping out of school, the emergence of various health problems in

society, increased crime, increased death rates, and many conflicts that occur in society. The impact of poverty as stated above is a burden and obstacle in the development of the nation and state [29].

The concept of empowering the poor has a close relationship with two main concepts, namely: the concept of power and the concept of being disadvantaged (inequality) [30, 31].

People who are empowered or not poor become social capital in development. Social capital is the ability of people to work together, for the sake of common goals, in various groups and organizations. With this ability, you get facilities in building cooperation through a harmonious and conducive network of interaction and communication [32, 33]. This social capital contains network elements that are integrated into society and institutions. Network relationships can mobilize several capital (economic, cultural and symbolic) which can be obtained through relationships with other actors, moreover, social capital theory provides a broad framework for exploring development; influenced by trust, reciprocity and social networks. Social capital makes a major contribution to economic development and improving all levels of life [34, 35]. Thus, it can be emphasized that empowering the poor is essentially a transfer of power through strengthening social capital in community groups so that they become empowered and productive.

3. Research Methods

3.1. Data and Methods

This study uses a qualitative approach [36]. The research approach used is Research and Development/R&D with the hope of producing an appropriate model for rowing goats to improve the opinion of the poor residents of Sodong Hamlet. The development model adopts the ADDIE development model.

The ADDIE development model consists of five steps/development phases, namely: Analysis, Design, Development or Production, Implementation or Delivery and Evaluations [37]. The results of this evaluation are also used as feedback for researchers as model developers to make revisions or improvements if there are weaknesses or things that need to be improved.

3.2. Data Collection

This study uses observation and interview methods to understand the goat rowing process and also see the development of the rowing process by comparing experiences before the rowing was carried out. Experience and the amount of income earned have also been given. This research was carried out in Sodong Hamlet, Gelangkulon, Sampung, Ponorogo, East Java, Indonesia. Meanwhile, the research period starts from September 2023 - May 2024.

The observation method is used to find out every process and progress of goat rowing that has been carried out by residents. Residents also participated in group interviews to share their experiences or opinions regarding goat noise. Interviews were conducted separately between goat owners and goat breeders. Each interview session takes approximately one hour. The interview notes were then transcribed and transliterated and coded according to the focus of the problem.

3.3. Data Analysis

The data obtained were analyzed using an interactive model [38]. The technique includes data reduction activities, data displays, conclusion drawing/verification moves and continues continuously until the data is considered satisfied and sufficient [39]. While the implementation procedure is a preliminary study in the form of initial observation and literature studies. While the work to be carried out is; (a) data collection through interviews, observation, and document dismissal, (b) data processing-data analysis, (c) discussion, (d) drawing conclusions, (e) writing and publishing research results.

4. Research Results and Discussion

4.1. Research Result

The results of developing the goat rowing model to improve the poor population of Sodong Gelangkulon Hamlet, Sampung District, Ponorogo Regency, East Java Province, Indonesia were arrived at in stages by referring to the development research model used. The results are as follows:

4.1.1. Results of the Analysis Stage

The word Gaduh comes from the Javanese language Ngoko, which means temporarily borrowing or maintaining something belonging to someone else for a certain period of time with a profit sharing system. Meanwhile, the term goat gaduh means keeping other people's goats for a certain period of time to be bred (males) or bred (females) with a profit sharing system for profits from sales or cross-breeding of goats. This model of rowdy goats has become a tradition in the lives of the people of Sodong Gelangkulon Hamlet. Residents who are economically well-to-do bring their goats to poor residents. In other words, the capital or goat that is being disputed belongs to an individual. This rowdy model has several weaknesses, including; (1) There is no certainty of profit sharing. Often those who own goats take them because they want to sell them. Even though the goat has not given birth if it is female and is not worth selling if it is male. So that the party who maintains or causes harm , (2) There is no assistance, monitoring and evaluation so that the system does not run well, it even becomes the embryo of conflict, (3) The advantage is only being one of the parties, namely the owner of capital (people who are economically capable) . Therefore, it is necessary to develop a new noise model.

This goat rowing model is used as a solution to increase the income of the poor with the considerations; (1) the need for goat meat continues to increase every year (aqiqoh, sacrifice, etc.), (2) goats do not require complicated care, (4) goats are easy to breed (gestation period is around 5 or 151 days), 4)goat feed in the form of grass and tree leaves is available in the surrounding environment.

