

# BROWN SUGAR AGRIBUSINESS DEVELOPMENT BASED ON GENDER IN KLUNGKUNG REGENCY, BALI, INDONESIA

YAYUK YULIATI, SUGIANTO AND NI PUTU TIKA PRADNYANI

Interest of Economic and Social Agriculture Department, Faculty of Agriculture,  
University of Brawijaya, Indonesia

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**Abstract** - The purposes of this study were: 1) to describe and analyze the role of women in agribusiness brown sugar, 2) formulating development strategies of coconut sugar agro-industry. This type of research is qualitative and descriptive. The method to determine the respondents were non-probability sampling with purposive sampling technique. In addition to structured interviews; data collection is done with depth-interviews and observations. The data obtained were analyzed by using Gender analysis (Harvard), and a SWOT analysis. The results showed that the role of women in brown sugar agribusiness is very high when compared with men. The development strategy which is appropriate and can be applied is SO (strengths and opportunities) of which is to increase the sale of products so that consumers are growing and loyal to the product brown sugar, by utilizing a resilient workforce with high work experience to improve product quality in order to seize the consumers in the market, benefit from the support of local governments to improve their expertise.

## INTRODUCTION

### Background of the Research Problem

Indonesia is a country with a tropical climate and natural resources and biodiversity is very high. The natural resources allowing the growth of a wide range of plant species, one of which is the coconut (*Coco snucifera*), which can flourish in some parts of Indonesia, such as Sumatra, Sulawesi, Java and Bali. Almost all parts of the plant used oil from leaves that are used for decoration in traditional ceremonies, coconut wood are used as household furnishings, which can be consumed, fruits and flowers produce coconut sap water. One of the products processed from palm plants almost every day sought by the majority of society is coconut sugar, because of sugar palm can be consumed directly or as an industrial raw material. According to Hidayat (SOE, 2012) the business of the brown sugar is very nice to be developed palm sugar, because it is not only consumed by households but also needed as raw material for production of food ingredients (soy sauce, candy,

chocolate, syrup).

Coconut sugar Agroindustry is a sustainable agro-industry, therefore it is very important to develop. The characteristics of sustainable agro-industry are: 1) productivity and profitability can be maintained and improved in a relatively long time, so as to satisfy human needs in the future; 2) natural resources / agricultural resources to produce agro-industrial raw materials can be maintained and can even be improved because of the sustainability of agro-industry is highly dependent on the availability of raw materials; and 3) the negative impact of their use of natural resources and agro-industries can be minimized (Soekartawi, 2005).

On the palm sugar agro-industry the labor involved not only men, but also women. Men deal with cultivation of coconut and collect the sap of coconut, while women are responsible in making coconut sugar. Work to make palm sugar carried together with domestic work or other reproductive, that cooking meals for family purposes.

Klungkung, Bali is an area that has the potential in the agro-industrial brown sugar. The land is

mostly in the form of dry land, where coconut trees grow with the proliferation of agro-industrial presence of coconut sugar is already very long; certainly the experience of women farmers in processing palm sugar is also very good. This is evidenced by the products produced, that coconut sugar from these regions is favored by the people of Bali. Although the year 2011, and already established women farmers coconut sugar which aims to improve the quality and welfare of artisans brown sugar, but until now it is not optimal development of the agro-industry. To view the role of women in coconut sugar agro-industry and coconut sugar agro-industry development strategy in the research location, this research was conducted.

### Research purposes

1. Analyzing the role of women farmers of the coconut sugar agro-industry
2. Formulating the strategies of coconut sugar agro-industry development

## RESEARCH METHODS

This type of research is descriptive qualitative case study method. Determination of the respondents was conducted by nonprobability sampling with purposive sampling technique. Number of women farmers who used informants is all members of the women's group of palm sugar, which are 20 people. Informants supporters consist of: village chiefs, community leaders and agricultural extension field of the relevant office. The data required includes primary data and secondary data, taken with the in-depth interviews technique, focus group discussion (FGD), observation and documentation.

**A data analysis method that was applied in this research is an analysis of Gender and SWOT Analysis.**

### 1. Gender Analysis (Harvard)

To determine the role of women in the agro-industrial use of palm sugar Harvard Gender Analysis. The analysis technique is often referred to as the Gender Framework Analysis (GFA) is an analysis that is used to view a profile gender of a social group and gender roles in development projects, in which there are several components, namely: activities profile, access profile, and the control profile, and benefits (Overholt *et al.*, 1988). In

this study will be known how the activity profile of the women farmers in Agro industry palm sugar, how their access to resources related to agro-industry (market information, technology, etc.), who takes the decisions in Agro industry palm sugar and what benefits are enjoyed by the women farmers in Agro-industrial of coconut sugar.

