Study of Empowerment Smallholders Cocoa Based on Agro-Industry Approach

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Abstract. Empowering smallholders’ cocoa based on agro-industry requires readiness of the cocoa commodity itself from on-farm to off-farm. The research technique conducted in this study is a descriptive survey approach. The research site is Luwu Raya in South Sulawesi Province. This study uses literature and interviews as a data collection technique. Interviews were conducted with related parties such as government agencies, cooperatives, manufacturers, cocoa farmers associations, and farmer groups which were selected purposively. Collecting secondary data is done by collecting documents in the relevant agencies. Data and information obtained were analyzed descriptively correlatively. The results showed that empowerment of community cocoa into an independent community through agro-industry became a necessity, considering the potential of the community's cocoa in producing cocoa beans was quite large and only a small portion was processed into finished products. To that end, in order to reach an independent community on cocoa commodities, various things are neede such as transferring technology based on local potential, facilitating the government in providing bailouts and processing machines, and supporting regulations that favor farmers.

1. Introduction
Cocoa is one of the export commodities that contribute to increasing Indonesia's foreign exchange. Cocoa commodities ranked third in the plantation sector after rubber and Crude Palm Oil (CPO) as foreign exchange earners. Indonesia is the third largest supplier in the world after Ivory Coast and Ghana with a market share of 13.6% of total world production until 2011. Based on this, the government's efforts to increase the competitiveness of Indonesian cocoa on the world market have been carried out by launching Gerakan Peningkatan Produksi dan Mutu Kakao Nasional (GERNAS), especially in cocoa commodity centres in South Sulawesi Province, which is the province with the highest cocoa production growth reaching 8.6% followed by Central Sulawesi, Southeast Sulawesi and West Sulawesi. In South Sulawesi province cocoa production centres are located in Luwu Raya where cocoa production has contributed 63 percent of the national cocoa production with a total cocoa production of 63,259.21 tons and a total area of 133,469.70 hectares consisting of three districts, namely districts: Luwu, North Luwu and East Luwu and Palopo City [1].

Unfortunately, some problems still confront the development of the people's cocoa industry, namely low industrial utilization (<40%); export in the form of cocoa beans (70%); competitiveness; standardization of flavour and food safety; competition with imported and diversified products [2]. This is caused by many factors, one of which is that there are still obstacles to the transfer of technology that take place from Research Centres and Universities to cocoa farmers. In the process of technology transfer, it cannot depend entirely on the dynamics of the transfer of technology (Research Centres and Universities), but can also come from within the farmer itself. Farmer's independence in adopting technology is needed. Therefore, the empowerment of cocoa farmers by the relevant agencies so that
2. Materials and Methods
The research technique used in this study is a survey descriptive study approach. The chosen research site is Luwu Raya in South Sulawesi Province, which is the centre of cocoa. Luwu Raya is one of the centres of cocoa in South Sulawesi Province and still tends to produce cocoa beans (not in processed form), therefore, to make the community cocoa more independent, empowerment must be directed to the agro-industry, and it becomes an urgent matter. To empower community cocoa into an independent community based on cocoa agro-industry, it must be supported by its own cocoa commodities from on-farm to off-farm which are interrelated with each other, and are integrative and sustainable. Luwu Raya consists of Luwu District, North Luwu District, East Luwu District, and Palopo City. Data collection techniques are carried out by means of: literature study and interviews with related parties, namely officials in government institutions/ agencies, cooperatives, manufacturers, cocoa farmers associations selected purposively, and farmer groups. Secondary data collection was also carried out to supplement primary data, namely by collecting and studying written data in the form of documents or transcripts, newspapers, journals, bulletins, and opening access through the internet looking for websites related to this research. Data and information obtained are then analyzed descriptively correlative.

3. Results and Discussion
3.1. Potential of Smallholders’ Cocoa in the Research Area
In general, cocoa beans produced in Luwu Raya (except East Luwu District and Palopo City) are still not fermented. This condition will affect the quality and selling value of the products. The results of the study showed the reason farmers did not ferment because of the costs that had to be incurred, besides that they (smallholders) also stated that by not doing fermentation their cocoa was sold even at low prices. The quick desire to get money from their cocoa harvest is because of the additional impetus the need to fulfill their daily lives. East Luwu Districts produces seeds that have been fermented and are generally processed into intermediate products, and a small portion in the form of end-products. This area can be the exit gate of the final product from cocoa due to Luwu Timur Regency has a pioneer airport (Sorowako Airport) and an international port (Sorowako Port), thus facilitating the flow of goods to enter the surrounding area; in other words, the existence of international ports and airports in East Luwu Districts strongly supports the entry and exit of goods (trade) [3] Furthermore, the results of research conducted (in 2011-2012) both the Directorate General of PPI Ministry of Industry and the Indonesian Coffee and Cocoa Office (2011), it can be identified that the Luwu Raya region is divided into three types of industry categories, namely: upstream industry, intermediate industry and downstream industry. The purpose of the grouping is to accelerate and equalize the development of the cocoa industry in Luwu Raya.

Based on these groupings, the transfer of information in a system can be easier to do. The grouping of the Luwu Raya region by industry are:
1) Luwu Districts is included in the upstream industry criteria
2) North Luwu Districts falls into the industry criteria
3) Luwu Timur Districts is included in the upstream industry criteria
4) Palopo City falls into the criteria of the downstream industry
The all regions will run if the guidance to farmers in the area is carried out systemically as well as regional coordination with one another supported by Universities, Research Centres and the Central and Regional Governments.

