

Transformation of the Governance of the Farmer Groups Association towards Farmer Corporation in The Shalot Area of Solok Regency, Indonesia

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Abstract. The main problem in the development of the shallots business in the Solok Regency production center is the weakness of farmer institutional governance and market access. This article aims to formulate a strategy for the transformation of farmers institutional governance in the direction of the farmers corporate institutional governance. This study was conducted in July-August 2019. The results show that the institutional performance of the farmer groups association is at a medium level measured by the role and business activities, while the cooperative is at a level that is less developed in encouraging the development of farmer institutions towards corporate institutions that ongoing in the shallots agribusiness area. Institutional governance performance of the farmers group association and cooperatives has shown that they have begun to work, but the mechanism of work and coordination has not been effective. Strategies for transformation of institutional governance farmer group association and cooperatives into farmer corporation can be done by adding new structures by participating in integrated agribusiness systems and businesses, expanding market goals and segments, developing new related businesses, and strengthening horizontal corporate institutional governance and horizontally vertical through integrated agribusiness partnership.

1 Introduction

The area of Solok Regency is 3,738 km² consisting of 14 sub-districts and 74 Nagari. The population is 384,091 people, of which 80% of the population works in the agricultural sector, especially food crops, horticulture and plantations. The topography of the Solok Regency area consists of: (a) plain, undulating and hilly. Located at an altitude: 350-1,458 meters above sea level, medium to high plains. To the north it borders Tanah Datar Regency, to the south it borders Pesisir Selatan Regency and South Solok Regency, and to the west it borders Padang City and Pesisir Selatan Regency, to the east it borders Sawahlunto and Sijunjung Regencies. The distance from the provincial capital to Solok Regency is 40 km.

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The central province for shallot production in Indonesia is West Sumatra Province which has consistently been in the 5 provinces contributing to the highest shallot production in Indonesia since 2019, even in 2022 West Sumatra will be the province with the third highest shallot production in Indonesia. The center of shallot production in West Sumatra Province is Solok Regency which consistently contributes most of the total shallot production in West Sumatra Province with an average contribution of over 90%. The shallot harvest area in Solok Regency was 9,223 ha in 2019 and increased to 11,875 ha in 2022, with a productivity level of 11.64 tonnes/ha in 2019 and increased to 15.88 tonnes/ha in 2022. Shallot production in Kab. Solok amounted to 107,378 tons/year in 2019 and will increase to 188,516 tons/year in 2022. The main center for shallot production is in Solok Regency, namely Lembah Gumanti District and Lembang Jaya District, with the dominant variety planted by farmers being the SS Sakato variety. This variety is a local variety that suits the conditions of the highland dry land agroecosystem in Solok Regency [1].

The development of horticultural areas including shallots based on farmer corporations is aimed at [2]: (a) strengthening the bargaining position of shallot farmers, (b) supporting the development of shallot areas based on farmer corporations, (c) strengthening business partnership networks between farmers and business actors, (d) strengthening the provision of agricultural infrastructure, (e) increasing the human resource capacity of farmers and business actors, (f) strengthening the institutions of shallot farmers towards legal entity economic institutions; (g) accelerating the adoption of location-specific cultivation technology, (h) developing upstream and downstream industries; (i) carry out a transformation from knowledge (know-how) to the application of farming practices in the field (know how). Meanwhile, support for production facilities consists of seed business, procurement of production facilities, provision of agricultural tools and machinery, on-farm, processing and marketing of results, as well as supporting service facilities [3].

The government's efforts to develop shallot farming in production centers using an agricultural area approach are aimed at achieving an efficient business scale [4]. The implementation of the shallot corporation needs to be carried out through the following stages [5]: (a) consolidating within a farmer group or combination of farmer groups, (b) transforming farmer institutions towards legal entity economic institutions, (c) consolidating management corporate business on a stretch of land with an economic scale of 50-100 ha, (d) Implementing integrated supply chain management supported by agricultural, post-harvest and processing industry infrastructure, (e) building a harmonious cooperation network, both internally and externally, and (f) building integrated agribusiness business partnerships as a center for business activities and services, and (g) changing marketing strategies from conventional market approaches to digital marketing strategies.

The development of the shallot area in Solok Regency is currently considered not to have been developed in an integrated manner, this is due to [1]: first, the low quality of managing farming efficiently, weak cooperation between agribusiness actors and other rural economic institutions. Second, the low availability of capital and limited access of farmers to financing sources limits the adoption of technology. Third, the lack of availability of advanced technology and limited access for farmers to sources of science and technology and information. Fourth, low capacity of farmers' human resources, both in terms of technical skills for shallot cultivation and managerial capability of farming. Lastly, the weak institutional capacity of farmers and farmer economic institutions means that their role and function as a forum for farmer organizations is not running optimally.