### 2. SWOT Analysis

This analysis is used to develop the coconut sugar agro-industry enterprises in the research location, by measuring the strengths, weaknesses, opportunities and threats from both internal and external factors that become the strengths and threats in implementing the program. SWOT analysis consists of four stages (Rangkuti, 2004), namely:

a. Identification of internal and external factors, that aims to determine the factors that become strengths, weaknesses, opportunities and threats. Having identified these factors strategies are developed which may build on the strengths, eliminate the weaknesses, exploit the opportunities or counter the threats. The strengths and weaknesses are identified by an internal appraisal of the organization and the opportunities and threats by an external appraisal. The internal appraisal examines all aspects of the organization covering, for example, personnel, facilities, location, products and services, in order to identify the organization's strengths and weaknesses. The external appraisal scans the political, economic, social, technological and competitive environment with a view to identifying opportunities and threats (Dyson, 2004).

### b. IFAS and EFAS matrixes

IFAS (Internal Factory Analysis Summary) is a matrix that is used to arrange internal strategic factors in the forms of strengths and weaknesses. The strengths are the advantages owned, while the weaknesses are the deficiencies owned by the researched villages. EFAS (External Factory Analysis Summary) matrix is a matrix that is used to arrange external strategic factors which can affect the sustainability of the program. These external factors can be in the form of opportunities and threats as well. IFAS and EFAS matrixes compare the conditions between internal and external factors so that they can formulate a strategy which is in accordance with the

conditions of the researched villages by using the following steps: a) the criteria for assigning weights, b) the criteria for rating, c) the criteria for scoring, and d) the formulation of IFAS and EFAS matrixes.

### c. Analysis of internal and external (IE) matrixes

#### d. SWOT matrix

The steps of SWOT analysis in general are described as follows:

#### 1. The Role of Women in Coconut Sugar Agro-industry

The activity in Agroindustry coconut sugar include: cooking, packaging, sales, look for fuel, and look for coconut sap. In this respect the role of women are dominant. In it can be seen from most of the respondents (69%) are involved in the cooking and packaging. The cook activity of coconut sap into palm sugar after cooking sugar then immediately packed takes quite a long time, so it is not uncommon if this activity is interspersed with taking care of home and children which are the responsibility of a woman. While Men only involved in activities of collecting the sap of coconut (coconut sugar feedstock) and firewood in agricultural land. The coconut sap collecting activities carried out by climbing, which of course requires high physical exertion. Similarly search of fuel (firewood). Search of firewood is not just done

in self-owned agricultural land, but sometimes done in the forest that is located very far from the homes. Sales carried out together between men and women. If there are buyers at home either for self-consumption or more to sell (middlemen), then the transaction is done by women, otherwise if sales are made outside the home or in the market then the activity is done by men or husbands. The division of this kind of activity related to family norms and norms in society in general that a woman should work at home (although included in the category of productive), while men were doing work outside the home) (Parsons in Saptari and Holzner, 1995). The women of coconut sugar artisans actually had access to almost all the resources related to agro-industries coconut sugar, such as training, pricing information, raw materials, capital, and point of sale. The trainings of manufacture and packaging which is more modern in fact already existed at the time a newly formed group of women farmers, but it is unfortunate that this activity is only done at the time of initial formation the groups of women farmers of palm sugar. At this time, the training has never again performed. Information on the sale price and the marketing of coconut sugar is dominated by men or husbands. Any information including everything associated with palm sugar turns men always are first aware of, this is simply because men have more reach than women.

