

Analysis the Implementation of Micro Insurance Product to Farmers in Indonesia

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Abstract: Considering that Indonesia still imports some products to fulfill domestic demand, this causes the amount of farmer is decreasing. In 2014 it declined from 38.97 million to 37.75 million in 2015 and farmers above 54 years old are 8.56 million household farmers (Indonesia's Statistic, 2015). The risks problem such as force majeure which is beyond human control in agriculture sector causes the decreasing of farmer. The risks are uncertain climate, natural disasters, and crop failure due to pests. Other risks that accepted by farmers are a health risk and price. Farming with hoeing and trenches make farmers stay in bending position for a long time, barefoot, exposed to UV rays, direct contact with the chemical compound which is harmful to health. Price of agricultural product is still unstable. Furthermore, government can determine price but not for fertilizers and pesticides. Therefore, all the risks need to be solved. Farmers should be given the micro insurance product to protect themselves towards those risks and encourages farmer's income. But, the micro insurance product demand is still low, because premium payment was considered too expensive with compensation that was not comparable. The problem like complexity of insurance's procedure made they were not interested. Moreover, the existence of this idea is to help farmers. In this paper, we will discuss about how the implementation of micro insurance product which has been done in Indonesia can help farmers. To determine it, the author will analyze farmers who used the micro insurance product. The author also collects data to determine the further impact of using micro insurance product in Indonesia.

Keywords: farmer, force majeure, micro insurance product.

I. INTRODUCTION

INDONESIA is an agrarian country which has the wealth of natural resources. The agricultural sector has the main role towards national economics. The role of agricultural sector is to provide food to all society in Indonesia, to provide the job opportunity, to generate the national income, investment and devisen due to export to other countries. On the other hand, agricultural sector faces the highly uncertain risk, and so far the farmers face it all by themselves. The Indonesian government decides to realize Indonesia has the food sovereignty. Start from 2015, government make a self-supporting of rice program with the target isto reach 75.13 million tons, to provide a one million hectares of crops outside Java, to build a bank to farmer, and give irrigation. The development of agricultural sector is not regardless from the policy that made by the government. The interest from the society to do working in agricultural sector is decreasing. According the research in 2013, it demonstrated that there is a slight decrease in farmer household as amount as 16,3% compared from the year of 2003.

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From the figure, the most decreasing is coming from horticulture sector which reach 337.4 % or 6.34 million of households^[1]. However, the welfare level of farmer tend to below average poor line during the time. The income predicted around five thousand rupiahs per month, then the poverty is still being the crucial problem to farmer^[2]. Unfortunately, the policy in the agricultural sector often tends to not in line with among the government's institution. The example is when in the harvest time, the government company try to buy the rice from market to keep the price fix. But, in the same time, the ministry of trade also decides to import the rice from other countries, then the price is lowering. In addition, the farmer also received the risk of uncertain climate change which affect to the production of agriculture product, and another risk like natural disaster which weakening a motivation to farmer.

In addition, the natural disaster such as flood and dryness occur in turns. This phenomenon could not be overcome in the middle period of time. The fact of ten years recent demonstrated that there has been too much flood crops and the crops suffer dryness^[3].

Working in agricultural sector not only has a high potential but also it has a high risk. The farmers' capability to adapt with climate change constrained by technology, capital and market access. Conventional approachment, such as the strategy of marketing and producing did not seem effective enough. During the time, the government has made some policies and programs to help agricultural sector, especially farmers. For example are the subsidy of seed, fertilizer, production infrastructure, and credit program to farmer. Meanwhile, these policies were not enough to overcome the agriculture sector, especially the crops failure which depends on natural factor.

Therefore, it needs a policy to minimize the risk. It includes risk management to farmer. The system of protection for farmer with development of insurance system is needed, especially for rice commodity. The policy is micro insurance product to farmers.