Institutional economics recognizes the neoclassical economic principle of scarcity and the principle of efficiency to overcome it, but differs in achieving economic "balance" [6]. Neoclassical economics achieves efficiency through competition, while institutional economics achieves efficiency through cooperation [6, 7]. Institutions are game rules, norms, prohibitions, contracts in regulating and controlling individual behavior in society and

organizations [8]. The rules of the game function to regulate relationships between humans to prevent the emergence of opportunistic behavior that can be mutually detrimental, so that human behavior in maximizing individual welfare is more predictable [9].

Based on the conditions that occur, it is important to carry out an analysis to see the process of developing shallot farming areas in the district. Solok will then be developed based on farmer corporations, which means there needs to be a transformation of farmer institutions into farmer economic institutions. So, the aim of this research is to analyze the transformation of farmer institution or Farmer Group Association (FGA) towards a farmer economic institution as a prerequisite for farmer corporations in the shallot farming area in Solok Regency and developing a transformation strategy towards a farmer corporation.

2 Material and Methods

Empowering farmers is the key to carrying out the transformation towards a farmer corporation, which is carried out to encourage an increase in business scale so that it is more effective and efficient, increase added value and competitiveness of products and farmers and ultimately is expected to improve farmer welfare through increasing farmer income. The basic principles of farmer corporation-based agricultural area development include [2]: (1) Including national priority commodities and regional mainstay commodities including shallots; (2) Increasing the capacity of farmers' human resources in business processes through modern economic institutions; (3) Pay attention to the direction of regional development and pay attention to agroecological zones (AEZ); and (4) Covers all agribusiness systems and businesses from upstream to downstream.

The research was conducted in two shallot area development sub-districts in Solok Regency, namely Lembah Gumanti and Lembang Jaya Sub-districts. The case study approach method involves in-depth interviews with a combination of farmer groups and farmer economic institutions. The farmer institutions interviewed consisted of 2 Farmer Group Associations (FGA) in the Gumanti Valley and Lembang Jaya and one cooperative institution in the Gumanti Valley. Apart from that, a Focus on Group Discussion (FGD) was carried out with members of farmer groups and actors in the shallot commodity supply chain. The smallest research units are local institutions related to the shallot area development program and farmer companies. Data collection was carried out in August 2019 which included quantitative data and qualitative data.

Quantitative data to answer what, when, and when questions; Meanwhile, qualitative data can answer why and how. Interviews were also conducted with farmers, collecting traders, inter-regional wholesalers and retail traders in the market who were thought to be able to explain the flow of shallots in Solok Regency. Data analysis was carried out descriptively quantitatively and qualitatively to analyze the institutional transformation of farmer groups and cooperatives towards farmer corporations. Transformed factors include institutional goals, institutional structure, roles or functions, business activities, products produced, and market goals.

The institutions included in the institutional transformation analysis are farmer groups, farmer group associations, and farmer cooperatives. Analysis of the three institutions includes structure, function or role, compatibility between structure and role, internal and external coordination systems. Apart from that, it is also studied regarding technical and management assistance in developing farmer corporations so that the results are expected to be a good framework for the transformation of traditional institutions towards modern economic institutions [10]. Farmer groups are farmer institutions that do not yet have economic activities so they focus more on agricultural cultivation, so the data analysis and transformation process will focus on farmer economic institutions, namely FGA and Cooperatives. The process of transforming FGA and cooperatives into farmer corporations

in Kab. Solok is expected to provide an overview of the formation of farmer corporations, especially in strengthening the development of integrated shallot areas from upstream to downstream and involving farmers through farmer consolidation.

3 Results and discussion

3.1 Farmers' Group and cooperative institutional performance

Competence is a determining factor for the institutional success of FGAs and cooperatives in carrying out their roles and functions [11]. Competency consists of aspects of technical skills, managerial capabilities, business experience and length of education completed. Thus competence determines the performance, independence and sustainability of an organization [12]. The aim of establishing the FGA and Cooperative in Solok Regency is to strengthen the structure and institutional role of farmers through technical and management guidance in business management from the government to farmers focused on certain target groups. The results of the empirical study show that FGA institutional development in the shallot area in Solok Regency is still based more on strengthening horizontal ties than vertical ties. This causes the business being developed to still focus on strengthening the shallot cultivation business and has not touched on many other activities, including seeding, processing and marketing activities. However, in Lembag Gumanti and Lembang Jaya sub-districts, several farmer groups and farmer group associations were found that were oriented towards the production of SS Sakato red onion seeds, post-harvest handling with the help of storage warehouses and processed processing such as fried onion products, joint or collective marketing, and development of agribusiness partnerships.