4.1.2. Results of the Design Stage

The new rowdy model was designed by the owner of the goat or the owner of the capital, namely the communal property of the Sodong Gelangkulon Hamlet community which is managed by the SAE Goat Breeders Association (PPK SAE). PPK SAE funds for procurement of goats in the initial stage came from the Indonesian National Research and Innovation Agency (BRIN). So the design is that goats belonging to the community or PPK SAE are lent, looked after and treated as their own, the results are divided and distributed to poor people who have not borrowed (noise) or in turn. This activity is carried out continuously and without time limits.

The model of rotating goat rowing that has been successfully developed has the following principles, functions, work structure, implementation time and implementers:

- a. The principles of the goat rowing model in rotation are; voluntariness, openness, independence, dynamism, integration, normativeness, and tut wuri handayani.
- b. The goat rowdy model functions in rotation. The function of rowdy goats for people living below the poverty line is as follows:
 - 1) Understanding, namely to help residents understand their own abilities and fulfill their economic needs independently.
 - 2) Prevention, namely to help the population to be able to prevent or avoid poverty.
 - 3) Alleviation, namely to help the population overcome the economic problems of the limitations they experience.
 - 4) Development, namely to help the population develop their potential in raising goats.
- c. The work structure of the rowdy goat model in rotation is as follows
 - 1) If the goat is a female , it is programmed to breed until it gives birth. If there is one cub then the cub belongs to the rowdy and the mother is taken and then passed on to the next rowdy. If there is more than one child, the child is divided into two by the community. If the child is no longer breastfeeding, the goat from the division and its mother are taken and handed over to the next

farmer. If the mother goat is no longer productive, it is sold and the money is used to buy a new goat (rejuvenation) and handed over to the farmer.

- 2) If the goat is a male, it is programmed to be bred/fattened. If it is big/fat and old enough then sell it. Profits from sales are shared with the crowd and the association. The profits and initial funds from procuring the goats are bought again for the feeder goats and then handed over to the next farmer.

- d. The time for implementing the rowdy goat model is staggered

The implementation time for the goat rowing model is staggered for a certain period of time taking into account the potential, talents, interests, development, conditions and opportunities of poor people whose income will be increased by taking into account the growth and breeding period of the goats they borrow.

- e. Implementing the rowdy goat model in turns

- 1) The implementers of the goat rowing model in rotation for the poor are the poor, researchers and PPK SAE.
- 2) Researchers are involved and/or participate in all stages of the goat gaduh implementation activities, starting from planning to evaluating the implementation of the activity.
- 3) PPK SAE assists poor people in raising goats, monitors and evaluates implementation, procures goats and helps implement profit sharing, and rolls it out.
- 4) The rowdy keeps the goats he fights in accordance with the correct regulations, including; (a) provide initial treatment; providing a proper goat pen, providing identification tags, providing vitamins and medicine, providing initial feed and drink, (b) providing daily treatment; provide adequate food and drink, maintain the cleanliness and health of the goats, maintain the cleanliness of the pen and surrounding environment, (c) provide seasonal treatment; giving regular worm medicine, trimming hooves, and facilitating the mating and calving process, (d) carrying out the end of the livestock season; divide livestock products or proceeds from livestock sales, and return the brood goats that are bullied to PPK SAE to be given to the rowgers in the next turn.

4.1.3. Results of the Development Stage

A successful model draft is prepared in the design stage and then implementation procedures are developed. The procedure for implementing the rowdy goat model to increase the income of the poor residents of Sodong Gelangkulon Hamlet is as shown in pictures number 2 and 3 below:

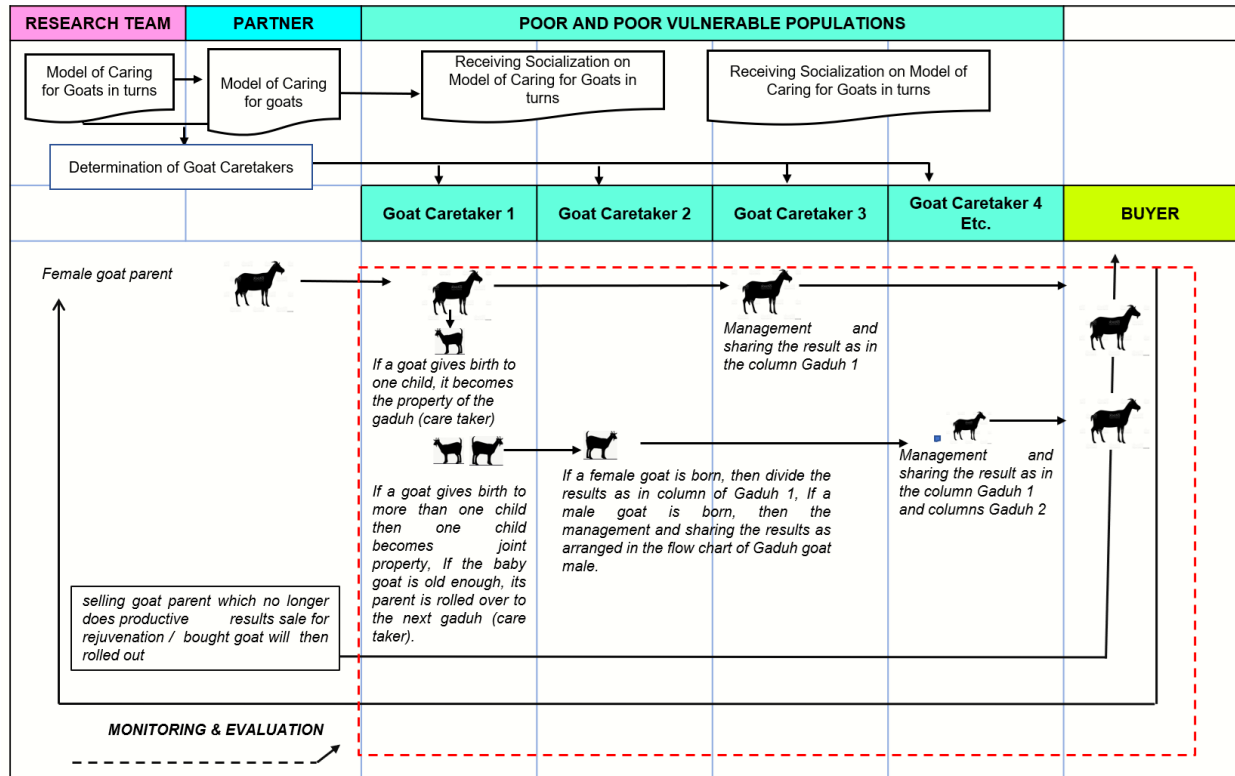


Figure 2.
Gaduh Models of Female Goats in Rotation.