1.1 The Legal Foundation of Insurance Product to Farmer

To focus on overcoming the risk to farmer, the government helps protecting their work in form of insurance. This insurance for farmer stated in the regulation of 2013 number 19 about protection and endeavoring farmer, supported by the regulation of ministry of agriculture of 2015 number 40 about the facility of agricultural insurance. In the regulation of 2013 number 19 stated that government and local government as the authority must protect the farmer's work in the form of farmer insurance. The insurance to farmers should protect the

farmer from the financial loss of crops failure as the consequence from natural disaster, pests attack, disease, climate change and other risk that regulated in the Minister Regulation^[4].

1.2 Objectives of Farmer Insurance

The objectives of insurance implementing to farmer are protecting the farmers from financial loss after crops failure, improving the position of farmer in the board of funding to get credit, stabilizing the farmer's income after financial loss, improving productivity of agricultural sector and educating farmer to plant well. In the long period of time, the insurance to farmer would decrease the poverty among farmers. Then, the insurance also supposed to increase the national production affect to national income or Gross Domestic Products, next it will decrease the volume of import the agricultural product from other countries.

1.3 Research Method

This research used descriptive research method. Descriptive research involves gathering data that describe events and then organizes, tabulates, depicts, and describes the data collection (Glass & Hopkins, 1984). The author collects the data from many sources that eligible and can be trusted. Such as the Indonesia Statistic Agency.

II. RESULT AND DISCUSSION

2.1 Micro Insurance Product Implementation to Farmers in Indonesia

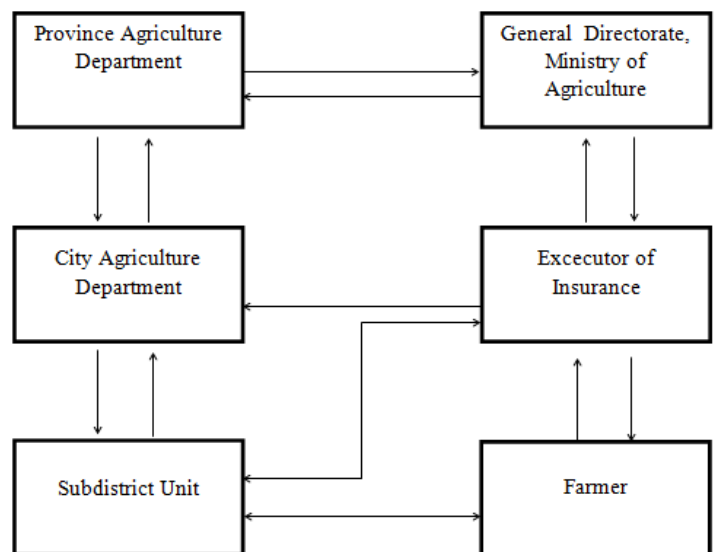
Micro insurance product to farmer is an agreement between farmer and insurance service concerning the matter of the risk of the production of rice^[4]. In this context, a farmer should pay a premium every month to the insurance service in certain amount. A farmer can claim the loss out replacement to the insurance service when he suffers of lose out. The risk covers when flood, dryness and pests attack affect to crops failure, it requires: the age of rice has passes 10 days (after planting), the age of rice has passed 30 days and the intensity of crops failure reach 75% and the scope of crops failure reach 75% at the very real scope.

In this micro insurance, the price of insurance fixed as six million rupiahs per hectare per planting time. This price used as a main premium account and the maximum limitation of risk cover. Premium insurance is the amount that should be paid in getting the insurance. The total of premium is 180,000 rupiahs/ha/planting time. Government gives the subsidy for premium as 144,000 rupiahs/ha/planting time and the rest that should be paid by farmers. The source is from the estimate of income and expenditure of the country or national budget. If the crops scope which insured least than one hectare, then the amount of premium (and risk cover) will be counted proportionally.

The insurance's policy will be highlighted for once planting time with long period started in the expectation of planting and end with the crops time. This micro insurance product will be considered to all farmers in Indonesia. The total scope of planting reach one million hectare of crops.

The picture below showed about the mechanism of agricultural insurance implementing with all the stakeholders. First, the province agriculture department will note the data

from the city agriculture department which also note the data from subdistrict unit. Then, the subdistrict unit will give the socialization about the micro insurance product to farmers and have them registered. After that, the subdistrict unit will verify the data to the executor of insurance (insurance company). The farmers should pay premium to the executor of insurance. After they pay the premium, the executor of insurance will give the insurance policy. The executor will give the fact of premium payment from farmers to City agriculture department. Then, the definite data forwarded to the province agriculture department. It will be there a transfer data between province agriculture department and general directorate ministry of agriculture. The executor of insurance will claim the premium to general directorate. At the end, general directorate will give the premium subsidy to the executor of insurance.