The FGA institution developed in Solok Regency is relatively uniform, namely that it was developed using a subsector approach, which means that each FGA is not business oriented in the agribusiness system, but some others have used an agribusiness approach. The formation of farmer institutions, both poktan and FGA, is generally carried out to make it easier to receive assistance, especially government assistance, and is not based much on farmers' needs or awareness of the importance of farmer institutions in business. This causes a lack of awareness regarding the development of human resource capacity, strengthening institutions and empowering agricultural communities.

Strengthening the agribusiness system in the shallot area in Solok Regency is still weak, because most of the FGA organizational structures that have been formed are based on the agricultural subsector and not on an integrated agribusiness system. This condition illustrates that there is not yet integration between activities and between actors in the shallot agribusiness system.

Other institutions in the agricultural sector besides farmer institutions are farmer economic institutions, one of which can be in the form of cooperatives. Cooperatives operating in the agricultural support business sector are farmer economic institutions whose presence is expected to develop farmer businesses. Some of these cooperatives can be formed from farmer institutions that are transformed into Agribusiness Microfinance Institutions (AMI). In its development until 2020, there are around 52 thousand farmer group institutions that have received a Rural Agribusiness Development (RAD) budget allocation of IDR 100 million/unit. The results of empirical studies show that only around 7,000 units have successfully transformed into Agribusiness Microfinance Institutions (AMI) [13]. This program is intended as an effort by the government to provide initial capital to farmer groups to start farming activities. This is based on the idea that one of the government's responsibilities is to provide funds for the protection and empowerment of farmers by establishing banks and farmer microfinance institutions [14]. AMI in Solok Regency, West

Sumatra is mostly managed in the form of savings and loan cooperatives, multi-business cooperatives, and sharia savings and loan systems or profit and loss risk sharing systems.

Extension and training activities for farmers in developing shallot areas based on farmer corporations are carried out with a mentoring approach by agricultural extension workers [13]. Extension and training methods are carried out using individual, group and mentoring approaches through direct practice in the field. Meanwhile, the duties and functions of newly formed cooperatives are still very limited, especially in the activities of providing seeds for the SS Sakti variety, marketing seeds, savings and loan activities for members, and processing fried onions.

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Activities are carried out at institutions, both FGA and Cooperatives in the area. Solok regency is more oriented towards providing supporting facilities and infrastructure, this can be seen in the use of seed technology, cultivation activities, post-harvest handling and shallot processing. Activities carried out include providing assistance with production facilities and infrastructure, such as shallot seeds, assistance with organic fertilizers and chemical fertilizers, assistance with tools and machines, assistance with warehouses, and assistance with business capital. The development of FGAs and cooperatives has not been oriented towards increasing human resource capacity, strengthening farmer institutions and empowering farming communities more broadly.

The development of FGA, which received capital through the RAD program, is still continuing to this day. The sustainability of institutional development carried out by FGA recipients of RAD shows the successful use of RAD funds for both cultivation and non-cultivation activities, capital sources through RAD funds which are managed using a savings and loan system by developing AMI. This activity has been going well, but business processes, business networks and product downstream need to be developed in stages and in an integrated manner. On the other hand, cooperatives, which are expected to be able to carry out their role as farmers' economic institutions, have not yet built networks or integrated relationship patterns with actors in agribusiness such as shallot traders and have not involved the local Cooperatives Service to foster cooperative development. The importance of sharing roles in the business process between FGA, cooperatives and existing trading players in the shallot area so that healthy competition and harmonious cooperation can be built.

Perspective of institutional development carried out in the shallot area Solok Regency, both FGA and cooperatives, are still taking a structural and short-term approach. The development of farmer corporation-based areas, which is currently the focus of government attention, is an opportunity to transform FGA and cooperatives into farmer corporation institutions that are legal entities with good governance institutions, professional management and supported by quality human resources. Experience of success in transforming FGA into a microfinance institution, supported by human resources who master administrative and financial management, as well as an entrepreneurial spirit possessed by its managers.

In achieving the goals set by FGA and the Solok Regency Shallot Area Cooperative, they have carried out productive economic business activities such as shallot seed farming, shallot cultivation, collecting traders, fried onion processors, shallot distributors. Apart from that, it has a savings and loan business unit managed by FGA or cooperative. This business activity is increasingly developing with the RAD program which provides funds of IDR 100

million/FGA which has now increased to around IDR 137.5 million/FGA. Available funds can be a source of capital for farmers, supply chain actors and fried onion processing businesses by borrowing and returning them according to predetermined agreements. This savings and loan activity has become a microfinance business unit, whether still managed at FGA or managed in the form of a cooperative, which can develop and increase available funds.