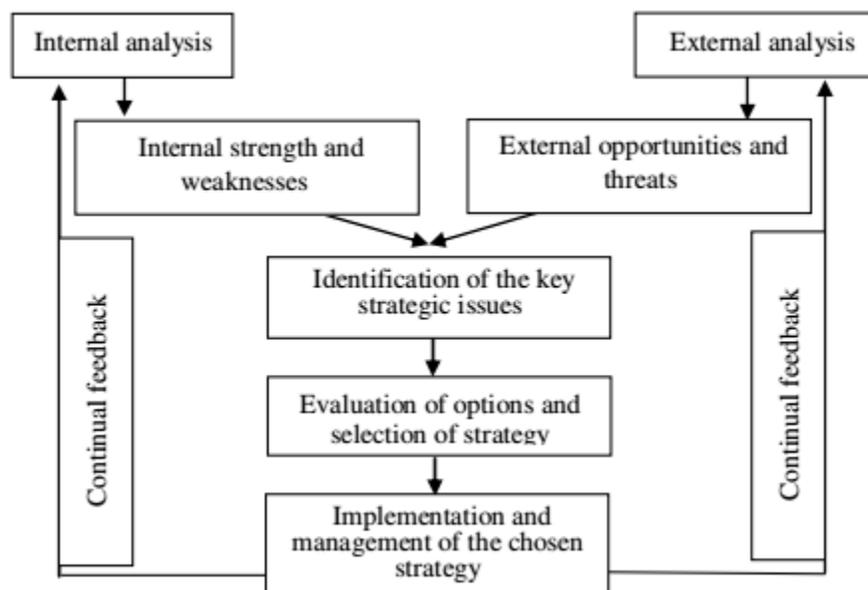


Fig. 1 The process of SWOT Analysis (Riston, 2008)

In decision making related to coconut sugar agroindustrial role of women is almost equal to men. Women are more involved in making decisions about production quality, facilities and supporting infrastructure of products, as well as the cooking time of the coconut sap. The kitchen and its equipment is "territory" and the authority of women, thus making any decision on this matter is women are dominant. Moreover, supported by cultural taboo for men came in and do the cooking in the kitchen. Nevertheless, the male plays a fairly important role in terms of determining the place of marketing. As explained before, that the mobility of men is higher so that they know where the sales and price information. It seems patriarchal system is still strong in Balinese society which affect this, where men still have an important role in every decision, including the decision making of agro-industry which is the domain of women.

Although activity in the manufacture of palm sugar dominated by women, but the results are not they enjoy themselves. In contrast, although the role of men is only minor in the agribusiness activities of brown sugar, but they enjoy the results. Most of the proceeds from the sale of palm sugar can be enjoyed by the family (the needs of daily life), the rest for personal use for women (palm sugar artisans) and male (husband). Benefits enjoyed by the women personally used to purchase cosmetics and clothes, while men use the results of this agribusiness for the purchase of cigarettes, cockfighting, and fair play ball (traditional game in Bali).

## **2. Red Sugar Agribusiness Development Strategy Based on Women**

The development of brown sugar Agro-industry based on gender, is considered very important, so necessary in its management strategy. As for the formulation of participation improvement strategies this includes the following steps:

### **a. Identification of Internal and External Factors: Strengths and Weaknesses**

As for strength that of the internal factors are: quality products, expertise make brown sugar, resilient labor in the work, the price of products affordable, work experience in the manufacture of brown sugar, production of brown sugar continuously, and has a fixed consumer. While weaknesses in internal factors include: the scope of marketing that is less extensive, labor coconut sap

harvesting only a few people, the education level of women artisans brown sugar is low, less active women farmers (management), and lack of capital.

While the strengths and weaknesses of the external factors are as follows: 1). Strengths: stable product demand, product known to the public, the support from the local government, seize the consumers in the market, fluctuations in raw material prices; 2). Weaknesses: their similar competitors, technological limitations.

This is in line with the results of research of Enwelu Onwurafo (2013) which states that some of the weaknesses in the agro-industry which dealt with women is: never received training in entrepreneurship (management), lack of capital and lack of application of modern technologies.

### **b. Determination of Internal Environment Analysis Score (ALI) and External Environmental Analysis (ALE)**

ALI Matrix (Internal Environmental Analysis) is used to determine the internal factors relating to the strengths and weaknesses that are considered important and can contribute to business continuity. Some important factors that make ALI compiled based on classification, namely the strengths and weaknesses, then weights, rating and score.

Total score of strength that owned by brown sugar agribusiness in the village of Besan is greater than the weaknesses which are owned in the amount of 1.99 compared weaknesses total score 0.94 the difference that was obtained amount of 1.05. The highest score in the power owned by a resilient labor factor, while the disadvantage of a lack of market information factors. In matrix ALE (External Environment Analysis) brown sugar agribusiness consists of several factors that have an influence on the business carried on. Opportunities and threats and then arranged in a matrix ALE as shown in Table 2.

From the Table above there is a chance factor in product demand, product known to the public, the government's support, a chance to win the market and fluctuations in raw materials that have little impact on the production of brown sugar whereas for threats there are only two factors such as the existence of similar competitors and limitations of technology owned. From the above analysis shows that the value score of opportunities was greater than threats.