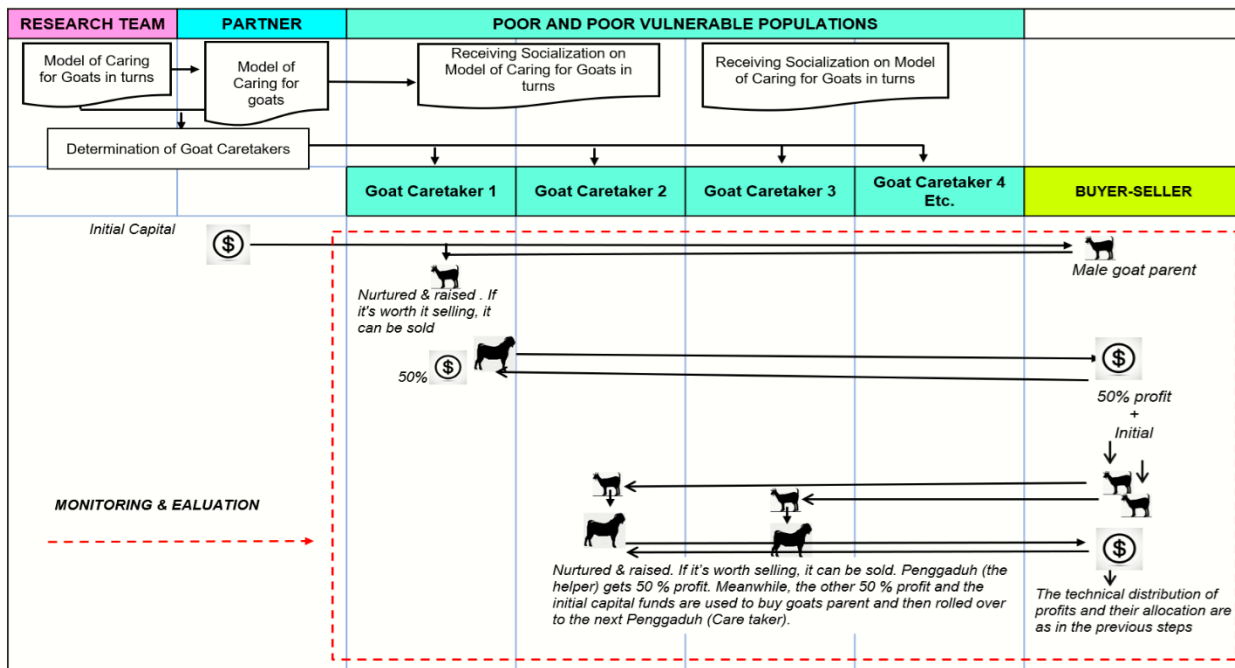


Figure 3.
Gaduh Models of Male Goats in Rotation.

Explanation of pictures number 2 and 3 regarding the procedure for implementing the rowing model of female and male goats in rotation to increase the income of the poor in Sodong Gelangkulon Hamlet as follows:

- a. Socialization of the implementation of the rowdy goat model in rotation to improve the opinion of the poor. SAE researchers and PPK carried out outreach to the residents of Sodong Hamlet regarding the procedures for implementing the goat rowdy model in rotation, the rights and obligations of poor and poor people in implementing the goat rowdy model in rotation.
- b. Preparation of a staging program for goat rearing activities in rotation. SAE researchers and PPK compiled activity programs that will be carried out by the goat raisers, namely initial, daily, seasonal and final treatment of the goats that are raised.
- c. Preparing a place or cage. Researchers provided understanding to the poor residents of Sodong Hamlet about good and healthy places or pens for goats, including the placement of goat droppings and their uses.
- d. Determining the goat rowdy in the first stage or as a pioneer. Researchers together with PPK SAE selected and decided on poor people who would breed goats in the first stage. The determination is carried out by deliberation, taking into account the situation and conditions, as well as the readiness of the prospective goat breeders.
- e. Purchase or procurement of goats. Researchers together with PPK SAE procure or purchase breeding or breeding goats from available funds or those provided by BRIN. SAE researchers and PPK in procuring goats adjust the type of goat that is of interest to potential rowdy (goat type and gender).
- f. Signing of the MoU and handing over of the goats to the rowdies. Researchers as the first party and goat breeders as the second party signed the MOU witnessed by the PPK SAE management. Then continued with the handover of the goats from the researchers to PPK SAE and the goat breeders ..
- g. The farmer keeps the goats as if they were his own. The poor people become troublemakers raising the male goats they fight with or breeding the female goats. In this stage, SAE researchers and PPK provide assistance , monitoring and evaluation.
- h. The distribution of the results makes the goats noisy. The profit sharing from this rowdy model is in the form of baby goats or profits from sales. If it is a female goat that is being fought, it is the offspring that are divided. The conditions; if there is one kid then the kid belongs to the noisemaker, if there are two kids then one tail belongs to the noisemaker and one tail belongs to the community/PPK SAE . If there are three kids then two tails belong to the noisemaker and one tail belongs to the community/PPK SAE. If there is one cub then the cub is given one chance to breed. Meanwhile, the distribution of profits from those who make noise about male goats, namely the profit from the sale (selling price minus purchase price) is divided between the people who make noise and the community/PPK SAE.
- i. Turn the goat to the next rower (second stage and so on). If the baby goat no longer suckles from its mother (separate weaning) then the mother goat (female goat) and the resulting goats are divided by the goats with the goats before they are then transferred (rolled) to the next turn of the goats. This activity continues to rotate continuously. If the parent or female goat is no longer productive.
- j. Sale of unproductive breeding goats and male or male goats. The rowdy told the researchers and PPK SAE that the female goat he was fighting was no longer productive or the male goat he was fighting was no longer suitable for sale. Then SAE researchers and PPK evaluate it and then sell it together with the publisher.
- k. Procurement or purchase of new parent or feeder goats. Funds from the sale of unproductive female goats and initial capital funds when purchasing male goats and funds from profit sharing with male goat breeders are used to purchase new parent or feeder goats. In procuring new broodstock or feeders, efforts are made to increase in terms of numbers, for example the proceeds

from selling 1 head plus the profit from getting 2 broodstock or feeders. Then pass the new breeder goats and feeders to the next rowers. These activities continue to repeat themselves into the community's economic life cycle.