Unit pengadaan sarana produksi khususnya penyediaan benih shallot varietas SS Sakto yang disediakan oleh koperasi dan Varietas Bima Brebes diadakan langsung dari Brebes yang keduanya merupakan benih variatas unggul. Apart from providing seeds, providing subsidized fertilizers, pesticides, building warehouses for storing shallots and drying them.

The development of the shallot area in Solok Regency also received support from various parties, such as assistance with 3 storage units from Bank Indonesia and 3 drying units from the Ministry's Directorate General of Infrastructure and Facilities. Apart from that, the Ministry of Agriculture also provides assistance with seeds, mulch, solid organic fertilizer, liquid biofertilizer, biopesticides, yellow sticky or pest traps, and BWG pheromones. It is hoped that the assistance provided can strengthen the cultivation efforts carried out by farmers who are members of the farmer group and FGA as well as cooperatives, so that they can develop their farming businesses well and obtain optimal results both in terms of quality and quantity.

Shallot processing business units have been developed in the form of fried onion products, both by individuals and by cooperatives, although in limited quantities. Post-harvest activities and marketing of fresh shallot products are carried out by farmers as producers, farmer group marketing units, as well as inter-regional collectors and wholesalers. Shallot product processing activities are carried out by cooperatives in Lembah Gumanti District, while the household processing industry is more developed in Lembang Jaya. The development of the processing industry faces capital and product marketing constraints, so further product development and promotion activities for processed shallot products are needed, as has developed in Malang, East Java and Manado City, North Sulawesi.

Marketing activities for shallots, both fresh and processed, are still mainly carried out by inter-regional wholesalers with increasingly wider market targets, such as the cities of Padang, Bengkulu, Jambi, Riau and Lampung. It even temporarily supplies Jakarta. However, existing cooperatives have initiated joint marketing business units for shallots by carrying out joint marketing, but have experienced many obstacles. The main obstacles faced are limited capital, post-harvest facilities and infrastructure, and modes of transportation. Limited capital and technology result in a low bargaining position in the negotiation process with other parties, especially intermediaries [15].

Another problem is the lack of support from inter-regional wholesalers for the existence of cooperative institutions. This is due to concerns that they could displace the trading business they have been running. Therefore, it is necessary to coordinate and reorganize the roles and functions of each actor so that marketing activities through cooperatives and wholesalers between regions can be harmonized. This shows that the role of existing institutions, especially cooperatives, is not yet optimal in marketing efforts so that cooperative business development is not yet visible in the agribusiness system but only focuses on supporting services in the form of providing capital, while FGA focuses on cultivating and providing facilities and infrastructure for shallot cultivation.

Based on the activities carried out by FGA and cooperatives which have been quite successful in running their businesses, they have been able to increase RAD's capital-generating capacity from IDR 100 million to IDR 110-137.5 million through the development of productive economic activities. Therefore, the transformation of FGA and cooperatives into farmer corporate institutions is highly expected so that farmers can develop their businesses together and collectively from upstream to downstream, empower farmers and

facilitate marketing and capital so that in the end they can increase farmers' income and welfare.

3.2 Factors that need to be transformed

Business processes are an important element in carrying out business functions in a business organization to achieve success and sustainability [13], so that the shallot business process really determines the running of shallot businesses in FGA and cooperatives in shallot areas, especially in carrying out institutional transformation towards farmer corporations. Proper management of business processes in the shallot area can improve the performance of farmer institutions and the economic institutions of farmers and supply chain actors [16] and in the context of the shallot area [4]. It can be concluded that business processes are an important concept in facilitating effective collaboration in the shallot area in an integrated and sustainable manner [17,18].

Business processes can be carried out by one business organization in an integrated upstream to downstream manner and/or carry out business collaboration with several other business actors in a coordinated manner [19]. The shallot business process in Solok Regency involves various members, namely shallot farmers, shallot growers, traders at the village, sub-district, district and inter-regional levels, as well as the shallot processing industry. The shallot business process also requires the support of supporting services to facilitate activities in it such as the availability of land, agricultural facilities and infrastructure (pre-planting, cultivation, post-harvest), agricultural tools and machinery and even a logistics system for distribution of the products produced. The current condition is that business activities carried out by each supply chain actor are still running separately or with partial action, making it difficult to develop and be sustainable. This problem is caused by a lack of coordination between agribusiness supply chain actors. This causes the institutional structure in the shallot agribusiness area to become weak and the linkage of supply chain management to become fragmented so that it is less able to create added value and sustainable competitiveness [20].

Increasing human resource capacity and strengthening management institutions in the shallot area must be carried out in an integrated manner, because the two interact with each other and have an impact on collaborative behavior through the learning process [21]. This shows the importance of a holistic approach in developing human resource capacity within shallot area management institutions. Both contribute to the development of skills and knowledge needed for collaborative action to increase the effectiveness of efforts to improve collaborative behavior in shallot area management institutions. Therefore, in developing shallot business processes, it is necessary to increase the capacity of human resources as actors and managers of business processes designed to carry out a business activity.