Picture 1. The Implementation of Insurance Agriculture (Source: Ministry of Agriculture, 2016)

There has been four times trials in Indonesia, in Central Java, South Sumatera, and West Sumatera. These trials used the funding from Corporate Social Responsibility of government company, and involved Indonesia Insurance Service Corporation (the insurance company). The ministry of agriculture delivered that the insurance premium will be given to farmer as amount as 80% at the first year, 60% at the second year, and 30% at the third year, and so on until it will be paid full by farmer.

In the implementation, farmer just paid as amount as 20% from the total premium, that is 36 thousands rupiahs per hectare per planting time. Then, the rest will be paid 144 thousand rupiahs per hectare/per planting time by the government. The loss that covered by government is when there is 75% or over from crops failure. It is based on the rationality of insurance source data in 2008, that is mentioned that one hectare crop result average 7 tons rice and the success of 25% farmer still get 6,75 million and enough to cover the input production cost. Then, the damage will be covered when happen a damage equals or over from 75% land damage.

Based on data of Indonesia's Statistic, the area of production crops in 2013 amount as 13,77 million hectares. Under the assumption of trials, the price of premium is 3% from input cost, and the rest will be paid by the government. It means that the government should allocate 1,98 billion (13,77 million hectares x 80% x 180 thousand rupiahs). This accounting has not considered on the socialization cost and association cost. In addition, according to Indonesia's Statistic, this program only covers 7,5% from total rice crops in national level.

After the trials, some of regions still implement the agricultural insurance. Nowadays, the implementation of agriculture micro insurance in Indonesia has developed, but it is not significant. At the first time, the associates gave the socialization and motivation, but the farmers refused it. Then, the associates still tried to give motivation until the farmers received the concept of micro insurance product implementation. The example is in Indramayu City. The area of crops is 4.651 hectares, allotted into 11 district, with 53 team of farmer. After the evaluation, the wide area which insured were 38.5 hectares. It increased 3.5 hectares from 2015. Besides, the crops in South Sumatera also reach around 35 hectares insured in 2015^[5].

In addition, the micro insurance product for farmers in Indonesia is not optimal and justify. In fact the price level in some regions in Indonesia are quite different, for example between North Sumatra and East Java. Both of them have a different standard of production result, production cost, rice price and crops price. However, the government plan and regulation stated that all risks will be covered six million rupiahs when there is 75% crops failure. This policy seems not be spread evenly. For example is the productivity in North Sumatra resulted 5,1 ton/hectare, then in East Java resulted 6 ton/hectare. When there is crops failure, the income loss of farmer is 5,1 ton/hectare in North Sumatra and 6 ton/hectare in East Java. Then, they both will be covered with 6 million rupiahs even with different price level. This is not efficient because farmers in rural area like North Sumatra looks like justified under inefficiency of crops failure. Meanwhile it will also make a disincentive for farmers in East Java who have a higher productivity. These farmers will not stimulate to increase the productivity with adopting high technology. If there is crops failure, the risk cover which they accept is smaller than the risk cover which accepted by farmers who adopt low technology.

Then, if this system and mechanism are implemented continuously, farmers will do a moral hazard. The example of this is farmer being lazier to manage the crops. When the risk cover claimed is when there is 75% crops failure, but actually in the 30-40% crops failure, the farmers had a big loss out and didn't have any capital again to do working in the next planting time. The moral hazard happen when the farmers deliberately failing their crops. For example, after 75% crops failure, it means the rest of crops is 25%. The account showed that 6 million plus result of production selling from 25% crops, is still bigger than 70% crops failure without claim of risk cover. This is the disincentive of micro insurance product implementing in Indonesia.

