Stakeholder Analysis of Coconut (Cocos nucifera L.) Agro-Industry Development in North Minahasa District

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Abstract

The coconut industry is one of the agro-industries that has a high strategic value in the plantation sector. The coconut commodity has a very high development value, such as economic value (young coconut fruit, source of cooking oil, industrial raw material, to nata decoco) as well as social values such as; use of leaves in traditional events, religious events and so on. The purpose of this study was to analyze the role of stakeholders and identify key stakeholders in the development of the coconut agro-industry in North Minahasa District. The data analysis method used was prospective analysis. The results of the analysis show that there are five elements of the main actors in the development of the coconut agro-industry in North Minahasa District, namely; Bappeda (regional development planning agency), Financial institutions, Cooperative / BUMDes, Department of Industrial and Farmers.

Keywords: Stakeholders; coconut; agro-industries; North Minahasa.

1. Introduction

Coconut is a commodity that grows and develops well in rural areas in Indonesia, including in the North Minahasa District. Coconut has a very vital and strategic role, both from an economic point of view as a source of food for the community, a source of income, industrial raw materials as well as a social aspect as part of community culture and as a provider of employment.

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This makes coconut a commodity that has the potential and opportunities to be developed. According to [1], coconut is one of the strategic commodities from the plantation sub-sector which is also part of the agricultural sector, because of its large role for society as a source of income, the main source of domestic oil, a source of foreign exchange, a source of industrial raw materials (food, buildings, pharmacy), and as a provider of employment. However, according to [2], when viewed from the perspective of farmers' income, the huge economic potential of coconut has not been optimally utilized, this is due to various internal problems in the production, processing, marketing, and institutional processes. Furthermore, according to [1] that in terms of economic role, the national coconut plant has not yet reached an optimal level, especially in terms of farmers' income, the fulfillment of domestic industrial raw material needs and foreign exchange earnings.

Based on potential data, Indonesia is a country that has the largest coconut plantation area in the world with an area of 3,783 million hectares and 97 percent of which are smallholder plantations. The main areas for the distribution of coconut trees in Indonesia are: Riau, East Java, North Sulawesi, North Maluku, West Java, Central Sulawesi, and East Nusa Tenggara [3]. According to [4] that the development in the agribusiness sector of coconut plants is very important as an organ of life with various functions, because part of the coconut plant can be used for human needs. Furthermore [5] states that coconut agribusiness development plays an important role in increasing productivity and simultaneously increasing farmers' income. Reference [6] explain that the development of coconut commodities is directed at increasing productivity through the use of superior seeds and efficient farming processing, development of economic value coconut products with quality according to market demand, empowerment of farmer groups or Gapoktan partners with the coconut industry. exporters, technical assistance for guidance and financing for Gapoktan from related institutions that are programmed and sustainable.

So that the development of the coconut agro-industry in North Minahasa District can be realized properly, various efforts are always being made including this research in the form of stakeholder analysis for the development of the coconut agro-industry in North Minahasa District. Stakeholder analysis is very important considering that in the development of the coconut agro-industry there are various stakeholder components that play a role in it, such as; Department of agriculture (plantations), coconut farmers, industrial entrepreneurs, traders, and soon.

2. Research Method

2.1. Data types and sources

The type of data used in this study is primary data in the form of expert judgment. Primary data were obtained from interviews with experts. Expert criteria refer to [7] that the expert criteria meet one of the criteria, namely; 1) experts due to scientific factors (academics), 2) experts due to decision makers, and 3) experts due to experience (practitioners). The number of experts in the study was 5 people which refers to [8] that the number of expert respondents who have high precision is 3 to 6 or 7 persons.

2.2. Data analysis using prospective analysis methods

Prospective analysis or also known as participatory prospective analysis is one of the analytical tools that is widely used to formulate policy alternatives or to analyze the role of stakeholders or other problems. According to [9], prospective analysis is a method used to analyze problems in an expert system that can combine decision makers in order to reconstruct several plans with different approaches. Participatory prospective analysis is a tool that can effectively map stakeholder interests to a problem or condition.

The output of the prospective analysis obtained a consensus of the interactions between stakeholders that will be used for planning [9, 10, 11]. Furthermore, it is stated that prospective analysis can be used as a tool to explore and anticipate changes through scenarios. In addition, it can also be a normative tool, which is an action-oriented approach that starts from a selected vision of the future and determines a path to achieve it. Thus, prospective analysis does not only focus on optimizing solutions, but also on providing various alternative options and objectives for decision makers and contributing to designing a series of alternatives rather than choosing the best alternative [12].

According to [13] that prospective analysis is one of the analyzes that is widely used to formulate policy alternatives in the form of strategic scenarios related to natural resource management, industry or other problems to achieve effective and efficient conditions in the future. In detail, the stages of the prospective analysis according to [7] are as follows:

1.   Determining the topic of study, in this case the stakeholder analysis in the development of the coconut agro-industry in North Minahasa District.