The principles of effectiveness and efficiency in business are also applied in the shallot business process designed within the farmer corporation. The business processes designed need to consider logistics costs and the cost structure of each stakeholder, so that cost reduction measures need to be identified that can be implemented [13] in every process carried out. Based on this approach, the development of farmer corporations can be interpreted as developing a business model through organizing and consolidating farmers, agribusiness business activities and institutions/management to meet economies of scale and integrate with other business actors from upstream to downstream to produce quality products, creating added value, and competitive in the market.

The transformation from traditional farmer institutions to modern farmer economic institutions must be carried out through a mature social process. There are at least several important factors that need to be considered in order to carry out an institutional transformation strategy towards a farmer corporation. Farmer institutional factors that need

to be transformed into existing conditions, the factors to be transformed and the direction of transformation are presented in Table 1 below [13].

Table 1. Transformation of farmer institutions from existing conditions to farmer corporation institutions in the shallot area, Solok Regency, West Sumatra, 2019.

Existing Condition	Transformed factor	Forward transformation
Short-term goals: increasing shallot production	Farmers group association goals	increasing production, product quality and added value of products
Economic profit oriented	Cooperative institutional goals	economic profit oriented, income equality within member of cooperative
has a business unit with a subsector approach	Organizational form Farmers group association	Farmer-owned enterprise with consolidation in an agribusiness system approach
Only has one business unit: savings and loans business unit	Agribusiness microfinance institutions Organizational business unit	To be a primary cooperative that manages upstream and on-farm businesses, not just savings and loan business units
Legally incorporated farmer cooperatives with limited business activities	The role played by cooperative institutions that exist in the Shallot area	Secondary cooperatives are legal entities that manage agricultural equipment and machinery services, harvest activities, post-harvest activities, product processing, as well as distribution and marketing
There is no clear division of tasks and functions based on organic work specialization and human resource competency	The tasks and functions of each organizational section in farmer institutions in the shallot area	Have a clear division of tasks and functions based on work specialization and human resource competency
The coordination system is carried out verbally and in writing which is not effective in conveying messages and getting feedback	The coordination system is good internally between parts of the institution and externally between institutions in the Shallot area	A more effective internal coordination system between departments within institutions and externally between institutions through internet and things (IoT) information and communication, online systems, such as WA, Telegram and virtual groups
Agribusiness systems and businesses are still partial and fragmented based on sectors or subsectors	Types of business activities, business processes and business management	Integrated upstream-downstream agribusiness systems and businesses oriented towards meeting consumer needs with more complete and detailed attributes
Productivity growth comes from science, technology and innovation locally with limited acceleration	Source of science, technology, and innovation	Sources of information on science, technology and innovation come from global knowledge, precision agriculture and industry 4.0 which are able to accelerate productivity growth and product downstreaming.
Microfinance serves farming savings and loan services using conventional systems and procurement of production facilities	Savings and loan services business, agribusiness microfinance institutions/primary cooperatives	Primary Cooperative Institution to serve savings and loan services businesses using conventional systems, sharia systems, procurement of

Existing Condition	Transformed factor	Forward transformation
		production facilities, and other business activities
Farmer cooperatives whose economic institutions are unclear in form and function	Farmers' economic institutions are in the form of farmer cooperatives in the shallot area	Secondary cooperatives can be in the form of agribusiness cooperatives or all-business cooperatives
Human resources have low technical skills and low managerial capabilities in the Shallot area	Competence of human resources management managers in the Shallot area	Competence of highly skilled human resources and high managerial capabilities in the Shallot area
Inappropriate governance system for shallot areas	Business governance system in the shallot area	Good and appropriate governance system in the shallot area
Raw material products have low added value and do not have competitiveness in the market	The final product produced	Intermediate products and/or final products that have high added value and high competitiveness
Product marketing strategies tend to be conventional with market objectives and limited market segments so prices are unstable	Marketing strategy for the produced shallot products	Marketing strategies with conventional patterns and digital marketing with online and e-commerce systems with broader market goals and segments so that prices are more stable
Transaction patterns between sellers and buyers are individualised in the form of general trading patterns that are only orientated towards local, regional and domestic markets.	Patterns of business relationships between business actors	Developing an integrated agribusiness partnership pattern, competitive and sustainable with regional, domestic and global market orientation

3.3 Strategy For Institutional Transformation Towards Farmer Corporation

The agricultural sector has a strategic role in providing food for the population and in providing employment opportunities in rural areas [22]. The strategic horticultural commodity development program through advanced innovation and adaptive institutions is a key success factor in transforming the Petanu economic institutions in the shallot area in Solok Regency. Economic transformation in the development of shallot areas is carried out using a farmer corporation approach which is carried out by consolidating farmers, land, management and business. The fundamental difference between agricultural corporations and individual farms lies in several aspects, such as professional management, cooperation rather than individual work, optimizing the use of agricultural tools and machinery, influential actors in the communication network can take a role as drivers in accelerating the dissemination of information and the retrieval process good and appropriate decisions [23].

