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Impact Evaluation of Community Empowerment Programs with the Farmer Managed Extension Model

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Abstract:

Assistance in modern agricultural technology is the implementation of the government's strategic policy to improve people's welfare. However, policy implementation can work effectively if a comprehensive evaluation program has been conducted. Therefore, this study evaluates an agricultural technical assistance program through the aspiration of legislative members of Yogyakarta in 2014-2016.

The objectives of this research are: (1) to map the distribution of aid to the community; (2) to describe the results of the evaluation of agricultural technology assistance program for community empowerment with indicators of program understanding, responsiveness, effectiveness, efficiency and the impact of the program.

The research was done by qualitative-quantitative method (mix methods). Data were collected by interview and questionnaires from 98 respondents in Yogyakarta.

The results showed that the mapping of agricultural technology program assistance is required in four areas, namely coastal, forestry, rice fields/fields, and mountains area. The implementation of aid programs can be channeled to the community as a kind of beneficiary issue. Meanwhile, the evaluation of the tested program, based on the results of the hypothesis testing, is accepted.

***Keywords**: Program evaluation, agricultural technology assistance, and community empowerment.*

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1. Introduction

Indonesia is an agricultural country, so agriculture becomes an important sector in the national economy. This is seen by the large number of people working in the agricultural sector (Breman, 1983). Agricultural sector policy will be useful for national development. Thus, strategic policy needs to be designed in accordance with needs that will have a direct impact on the economic improvement of the society (Mubyarto, 1989).

The agricultural sector, directly facing food, is natural when food security becomes a strategic study to improve welfare (Tauchid, 2007). Increasing welfare in the agricultural sector, is not good to rule out the performance of the people in the informal sector. The performance of this sector consists of several clusters; agriculture, fisheries, forestry, coastal, labor, domestic workers, and others (Rahardjo, 1986). Thus, the government through legislative members directly related to the sector of informal performance is the commission of four in the region of Yogyakarta; fisheries, marine, agriculture, and animal husbandry sectors (DPR RI, 2016). The role of legislative commission, as a function of oversight, has a central role in strengthening the food sector by advocating for the government (Setiawan, 2003). This advocacy agenda, the legislative role can directly propose a strategic step of the agricultural sector policy that is able to encourage the efforts of economic independence of the community. Independence support can be implemented with agribusiness based community empowerment program using modern agricultural technology (Sumardjono, 2008).

Table 1. *Type of Agricultural Technology Assistance Special Region of Yogyakarta (DIY 2014-2016*

No.	**Type of Assistance**	**Realization**				**Total**
		Kulonprogo	**Sleman**	**Gunungkidul**	**Bantul**	
1	Tractor/R4	6	16	3	25	50
2	Tractor/R2	141	288	305	89	823
3	Water Pump	150	86	205	52	493
4	Power Thresher Multiguna	4	6	48	16	74
5	Corn Shelter	4	3	7	4	21
6	RMU	1	1	1	0	3
7	SRI	100	0	0	0	100
8	Rice Transplanter	17	3	8	10	38
9	Combine Harvester	2	0	73	11	86
10	UPPO	4	4	2	0	10
11	Hanspayer	0	0	67	0	67
amount						1765

Source: *Official of Agricultural and Forestly DIY, 2016.*

The data presented is a type of agricultural technology assistance realized during the year 2014-2016. This assistance is channeled to approximately 1,765 group of

peasants (Poktan) that includes into 39 ministry programs (Agriculture and Forestry Office of Yogyakarta, 2016). Moreover, in order for the assistance channeled to be directly benefited by the community, the government needs to evaluate this program. Implementation of the evaluation should be to know the level of success, the extent to which the help of agricultural technology can increase the real productivity and the welfare of the community. This is in line with the results of Permesti (2010) showed that the evaluation of program empowering farmers through agricultural technology and information (P3TIP) in Serang regency is able to improve farming productivity, income and welfare of peasants through increased accessibility to information, technology, capital and production facilities, agribusiness and business partners through the container of Farmer Managed Extension Unit (Locander and Hamilton, 2017).