2.   Determine the elements and attributes of the study, where the elements in the research are the elements of the actors which include; Bappeda, Department of Agriculture, Department of Industry, Entrepreneurs, Coconut Farmers, Religious/Customary Figures, Farmers Groups, Financial Institutions and Cooperatives / BUMDes.

3.   Defining and describing the evolution of the possible future, at this stage we identify how the key elements can change by determining the state of each element, examining which changes can occur simultaneously and describing scenarios by pairing the changes that will occur by discussing scenarios and the implications for the system.

Table 1: Matrix of Influence and Dependence

| To → From ↓	A	B	C	D	E	F	G
A	▨						
B		▨					
C			▨				
D				▨			
E					▨		
F						▨	
G							▨

Sources: Bourgeois (2004) Note : A–G = Elements

Table 2: Guidelines for Assessment between Elements

Score	Remarks
0	No influence
1	Weak influence
2	Moderate influence
3	Strong influence

Sources: Bourgeois (2005)

To determine the key factor refers to the quadrant which is the output of the software, which can show the level of influence and dependence between elements in the system in detail. The following is a description of the position of the 4 (four) quadrants [14].
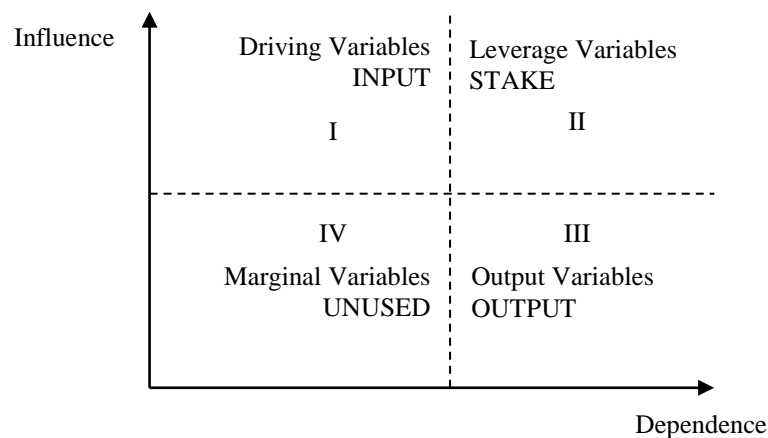
Figure 1: The Quadrant of Influence and Dependence

Information:

- Quadrant-I is the input quadrant or quadrant of determining variables (driving variables). This quadrant contains elements that have a strong influence and dependence between elements is low.
- Quadrant-II is the stake quadrant or the leverage variables. This quadrant contains elements that have a strong influence and the dependence between elements is also strong.
- Quadrant-III is the output quadrant or the dependent variable quadrant (output variables). This quadrant contains elements that have low influence and dependence between strong elements.
- Quadrant-IV is the unused quadrant or the independent variable quadrant (marginal variables). This quadrant contains elements that have low influence and low dependence between elements.

According to [9], in general, there are 2 types of distribution of elements in the influence and dependency graph, namely; 1) The type of distribution that tends to cluster on the diagonal of quadrant IV to quadrant ll. This type indicates that the system being built is unstable because most of the elements produced include marginal or leverage variables. This makes it difficult to develop strategic scenarios for the future, 2). The type of

distribution of elements that collect in quadrant I to quadrant lll is an indication that the system being built is stable because it shows a strong relationship where the driving variable regulates the output variable strongly. In addition, with this type, strategic scenarios can be built more easily, efficiently and effectively and are strategic in nature.

3. Results

Based on the results of a literature study (systematic review), and brainstorming with experts, a number of actor elements (stakeholders) were obtained in the development of the coconut agro-industry in North Minahasa District, as follows:

Table 3: Element actors

Symbol	Actors Element
A1	Bappeda (regional development planning agency)
A2	Department of Agriculture (Plantation)
A3	Department of Industrial
A4	Businessman
A5	Farmers
A6	Religious / Customary Figures
A7	Farmer Groups
A8	Financial institutions
A9	Cooperative / BUMDes