The institutional conditions in the red onion area of Solok district still require strengthening in several aspects so that the institutional transformation process into a farmers' corporation can be carried out well. For this reason, an institutional transformation strategy is needed in farmer institutions and farmer economic institutions. Furthermore, the limited area of agricultural land control is also an obstacle in business development and business continuity. The farmer corporation development strategy can be an alternative to increase production, productivity, increase the income of farmers and supply chain actors [24] through horizontal ties or the common goals of their members as well as vertical ties with other stakeholders to carry out business processes designed in integrated agribusiness system.

3.3.1. Farmer's Group transformation strategy

Based on institutional conditions in the shallot area, Solok Regency and his hopes that in order to develop shallot areas based on farmer corporations, an institutional transformation strategy needs to be developed. This transformation is important as the key to the success of forming a farmer corporation. The Association of Farmer Groups is a farmer institution that can transform to support the development of farmer corporations in the shallot area in Solok Regency. The strategy that can be implemented is as follows: First, add a new organizational structure in the form of a productive economic business unit. This business unit can be an additional business unit or a new business unit, such as a business unit for procurement of inputs, especially seeds and fertilizers, cultivation business activities, and post-harvest handling. The performance of a business organization is a very complex concept which is influenced by various factors, both technical, economic and socio-institutional factors [25]. The addition of a new organizational structure must be supported by skilled human resources and high managerial capabilities.

Second, improving the institutional governance of the Association of Farmer Groups in the shallot area in Solok Regency so that the basic tasks and functions are strengthened more clearly. Institutional strengthening focuses on aspects of administration, financial management and productive economic business management. It is hoped that improving the governance of business organizations can improve performance, profits and business sustainability [26].

Third, reformulate the vision, mission and objectives of establishing FGA. The reformulation carried out was based on a joint agreement between the management and members in accordance with the role and function of FGA in the farmer corporation business process. Steps that can be taken to reformulate are as follows: (a) formulate institutional goals clearly and measurably; (b) development of productive economic business groups, including the business of procuring quality shallot seeds and excellent post-harvest handling; (c) providing benefits of added economic value and providing extensive employment and business opportunities; and (d) increase the income of farmers, packing houses, traders and industries processing products made from shallots.

Fourth, strengthening horizontal ties. So far, horizontal ties have been built only between member farmers or between member farmer groups and have not been implemented between FGAs within a sub-district or even across sub-districts. Horizontal ties are built based on the same goals in developing the business carried out, so that farmer consolidation within FGA can be carried out. Furthermore, consolidation of management of both land and business can be carried out between FGAs. The consolidation carried out can strengthen the horizontal ties that are built so that each has a role in the farmer corporation and has interests and benefits from the business development carried out.

Strengthening horizontal ties between farmer institutions at the same level aims to strengthen the bargaining position of farmers and business actors in the shallot area through joint production and marketing planning activities that are based on meeting consumer needs and market demand dynamics. FGA activities through LKMA are positioned as additional activities and not main activities, but rather production support activities which are FGA's main focus. The existence of AMI, which is developing in FGA, can be transformed into a primary cooperative where one of the business units is savings and loan activities, while other business units can be the management of business activities in the on-farm subsystem, such as: the business of procuring quality shallot seeds, the Equipment Services Unit and Agricultural machinery, shallot cultivation, and post-harvest handling of shallots are prime to produce quality onion products.

3.3.2. Transformation strategy of cooperatives toward farmer corporations

Cooperatives in farmer corporations can be formed from FGA which transforms when it has a business unit that is considered to be performing well, such as AMI. Farmer Group Association has a savings and loan business unit through AMI in the Shallot area in Solok Regency was transformed into a primary cooperative. The management of the AMI has performed quite well because it has become a savings and loan institution that is active in providing capital for member farmers, especially shallot farmers. Agribusiness Microfinance Institutions, which are mostly in the form of Notarial Deeds, can be transformed into a legal entity primary cooperative institution whose operationalization can take the form of a farmers' cooperative. The institutional form of primary cooperatives was chosen because primary cooperatives can further strengthen horizontal ties and build farming businesses, especially businesses carried out by farmers in the on-farm aspect of providing pre-planting and post-harvest facilities and infrastructure.