Rowing model that was successfully developed was then assessed or validated by two experts. The two experts, namely; (1) Professor Dr. Parji, M.Pd. (Social science-social welfare field from Universitas PGRI Madiun), (2) Associate Professor Dr. drh. Cicilia Novi Primiani (Veterinary science-livestock cultivation from PGRI Madiun University). The feasibility or validation test will be carried out for one month (October 2023). The average score of the validators is 3.63 when compared with the validity criteria of the rowdy goat model in rotation, which is in the value range 3.1 -4.0= feasible / valid. In this way, the rowing goat model is declared valid and suitable to be continued in the next phase (implementation).

4. Implementation

After being declared feasible by experts to increase the opinion of the poor, the goat rowing model was then tested in practice in the field. After the residents received socialization regarding the implementation of the goat rowdy model in rotation, residents were invited to register as pioneer rowdies or first stage rowdies. The researcher then selected them and determined the poor people who would make noise in the first stage, totaling 24 poor people.

24 poor residents were then given alternative choices of the type of goat they would breed and signed a memorandum of understanding (MoU) regarding their rights and obligations. Next, procure or purchase goats using grant funds from BRIN which will later become an endowment fund belonging to the people of Sodong Hamlet. When purchasing goats there are several things to consider, including; The population's interest in the type of goat that suits the environment of Sodong Hamlet, the gender and age of the goat. The type of goat that is suitable for the ecology of Sodong Hamlet is the Java Randu Goat. Meanwhile, he has entered puberty and the mating period or is 6-8 months old. This is taken into consideration so that the female goats that are stirred up produce or give birth immediately and the male goats that are stirred up are immediately suitable for sale, especially for the need for aqigoh and sacrifice (religious rituals).

Apart from getting their main income as stated above, goat breeders also get additional income, namely wages from looking for food for other people's goats who, for some reason or another, don't have time to find food for their pet goats. Since the poor people have been making noise about goats, many people who are economically well off and keep goats have asked for food to feed their pet goats. Apart from that, goat breeders also get additional income from selling goat dung to the fertilizer industry.

Poor people who raced goats during the goat-fighting period saw their income increase. The increase in income came from wages for finding food for other people's pet goats (not the goats they were messing with) and selling the dung of the goats they were messing with. Increased income occurs every month. This can be seen from the average income before fighting the goats and the income during the goat fighting. If you look at the average income of poor people who breed goats in the 6th month, it is IDR 629,333, meaning their income has increased by IDR 276,500 (78.37 %)

5. Evaluations

Based on the main income obtained by the poor residents of Sodong Hamlet which is obtained from the distribution of profits from the sale of male goats that are rowed, the distribution of baby goats from mother or female goats that are rowed, additional income obtained from wages for finding food for other people's pet goats (not the goats that are rowed) , and the sale of goat dung to fertilizer producers, it can be stated that the model of rotating goat dung is very practical or appropriate for increasing the income of the poor residents of Sodong Hamlet.

6. Discussion

The results of this research indicate that the use of a basic needs approach and a local approach have an important role in the success of implementing the rotating goat gaduh model. The substance of this approach is that through common interests, social problems can be solved by presenting as many community representatives as possible and they are given space to participate [40]. Community participation and shared interests in basic needs are one of the keys to success in alleviating poverty. This is as stated by Amofah and Agyare [41] that sustainable poverty alleviation programs in rural areas will work better if they touch on basic human needs by involving social capital, government, components and supporting capacity in the surrounding environment. So the program will work better in increasing the income of the poor.

The increase in income of the poor residents of Sodong Hamlet is interpreted as new or additional income apart from the income they receive in the form of wages as farm laborers or the results of work in the fields. While working in the paddy fields or in the fields, goat farmers can look for food for the goats they are fighting.

Raising goats is an additional job that generates income and also business capital. This additional income takes between three and five months. This depends on the age of the goat and the type of goat it is fighting.