The results of the ISM analysis on the element of opportunity show that there are 5 (five) key elements in the stakeholder analysis of coconut agroindustry development in North Minahasa District.The results of the quadrant and hierarchical (level) analysis are as follows:
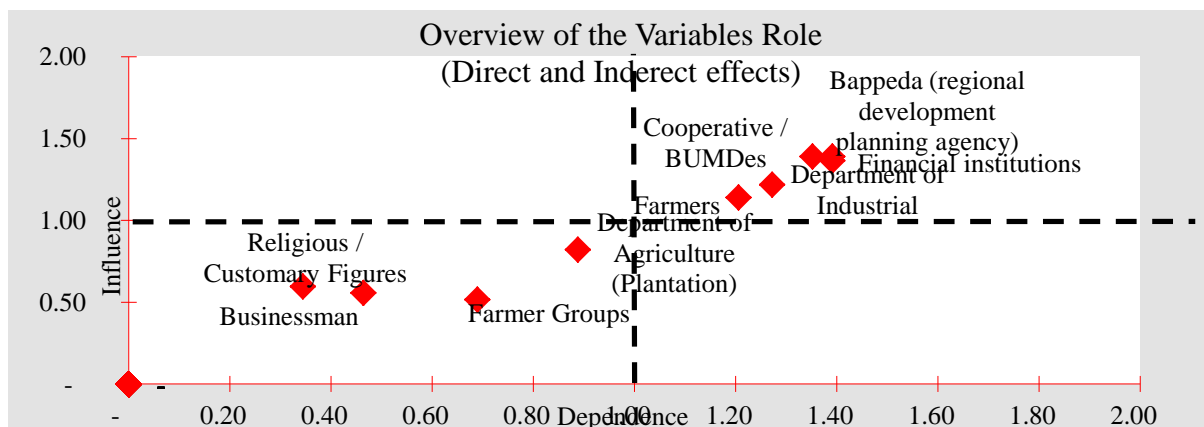

Figure 2: Output of Prospective Analysis

The results of the analysis show that the five key elements in the development of the coconut agro-industry in North Minahasa District are as follows which have the highest weight value.

Table 4: Global Forces Weighted

Elements	Global Power Weighted
Bappeda (regional development planning agency)	1.76
Financial institutions	1.21
Cooperative / BUMDes	1.53
Department of Industrial	1.16
Farmers	0.87

The results of the analysis as in the table above were obtained that there are 5 (five) main elements (key stakeholders) in the development of coconut agro-industry in North Minahasa District. Where Bappeda (regional development planning agency) is the main key actor with a weight of 1.76.

4. Discussion

The results show that the regional development planning agency (Bappeda) is a key element. This is closely related to the political will of the local government in the development of the coconut agro-industry in North Minahasa District. Political will is interpreted as the desire of the local government to focus and mobilize all of its power optimally for the development of the coconut agro-industry. This is usually indicated by various regional programs that are directly related to the main program. Bappeda is a regional technical institution in the field of research and regional development planning led by a head of an agency who is under and responsible to the Governor / Mayor through the Regional Secretary. This agency has the main task of assisting the Governor/Mayor in the implementation of Regional Government in the field of research and regional development planning.

A financial institution is an institution or business entity that operates in the financial sector to distribute funds or to provide services to customers and has a function as a collector of customer funds [15]. A financial institution is a business entity that collects an asset in the form of funds from the public and is channeled for funding a development project as well as for economic activities by earning interest in the form of a certain percentage of the amount of funds distributed [16]. The existence of an institution will increase the growth of the coconut industry in North Minahasa district. Easy access to funding will stimulate the growth and development of the coconut agro-industry in North Minahasa District.

Cooperatives are part of business entities (economic organizations) owned and operated by their members to fulfill common interests in the economic sector [17]. Cooperatives are also legal entities based on kinship principles, where all members consist of individuals or legal entities with the aim of making the members prosperous. According to [18], a cooperative is a socio-economic or social engineering system (a socio-economic system or social engineering), which is open and goal-oriented (open and goal-oriented). Whereas

BUMDes or Village-Owned Enterprises are business entities whose entire or most of the capital is owned by the Village through direct participation originating from separated Village assets in order to manage assets, services, and other businesses for the maximum welfare of the Village community. The existence of cooperatives/ UMDes will increase the development of the coconut agroindustry in North Minahasa District.

The Industrial Service is an element implementing regional autonomy, led by a head of service who is under and is responsible to the Mayor / Governor through the Regional Secretary. The Industrial Service is a service in charge of industry within a regional government. The main task of DInas Industry is to improve and /or maintain development performance in facing the development of dynamic changes in strategic environment and influencing factors that change rapidly and often unexpectedly, and as a trigger for all components of society (stakeholders), the Government and the Business World to continue to work hard to develop the region in order to achieve the desired vision.

Farmers are one of the important actors in the development of the coconut agro-industry in North Minahasa District. Farmers are at the forefront of coconut production. On the other hand, farmers are also a major component in the supply chain for the coconut industry.

5. Conclusion

The results of the analysis and discussion concluded that there are five elements of the main actors in the development of the coconut agro-industry in North Minahasa District, namely; Bappeda (regional development planning agency), Financial institutions, Cooperative/BUMDes, Department of Industrial and Farmers.

Acknowledgements

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