Meanwhile, existing cooperatives in the shallot area at the Solok Regency level can be transformed into secondary corporations. Operationally, secondary cooperatives can be implemented in the form of shallot agribusiness cooperatives. There must also be differences in the type of business carried out between primary and secondary cooperatives, so that these two cooperatives support each other. Primary cooperatives carry out seed business activities, cultivation activities, as well as post-harvest handling of shallot product processing, while secondary cooperatives can have businesses that are more capital intensive such as shallot processing, shallot exporters, shallot marketing which has a wider reach.

Cooperative institutional transformation in farmer corporations can be carried out by adding new organizational structures or strengthening existing organizational structures. The transformation of an AMI into a primary cooperative or primary cooperative into a secondary cooperative can be done by adding new structures, such as adding divisions or business units. Management restructuring can be carried out to strengthen the organizational structure to adapt to the business being developed and to meet the requirements for establishing a good cooperative such as a supervisory board, auditing body, cooperative administrators such as chairman, secretary, treasurer, cashier/teller, apart from that a manager can be selected for each business unit formed such as marketing and collection, cultivation, infrastructure and financing or savings and loans. Secondary cooperatives, which in their implementation can be in the form of agribusiness cooperatives, can carry out capital-intensive business activities, such as agricultural equipment and machinery service businesses, transportation or logistics service businesses, processing and marketing of shallot products.

In order to carry out its business activities, an Integrated Agribusiness Partnership Institution (KUAT) can be formed as a bridge that moderates primary upstream cooperative business activities with secondary downstream cooperative business activities, as well as moderating the role of processing companies in accessing markets to various destinations and broader market segments. Business processes that clearly describe the roles between farmers, farmer groups, FGA, primary cooperatives and secondary cooperatives or companies can maintain the sustainability of the respective businesses that have been built and there is continuity in the pattern of relationships with one another. This established pattern causes the growth of independence and entrepreneurship of members in the agribusiness system which is formed naturally due to the need to carry out their respective roles.

Institutional transformation steps through the addition of a new organizational structure must pay attention to developments in farmers' institutional performance and future business process plans, such as designed business processes, built business models, financial capabilities, managerial capabilities, quality of managing human resources and level of member participation. Therefore, strengthening the existing institutional structure can be focused on aspects of organizational structure, main tasks and functions, agribusiness business partnerships and building work networks [13].

Apart from strengthening or adding new structures, a strategy that can be implemented is strengthening access to financing sources. One of the obstacles to developing cooperatives in Indonesia is the limited capital for cooperatives to develop potential businesses, so structural breakthroughs are needed [27]. The existence of the RAD can be a breakthrough source of capital for farmers, so that FGA can establish AMI. Rural Agribusiness Development funds amounting to Rp. 100 million, which was originally used as capital for the FGA savings and loan business unit, continued to grow to approximately Rp. 110–137.5 million and experienced an expansion in the goals to be achieved and transformed into a cooperative. Initially the cooperative only served FGA members and focused on horticultural farming, then expanded to serve outside members so that it could be accessed by supply chain actors from upstream to downstream.

Secondary cooperatives in the form of agribusiness cooperatives can obtain capital allocations not only from members, but can access government programs, People's Business Credit (KUR), LPDB of the Ministry of Cooperatives and Corporate Social Responsibility (CSR) sources for Micro, Small and Medium Enterprises (MSME), State-Owned Enterprises (SOEs) and the private sector. The ability to access sources of financing for cooperatives is certainly inseparable from the ability of human resources who have the capability and entrepreneurial spirit to see existing opportunities. Cooperative managers must be able to increase their creativity to find new breakthroughs so that they can increase their capabilities and access to financing which is often an obstacle that makes it difficult for a cooperative to develop.

Future strategies that can be implemented by agribusiness cooperatives can be carried out by strengthening horizontal work networks, namely building relationships between institutions at the same level to strengthen the production base that can meet the dimensions of quantity, quality and continuity of shallot supply. The cooperative that has been formed in the shallot district. Solok, has a management consisting of joint FGA administrators and members from joint FGA members. However, the existence of linkages or consolidation of farmers through FGAs and combined FGAs does not guarantee that cooperative management can run well even though there are similar goals or horizontal linkages. Problems that occur that cause cooperatives to not develop well include 1) the ability or capability of the human resources management which is still low, both technically and managerially; 2) lack of assistance from the government; 3) there is no synergy or partnership pattern built with existing business actors; 4) lack of awareness among members in actively participating in building cooperatives; 5) the business processes and business models that will be developed have not been prepared; 6) the division of roles between administrators, members and other actors in the agribusiness system is unclear; and 7) has not yet fully provided optimal incentives to farmers who have been using it [28].