**Table 1.** Internal Environmental Matrix Analysis (ALI) Brown Sugar Agro-industry in the village of Besan

No.	Internal Strategic Factors Strength (S)	Weight	Rating	Score
1.	Quality products	0.07	4	0.28
2.	Skills to make brown sugar	0.03	3	0.09
3.	Labor resilient in working	0.07	4	0.28
4.	The product price is affordable	0.08	4	0.32
5.	Work experience in making brown sugar	0.06	4	0.24
6.	Continuous production of brown sugar	0.06	3	0.18
7.	Having a regular consumers	0.15	4	0.60
	Total Strength Score	0.52		1.99
	Weakness (W)			
1.	The scope of marketing which is less extensive	0.10	2	0.20
2.	The labor that harvesting coconut sap is less	0.06	2	0.12
3.	Human resources has a Low education level	0.10	2	0.20
4.	Less involvement of women farmers group	0.06	2	0.12
5.	Lack of capital	0.10	2	0.20
6.	Lack of market information	0.05	2	0.10
	Total Weakness Score	0.47		0.94
	Total Score of internal environment	1.00		2.93
	Difference score of internal environment			1.05

Source: 2013 Primary Data (Processed)

Rating Description: 1 = Not at all influential ; 2 = Not influential; 3 = Influential ; 4 = Very influential

**Table 2.** External Environment of Matrix Analysis (ALE) Brown Sugar Agribusiness in the village of Besan

No.	External Strategic Factors Opportunities (O)	Weights	Rating	Score
1	The Product demand is stable	0.22	4	0.88
2	The Products known to the public	0.18	3	0.54
3	The support of local government	0.10	4	0.40
4	Seize the consumers in the market	0.25	4	1.00
5	Fluctuations in raw material prices	0.08	3	0.24
	Total Score of Opportunity	0.83		3.06
	Threats (T)			
1	The existence of similar competitors	0.04	2	0.08
2	Technological limitations	0.13	2	0.26
	Total Score of Threat	0.17		0.34
	Total Score of external environment	1.00		
	Difference score of external environment			2.72

Source: 2013 Primary Data (Processed)

Rating Description: 1 = Not at all influential ; 2 = Not influential ; 3 = Influential ; 4 = Very influential

### c. ALI and ALE correlation

Based on the analysis of the matrix ALI and ALE, for a total score of 1.99 while the strength of the weakness amounting to 0.94 for matrices ALI. ALE matrix analysis results, to score the opportunities amounting to 3.06 and a score of threats amounting to 0.34 when converted into images can be presented as shown in Figure 2.

In Figure 2 can be explained that value of the difference of the internal environment analysis (ALI) positive value of 1.05. While the difference in

the analysis of the external environment (ALE) positive value of 2.72. This can be determined by subtracting between the values of strength with weakness in internal factors and subtracting opportunities with threats to external factors. Based on the positive value the resulting reduction in ALI and the corresponding strategy ALE located in quadrant I of the aggressive. The position of the strategy can be described in Figure 3.

Based on the above mapping it is known that brown sugar agro-industry position in the village of Laws which are in a position or strategy I,

