

The characteristics and potential of the chrysanthemum commodity business and supporting institutions

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Abstract. The determining factor for the success and sustainability of chrysanthemum agribusiness development is largely determined by the optimal supply chain of the commodity. This study aims to elaborate the strategy for optimizing the supply chain of chrysanthemum agribusiness in Tomohon City, North Sulawesi Province. The research was conducted in September – December 2021, using surveys and FGDs involving farmers and business actors in deliberately selected locations. The data and information collected includes the characteristics and potential of the chrysanthemum commodity business and supporting institutions. In addition to primary data, secondary data from related agencies and results of literature studies were also collected. The collected data were analyzed using supply chain and value chain analysis. The results of the analysis show that the development of agribusiness and supporting institutions in Tomohon has the opportunity to be improved. One of the supply chain optimization strategies can be done with adaptive technology intervention, implementing low-cost strategies, product specifications and quality improvement.

1 Introduction

According to [1-3] that the supply chain is a new concept in implementing an integrated logistics system, which means describing a series in the form of goods/physical circulation, information, as well as processes that used in the delivery of products or services from the source location (supplier) to the destination location (consumer). Business processes in the supply chain are also important in relation to the increase in economic added value that will be obtained from product distribution to consumers [4-5].

The supply chain integrates a group of processes for sourcing, manufacturing, and delivering products [6]. This means that the supply chain is all activities that are integrated between: sourcing, production processes, and product delivery. The supply chain is not only related to increasing added value, according to [7] and [8] that the supply chain is also related to efforts to meet consumer demand, increase competitiveness, profits, and build good relations between actors. in the supply chain. In the supply chain discussion, it is not

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only concerned with the production process, but also building coordination and collaboration with other actors in a series of supply chain activities.

The states of [9] that supply chain operations, and even their effectiveness are not only determined by suppliers, but also depend on several aspects, namely the condition of distributors, warehousing, retailers and even consumer needs, so that the scope of the supply chain is composed of several aspects:, namely logistics, strategic planning, information technology, marketing and most importantly financial matters.

Chrysanthemum agribusiness, the supply chain of which reflects flow and transformation. The series of chrysanthemums includes the stages of providing plant seeds to the final product in the form of flowers to consumers [10]. Chrysanthemum supply chain management is different from the supply chain management of other agricultural commodities, because of the nature of chrysanthemum flowers that are easily wilted or easily damaged. If the selling price of chrysanthemum flowers is relatively low, then it is a reflection of supply chain performance that has not been optimal. If these conditions are not handled properly, it will have a negative impact on the income of chrysanthemum farmers so that the sales of chrysanthemum flowers cannot cover the production costs that have been incurred [11]. To face the challenges of developing chrysanthemum agribusiness in the future, the role of chrysanthemum agribusiness is increasingly important. The institutions developed are no longer limited to normative institutions but also need to accommodate and adapt prospective institutional approaches, namely in the form of institutional economics.

According to [12] that institutional economics is a branch of economics that studies the influence and role of formal and informal institutions on economic performance, both at the macro and micro levels. The development of chrysanthemum agribusiness certainly requires institutional innovation support, this is considered crucial, in order to be sustainable, institutions are needed to manage sources of interdependence between participants, encourage efficiency, supply chain and value chain effectiveness and create equity.

Institutional can also be interpreted as the rules of the game adopted by a group of people in conducting transactions with other parties [13][14]. Institutional can also be interpreted as an institution, organization, or network of organizations formed with a specific purpose [15-17].

There are many terms about institutions, so [18] states in general that institutions are a set of networks of social relations that involve certain people, have certain goals, have rules and norms, and have a structure. The existence of this institution in an activity has a fairly important role, including in agribusiness activities. The success of agribusiness is not only determined by the support of technical factors. Other institutional supporting factors are also very important, such as whether or not members of farmer groups are active, capital support and facilities and infrastructure support. Thus, the institutional aspect becomes a key factor in the sustainability of activities. The problem lies in how to manage or institutional governance. If the main actors and agribusiness actors can optimize the role of institutions, then the impact will accelerate the dissemination of introduced innovations. This means that if what is being introduced is plant varieties or seed innovations, then agribusiness will run more effectively.