Cooperative management is not carried out professionally, due to the limited capacity of the management staff. The selected management is not experienced in administrative and financial management so that cooperative management is not carried out well. Apart from that, the establishment of cooperatives often does not receive support from existing stakeholders, they are worried that the existence of cooperatives could shift their position in the shallot business in the shallots area Solok Regency. Thus, the existence of both primary and secondary cooperatives cannot be developed without paying attention to the social conditions of the local area. Pre-existing business actors must be consolidated in a business system or process that is designed so that businesses built in the shallot area can run harmoniously in society through a fair distribution of roles.

Future strategies that can be implemented are additional business activities, both upstream and downstream. The addition of business activities is based on the fact that the majority of business units in cooperatives are still limited to conventional savings and loan systems. In the future, credit products that can be developed will not only be limited to conventional

credit systems, but can include sharia credit systems and online credit systems. These various credit schemes need to be supported by the technical skills of computerization and the managerial capabilities of the human resources who manage them so that they can be successful in their distribution, use and return. Primary cooperatives can even develop other businesses according to members' needs or according to market potential needs, such as business development in the upstream subsystem. Business units that can be developed are seed businesses, production facilities procurement businesses, organic fertilizer manufacturing businesses, cultivation businesses and post-harvest handling business units.

Meanwhile, in secondary cooperatives, the development of business units that can be carried out includes agricultural equipment and machinery services businesses, product processing businesses, marketing shallot products, as well as integrated agribusiness business partnership units. Determining the business that will be carried out in the designed business process is an important factor by considering market needs in addition to increasing business competition. Therefore, the marketing pattern that is carried out also needs to be changed from general trading pattern transactions towards business partnership pattern transactions so that it is hoped that it can encourage free marketing to switch to a marketing contract system strategy. Apart from that, it is necessary to introduce digital marketing development through e-commerce development [29]. A harmonious relationship between farmers as producers, suppliers as producers of results who moderate the interests of farmers and super markets or hyper markets, and consumers as customers is expected to increase the integration of product processes and integration between supply chain actors from upstream to downstream [30]. It is important to implement a partnership pattern, so that you can determine the production planning pattern well, understand the scope and ability to fulfill market demand as well as provide market guarantees and price certainty for farmers.

The institutional transformation of cooperatives from FGA which already had an AMI to primary cooperatives and the formation of secondary cooperatives caused a shift in the level of institutional autonomy in Solok Regency, West Sumatra Province. The AMI business unit, which was previously a business unit under FGA, after being transformed into a primary cooperative institution, received full autonomy in financial management under the cooperative, which was handled by professional managers and employees who were skilled in administration, financial management, as well as mastering information technology and communication. Meanwhile, cooperative institutions that have been formed can be transformed into secondary cooperative institutions with legal entities in the form of agribusiness cooperatives that control upstream and downstream business units. [14]. Conducive business and entrepreneurial ecosystem support is needed for the transformation of farmers' economic institutions. Apart from that, the entrepreneurial spirit possessed by the manager can determine how fast or slow the institutional transformation will be towards a successful farmer corporation. The higher the entrepreneurial spirit possessed by an administrator, the higher the ability to see opportunities, so that the institution can develop more quickly.

4 Conclusions

The results of the institutional performance of the Association of Farmer Groups and Cooperatives are at a moderate level in supporting the development of shallot farmer corporations. This is based on the activities carried out in each institution which are still isolated and not yet coordinated in an integrated manner from upstream to downstream. Activities carried out by institutions that have been established such as FGA and cooperatives have been running well, because they have carried out their main business, but in terms of organizational management, supporting institutions and work methods are not yet effective. This is indicated by the existence of an organizational structure and division of roles or

functions within the organization, but the coordination system between stakeholders is not yet effective, both internal coordination and external coordination, so that the performance and development of business units is not as expected.

Based on the results of the study, it is considered strategic to build agribusiness partnerships that need each other, strengthen each other, need each other and are integrated upstream to downstream to encourage product process integration and integration between business actors so as to create added value and competitiveness of Solok Regency shallot products.

The institutional transformation strategy for both the Association of Farmer Groups and Cooperatives into farmer corporate institutions in the shallot area of Solok Regency is as follows: (a) formation of farmer corporations in the form of primary cooperatives and secondary cooperatives from the perspective of agribusiness cooperatives; (b) Adding a new organizational structure by following upstream-downstream agribusiness systems and efforts; (c) developing an upstream-downstream business partnership unit that moderates product process integration and integration between supply chain actors; (d) strengthening access to various sources of financing to strengthen developed business units, especially upstream and downstream activities; (e) carry out horizontal institutional consolidation to increase the quantity, quality and continuity of shallot supplies; and (f) business development can be carried out by expanding and deepening new business activities, both upstream, on-farm and downstream business activities so as to increase added value and product competitiveness.

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