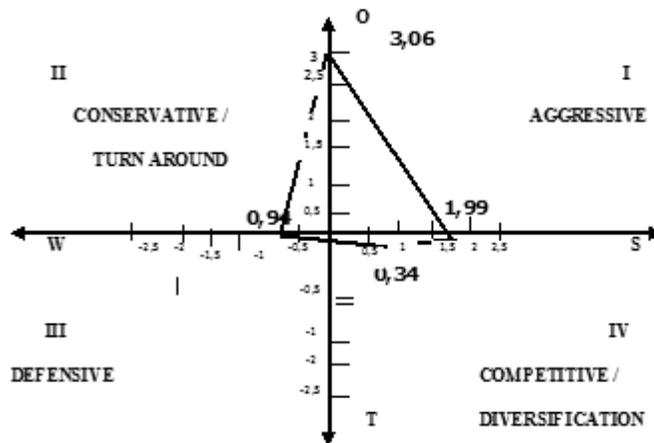


Fig. 2 ALI and ALE correlation in the Development of Brown Sugar Agribusiness

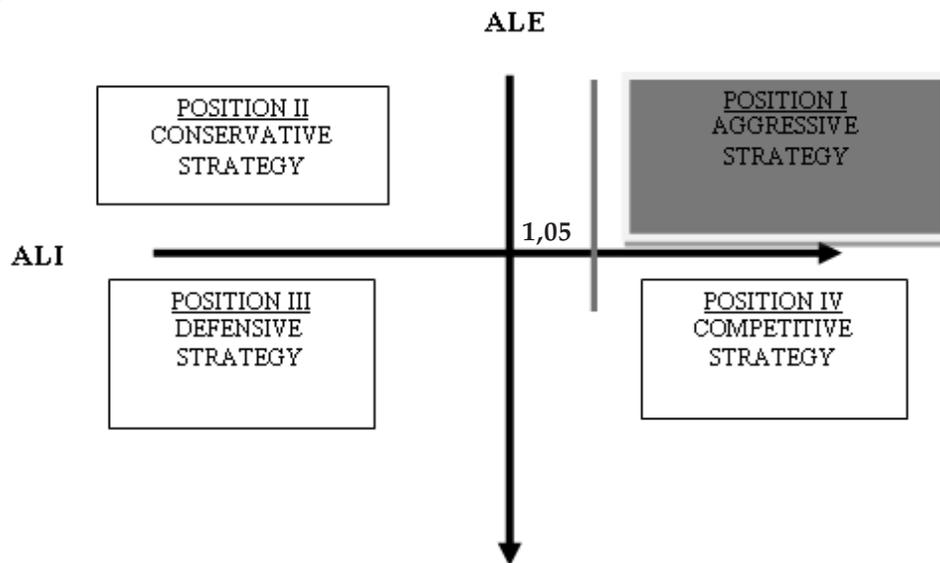


Fig. 3 Positioning Brown Sugar Agribusiness Development Strategy

namely Aggressive strategy. There for that each factor which exists has a value that is equally great and does not have much range which means that each factor in the brown sugar agribusiness support each other, it is shown from the difference between the two factors are positive (+).

**Determination of alternative strategies in the SWOT matrix**

After going through the positioning or quadrant of the matrix IE then the next do is mapping with the alternative strategy SWOT matrix. SWOT matrix used to formulate strategic alternatives which are strategic factors in developing agribusiness of brown sugar.

Based on the SWOT analysis is obtained of strategy which includes an overall strategy already described in the SWOT matrix, namely:

1. SO (Strength and Opportunity)
  - a) Increase the promotion of the product so that consumers are growing and loyal to the product of brown sugar ( $S_7, O_2$ )
  - b) Utilize workforce resilient with many work experience to improve product quality in order to seize the consumer market ( $S_1, S_3, S_5, O_4$ )
  - c) Utilizing the support of local governments to improve their expertise. ( $S_2, O_3$ )
2. WO (Weakness and Opportunity)
  - a) Utilize the facilities of the local government to

- improve the quality of human resources ( $W_1, O_3$ )
- b) Increasing the availability of water to maintain the stability of coconut sap of brown sugar products ( $W_2, O_1$ )
- c) Enhancing the role of women farmers and arrange the financial capital provided by the government well ( $W_3, W_4, O_3$ )
3. ST (Strengths and Threats)
- a) Improving product quality so it can face the many similar competitors ( $S_1, T_1$ )
- b) Utilizing modern technology to enhance the work experience ( $S_2, T_2$ )
4. WT (Weakness and Threats)
- a) Improving human resource capacity, and the availability of raw materials, as well as market information to minimize their similar competitors ( $W_1, W_2, W_3, T_1$ )
- b) Utilizing modern technology to seek the market information and business capital loan ( $W_4, W_5, T_2$ )

From the analysis that has been done using the SWOT analysis that the position of the right strategy is in quadrant I namely Aggressive strategy, where the intended strategy is a strategy of SO (strengths and opportunities).

**SO Strategy (strengths and opportunities) are:**

1. Improve the promotion of the product so that consumers are growing and loyal to the product of brown sugar ( $S_7, O_2$ ).
2. Utilizing resilient workforce with work experience that a lot to improve the product quality in order to seize the consumer market ( $S_1, S_3, S_5, O_4$ )
3. Utilizing the support of local governments to improve their expertise ( $S_2, O_3$ ).

**CONCLUSION**

Based on the results, it can be concluded that:

1. From the four aspects of gender roles which

examined, the dominant role of women in three aspects are, the activity (69%), the aspect of access (89%) and controls (70,83%), whereas the benefit aspect there is no dominant of all get the benefit of agribusiness brown sugar, with a percentage of 33.3%, respectively for the family, women (wives) and men (husbands). The factors that influence gender roles are: economy, and Bali culture.

2. The development strategy which appropriate and can be applied is SO (strengths and opportunities), namely: increasing the sale of products so that consumers are growing and loyal to the products of brown sugar in the study areas by utilizing a resilient workforce with lots of work experience in order to improve product quality in order to seize the consumers in the market, by leveraging the support of local governments to improve their expertise.

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