3.2. Transfer of Industrial Technology in Empowering Cocoa Farmers
Technology transfer is the transfer of a technology that is produced and used somewhere to be applied to other places as an innovation technology [4] In order for technology transfer to work well or be
acceptable to the target, in this case the community cocoa farmers in Luwu Raya must interact and be integrated based on the potential of each district / city in the region. The potential referred to is not only from the human side (independence), but also from the side: policy support, the existence of supporting stakeholders, technology information system for cocoa processing industry, and other supporting facilities (road facilities and infrastructure, communication, equipment/processing machinery). In addition, the system must be interconnected with each other. The system referred to here is the nature of giving and receiving technology that is already owned by each region based on their respective competencies independently, while adopting the technology that is continuously provided by the Research Institute and Higher Education.

Coordination and integration are needed to strengthen the system above and facilitate the link between cocoa farmers in an area with cocoa farmers in other regions. Therefore, in empowering cocoa farmer groups in Luwu Raya merged into the Cocoa Industry SME group to facilitate access to all facilities provided by the government and accept technology transfer or seek information as widely as possible from its stakeholders. In order for information transfer to run quickly and smoothly, then determining the right person (member of the social system) can be trusted to run the technology transfer well to other members of the social system. Therefore, to accelerate the process of technology transfer in District / City and out of Regency / City, it takes a type of farmer who has a pioneer character and early application. This type must be in the Cocoa Industry SME group, and is more likely to be selected in technology transfer activities at the District / City level.

Through this Cocoa Industry SME group, technology transfer from existing Universities and Research Centres will make innovative cocoa industry SME groups have high "bargaining power" in carrying out partnerships with larger companies. In order for the dynamics of the fictionalization of Research Institutions, Universities and Government to run well, the coaching model that can be applied can be through several models, namely:
1) Mentoring Model: guiding intensively (industries that have been running).
2) Incubation Model: maturing the beginner's business until it can run (IKM cocoa).
3) Cluster Model: establish partnerships with SME industry and large industries.
4) Mediation Model: open market access

The four models mentioned above can be done in sequence, starting from the model (1) continuing to the model (4). Palopo city which is the basis of downstream industries can be used as an incubator for other regions that want to increase production (quantity and quality of products); Likewise for North Luwu District which is an industry-based intermediate region, it can be a forum for regional development based on upstream industry (Luwu District and East Luwu District).

Industry characteristics that are different in the four regions in the Luwu Raya will lead to coaching that will be carried out by the government (related agencies) will refer to the concept of "accepting and giving each other in technology transfer". Community cocoa which has a higher technology level industry can be used as a place of internship for the community cocoa industry which is still lagging behind its technological level. Furthermore, Universities and Research Centres can help, namely, acting as tutors and the central government (the Directorate General of Industrial Regional Development of the Ministry of Industry) and the regional government to function as facilitators.

3.3 Empowerment of SMEs as Independent Farmers

The readiness of cocoa farmers in facing the globalization era is related to the quality of farmers' behaviour, especially in adopting technology transfer from related institutions (research institutions and universities). Farmers' readiness will determine the ability of farmers to be able to be independent. [5] states that there are external and internal factors that can affect the independence of farmers; and external factors of farmers show a real role even more interesting than the internal factors of farmers in the development of farmers' independence. Based on the research of [5], there are several things that influence the independence of farmers, one of which is: the affordability of farmers to agricultural support facilities shows the most sensitive, positive, and real influence on modern behavior and efficient farmers. In addition, there are other things that also influence, namely: a) farmers' accessibility to
markets for agricultural products, b) modern behavior of farmers, c) farmer efficiency behaviour, d) affordability of farmers for farming support facilities, e) farmers' perception of physical feasibility farming, f) farmers' accessibility to information resources, g) pressure on the development of the non-agricultural sector, h) quality of counselling, i) penetration of other products into farmer's household needs, and j) farmers' perceptions of agricultural development policies. Based on the description, to develop farmers in order to become independent human beings is needed an integrated, comprehensive and continuous collaboration between the community, government, universities and other stakeholders to jointly change the development mentality based on these cultural values. In the other side, [6] also states that for development to succeed, the people of Indonesian must have the mentality of self-confidence, discipline, and responsibility for what is done. Indonesian people who have the mentality as mentioned above will eventually be able to be independent and fully engaged in national development.

4. Conclusions
Empowerment of smallholders cocoa becomes an independent smallholders cocoa through the community cocoa-based agro-industry in Luwu Raya, South Sulawesi Province. Based on the results of the study, empowerment of smallholders cocoa into an independent smallholders through agro-industry becomes a necessity, considering the potential of smallholders cocoa in producing cocoa beans is quite large and only a small portion is processed become finished products. Furthermore, in order for the community cocoa-based agro industry to create independence and sustainability, it must: (a) material information technology must be adapted to the needs of farmers, (b) material information technology must be easy and inexpensive so that it can be affordable by the capital owned by farmers, (c) material information technology must be adapted to local social and cultural conditions, (d) create coordination, integration, synchronization and simplification among cocoa industry stakeholders (stakeholders), (e) create synergic cooperation, (f) regulatory support from the government in favour of farmers, (g) the existence of bailouts to buy cocoa beans that are not fragmented, and (h) the help of fermentation and processing machines that are locally specific.

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