Goat growth is the same as mammals in general. The male goats that people are interested in are aged 8 to 12 months. This is because goats of this age are considered suitable for consumption, especially in connection with religious ritual activities. Meanwhile, female goats that are ready to be fertilized are goats that have entered puberty. Puberty in goats is a condition where all reproductive organs begin to function so that the mating process in goats can take place. In general, goats reach puberty at the age of 6-8 months [42]. Meanwhile, the gestation period for goats generally lasts 150 days (5 months) with a time span of between 144-157 days [43, 44]. Therefore, if the male goat he breeds is six months old, then after three to four months it will be suitable for sale and consumption. Meanwhile, if the goat he is fighting is female and is six months old, it will take four to five months for the goat to give birth and the goat will get the results.

This model of rowing goats in rotation has a positive value that can predispose poor people to optimize their ability to meet their family's living needs. This is in line with the results of research by Alvarez, et al. [45] that capital assistance can increase human resource capabilities and motivate the actions of aid recipients to change their current conditions towards a better future.

The results of this research signal [46] suggestion that poverty alleviation in developing countries needs to improve governance. Poverty alleviation is not limited to providing financial capital because poverty has multidimensional aspects. The successful implementation of the goat rowing model in rotation to increase the income of the poor involves various components simultaneously. The results of applying this model show that alleviating poverty is not limited to providing capital assistance but also programs to increase the willingness and ability to work, good governance, involvement of social organizations and construction of social safety nets. The results of this research also confirm that poverty alleviation requires a variety of comprehensive and integrated approaches and involves various supporting capacities that are directly or indirectly related to the planned program.

The implementation of the rowdy goat model in rotation produces something positive not only for the poor but also for the wider community. The indications are that residents who are economically well off (rich people) are interested and participate in management. They joined the PPK SAE organization. The social reality that occurs in implementing this model is in line with the opinion of Kamruzzaman [47]. He said that local community participation in the development process, especially poverty alleviation, would be active and effective if the community was given sufficient space in decision making. The community implements this goat rowdy model on a voluntary basis. Poor people are given freedom to participate, choosing the type of camp, dividing or selling the goats they own. Their rights as parties involved in goat fighting were well accommodated, as were PPK SAE and the hamlet community so

that they synergized and participated actively. For example, PPK SAE members actively carry out monitoring and evaluation, as well as assisting farmers in raising goats, including goat health matters.

The involvement of social organizations such as PPK SAE in implementing the rowdy goat model on a rolling basis shows the important role of the existence of social capital in increasing the income of the poor (poverty alleviation) in rural areas. Their role is not limited to assisting, monitoring, evaluating but also procurement of goats, distribution, transfer of goats to the next farmer, as well as building social and sales relationships. These relationships are an important component in economic activity, especially in the entrepreneurial activity sector. This is as implemented in the Agribusiness sector of the South Sekyere District in Ghana [48]. He found that relational social capital had a positive impact in alleviating rural poverty in developing countries. For this reason, the implementation of the goat rowing model in rotation received a positive response and appreciation from the residents of Sodong Hamlet.

7. Conclusion

The rotating goat rowing model has passed expert tests and field or implementation tests. According to experts, the rotating goat rowing model was declared valid and suitable for use to increase the income of poor residents of Sodong Hamlet. Positive results were also obtained from implementation tests in the field that the rotating goat rowing model added value to the income of the poor residents of Sodong Hamlet. The increase in the income of the poor is obtained from sharing the results of young goats from breeding (female) goats or sharing profits from the sale of male goats. Apart from that, poor people who fight goats earn income from selling goat dung and wages for looking for food for other people's goats (not the goats they fight for) because that person does not have time to find food for their pet goat. In a period of six months the average income increased by 78.37 %. Thus, this model of rotating goat rowing is appropriate to use to increase the income of the poor residents of Sodong Gelangkulon Hamlet, Ponorogo.

8. Recommendations

Based on the results of this research, researchers recommend that parties who are concerned with alleviating rural poverty use the rotating goat rowing model. This model can eliminate the weaknesses of the traditional rowdy model. Apart from that, if this noisy model is implemented with greater capital, the income of the poor people who are noisy will get significant results or profits.

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Transparency:

The authors confirm that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained. This study followed all ethical practices during writing.

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