2 Methodology

2.1. Method

The research was conducted in September - December 2021, in North Tomohon District, Tomohon City which is known as one of the centers for producing chrysanthemums in

North Sulawesi, as well as a Special Floriculture Agribusiness Development Area (KKPAF) for Eastern Indonesia [19]. Method of data collection was collected by means of surveys and FGDs involving agribusiness actors in locations selected purposively based on the potential carrying capacity of chrysanthemum development.

2.2. Data collection and analysis

The data used in this study is primary data from respondents as many as 30 chrysanthemum farmer households in the research location in North Tomohon. In addition, the group discussions (FGDs) of 15 participants were also conducted at the sub-district and district levels focused on the research topic. The data and information include the characteristics and potential of the commodity business, market and marketing analysis, added value, supporting institutions, supply chain and chrysanthemum agribusiness value chain. To enrich the discussion, secondary data was also collected from relevant stakeholders in the Tomohon area. Data analysis used cross-tabulation analysis.

3 Results and discussion

3.1 Characteristics of the *Chrysanthemum* farming system

Chrysanthemum agribusiness is one of the economic activities that is a mainstay not only for household income of chrysanthemum farmers, but also contributes to the economy of the people in Tomohon City. In addition, the chrysanthemum business is also one of the sources of the regional economy of Tomohon and North Sulawesi Province. Cultivation of chrysanthemum by farming communities in Tomohon City is spread in all regions.

In terms of accessibility of chrysanthemum cultivation locations, almost all of them are carried out on relatively good and open land areas. This is indicated by the distance traveled from settlements (houses) to various locations related to cultivation activities (Table 1).

States of [20] that the supply chain is important in relation to the increase in economic added value that will result from the distribution of products to consumers. Supported by [5] statement that the supply chain is also related to efforts to meet consumer demand, increase competitiveness, profit, and build good relations between actors in the supply chain. In the supply chain discussion, it is not only concerned with the production process, but also building coordination and collaboration with other actors along the supply chain.

Table 1. Accessibility of chrysanthemum cultivation area in North Tomohon District, 2021

No.	Distance from home	Description (km)
1.	Farming place	0 – 0.3
2.	Highway	0.7 – 0.75
3.	Input market	5 - 6
4.	Output market	0.7 - 1
5.	Agricultural information sources (BPP)	1-1.5
6.	Source technology (BPTP)	15

3.2 Farmers and farmer groups institutional activities

Farmer groups in Tomohon, namely Kakaskasen II and also several other farmer groups are farmer groups that are active in supporting farmer institutional activities, including being active in participating in group meetings, participating in extension programs from the

center and regions, paying fees related to group activities. The farmer is also active in mutual cooperation activities in farmer group activities or not, for example religious activities. Mutual cooperation activities are still very visible in Kakaskasen village, Tomohon, North Sulawesi.

Table 2. Performance of institutional activities of chrysanthemum farmers

Activities	Routine	Sometimes	As Needed
Group meeting	15 respondents	5 respondents	5 respondents
Counseling	20 respondents	3 respondents	2 respondents
Mutual cooperation (<i>Gotong royong</i>)	10 respondents	2 respondents	3 respondents
Contribution	17 respondents	4 respondents	4 respondents

The active group meeting has been agreed upon by the group. Meetings are held once a week and sometimes the group's meetings are also held religious activities, the majority of their religion is Christian. The active group meeting was supported by 15 respondents from 25 respondents.

The extension program from the center and the regions is one of the programs that is very supportive and also complements these farmer groups. It can be seen that 20 respondents strongly support the extension program because they think that the program is very important because it can provide knowledge and also information. On the other hand, it can make farmers to be independent if they later face problems related to their activities.

The mutual cooperation (*gotong royong*) activity was reflected in the 10 respondents who were still concerned with this activity. They still consider *gotong royong* activities as social activities that have many benefits and they consider that activities are part of religious activities.

The contribution payment activity is an obligation for the farmer group and the contribution has been agreed upon by the members as well. This contribution is very important because it is for the common good. Each farmer group already has its own rules about group contributions.

4 Conclusions and recommendations

The results of the analysis show that the development of agribusiness and supporting institutions in Tomohon has the opportunity to be improved. One of the supply chain optimization strategies can be done with adaptive technology intervention, implementing low-cost strategies, product specifications and quality improvement.

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