2.2 Stakeholders

There are six stakeholders that contribute in the implementation of agricultural insurance. They are Policy Committee, The Board of Development and Finance Supervision, Ministry of Agriculture, Ministry of Finance, Insurance Company, and Farmers. The policy committee has to abbreviate and decide some policies and decide the work planning in micro insurance product for farmers. The ministry of agriculture has to be a coordinate the program, decide the priority to farmer, the location, create a founding program for farmers, account the budget and give the premium. The ministry of finance has to allocate the premium subsidy to farmers, account and decide the fiscal risk. The board of development and finance supervision should verify the insurance company and audit the program in a period of time. The insurance company gets premium from farmers, then realize a policy of insurance, pay the claim if the crops failure is happen. Next, the farmers should pay a premium, get a founding, and get a replacement of loss.

2.3 The Implementation of Agricultural Insurance in Other Countries

China is one country who has the biggest implementation on agricultural insurance after US. Farmers who join the agricultural insurance are mostly coming individually with crops failure under all risk (*multiple peril crop insurance/MPCI*). Insurance company also give the product depend on risk. The insurance that will be cover of crops failure are: corn, soya bean, wheat, etc.

The insurance will be given according to their choice. The policy of the subsidy and decision maker is coming from farmer team in district level. In one case, farmers who have not registered as a participant in the insurance because of unable to pay the premium, automatically they will be registered to get the subsidy of premium from Government. The central government, local government and farmers who contributed to pay the premium. The subsidy as amount as 20-100% depend on the condition of the crops.

Not only China, Japan also has implemented the agricultural insurance to farmers, where every cooperation collect the funding from the premium payment. The agricultural insurance scheme depends on the connection of cooperation in local, regional and national level which has around 300 national cooperation. The product type of agricultural insurance in Japan comprise: national program like rice, wheat, barley insurance and livestock insurance, then the choice program like fruits production, any plant and greenhouse insurance. The detail of product insurance can be looked in the table 1^[6].

The agricultural insurance in Japan has been implemented by 300 national cooperation with its capability to serve small farmer and marginal farmer. In joining the agricultural insurance depend on the insurance product and the characteristic of farmer. Even the farmers have not fully the requirement of minimum wide of crops area that should be registered the insurance, they still could join as a participant of insurance voluntary.

TABLE I
INSURANCE PRODUCTS AVAILABLE IN JAPAN
SOURCE : FAO, 2011

Crop insurance product available				Greenhouse	Forestry
MPCL	Named-Peril	Crop Revenue	Based Index		
yes	Yes	no	no	yes	Yes
Livestock insurance products available					Aquaculture
All risk	Accident and mortality	Epidemic disease	Other	Index base	
yes	Yes	yes	no	no	

2.4 Solution

Agricultural insurance is required as a risk management instrument for agriculture^[7]. Implementation of micro insurance product to farmers in Indonesia is still not effective enough. There are some obstacles which face by the stakeholders. The obstacles like the awareness of Indonesian farmer and their willingness to pay the premium to get insurance are still low, even they should pay in a cheap premium. The interest in farmer to participate is low. These obstacles could impede the implementation of agriculture micro insurance. The low of their willingness also caused by the general standard to get the insurance. They will be given the cover if they pay the premium and get suffer the loss till 75% crops failure.

It should be there a crop index from government to measure the loss which has to be covered. Based on the classification of crops failure, it consists of low, middle, and high class. In the harvest time, farmers that categorized in the low class are who reach 30-49% from target of production. It will be claimed 25% from total claim. Farmers that categorized in the middle class are who reach 50-69% from target of production. In this class, the executor of insurance or insurance company will covers 50% from total claim. Then, the high class is who get the highest risk, it is more than 75% crops failure. It will be given a claim as amount as 100%. This system ever worked done in the Sang Hyang Corporation.

In conclusion, government should make a justifiable policy on the society. Government can make a crops index or other indexes which has been done success implemented in other countries. Then, the government also needs to see the productivity per crop in some areas and some other factors that affect to the rice production of some crops. In order create the effective system and justify to the society. To make betterment of micro insurance product implementing, it needs a deep synergy among stakeholders, in order to realize Indonesian welfare, especially for farmers^[8].

III. ACKNOWLEDGMENT

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