Fransiska (2003) showed that evaluation of sustainable agriculture program through empowerment intervention in Boyolali, Central Java, determines the behavior change that happened in Sustainable Agriculture programs. Changes in behavior that occurs are that farmers are willing to become a cadre, choosing to use natural fertilizer rather than chemical fertilizers, planting green manure crops and making fertilizer from chicken manure as an alternative natural fertilizer, planting and developing local seeds namely local corn and fragrant rice, and choose to use Natural pesticides. Furthermore, there is a correspondence between the program plan and the outcomes achieved in the two years of program implementation (Luanglath, 2017). Evaluation of the impact of poverty alleviation programs in the agricultural sector in rural areas is generally effective. However, the urgency of stabilizing programming and anti-poverty program policy strategies is still on the way. Common problems are still occurring due to the slowdown in achieving poverty reduction goals with disparities between regions, rural-urban, and inter-income groups (Rahman *et al.*, 2010).

In order to realize anti-poverty programs on a local scale, it is necessary to analyze the evaluation of agricultural programs, in particular, the assistance of modern agricultural technologies. Evaluation is a simulation of the strategic development of future program planning. Evaluation results are important to develop the same program elsewhere, furthermore to make decisions about the sustainability of a program, whether the program needs to be forwarded, corrected or terminated. In addition, evaluation is a way to prove the success or failure of the implementation of a program (Mulyatiningsih, 2011).

Thus, the evaluation of anti-poverty programs is important to pay attention to the potential of village communities with the capabilities, assets, and activities needed to lead a better life (Chambers and Conways, 1992). Therefore, to increase the potential of the community, every program needs to be synergized with the implementation of empowerment which is an effort to help the community so that development can be initiated by identifying the needs, digging and utilizing the existing resources (Muslim, 2012).

Based on the above description, the research questions are: (1) how is the mapping of agriculture technology aid program in Yogyakarta? (2) to what extent is the evaluation of the agricultural technology assistance program running until it can be implemented well?

Thus, this study is an evaluation of community empowerment program of agricultural technical assistance through the aspiration of the House of Representatives of the Republic of Indonesia (DPR RI) commission 4 from Yogyakarta 2014-2016.

The research objectives are: (1) to map the distribution of aid to the community; (2) to describe the results of the evaluation of agricultural technology assistance program for community empowerment with indicators of program understanding, responsiveness, effectiveness, efficiency, and impact of the program (Jogulu and Uma, 2017; Moleong, 2010).

2. Research Methodology

The study uses qualitative and quantitative approaches. It was conducted in four districts throughout Yogyakarta. From 4 districts we collected 392 villages. By using random sampling, taken about 40% of the existing population the number of sample locations were 98 villages (Sugiono, 2013). In each village one Kelompok Kerja Masyarakat (Pokmas)—Gabungan Kelompok Tani (Gapoktan), Kelompok Wanita Tani (KWT), and others—were taken into samples, with distribution among four districts as follows: Kulonprogo 32, Gapoktan, Bantul 19, Gapoktan, Sleman 19, Gapoktan, and Gunungkidul 28. Selection of sample sites is classified based on aid program objectives, covering coastal areas, forestry, rice fields/ farm, and mountains (Azwar, 2012).

Respondents in this study are the parties directly related to the implementation of community empowerment program of agricultural technical assistance, conducted by partners of the legislative committee of the 4th committee of Yogyakarta. They are the people at the district, sub-district and village levels who are actively involved in the program. Institutional informants include the Department of Agriculture and Forestry, Statistics Indonesia (BPS), sub-district heads, village heads, and RWs (village administration coordinating RTs)/ RTs (neighborhood unit) heads (Jung *et al.*, 2016).

The research was assisted by 10 enumerators (field survey team) spread in 98 locations. By using purposive sampling technique, respondents will be given the questions put forward by field researchers with the draft that has been prepared (Kerlinger, 1990). The draft is compiled by instrument or questionnaire as a quantitative analysis. The validation process in this research is using the Delphi technique. This technique is an opinion forecasting procedure to acquire, exchange and create events in the future. In addition, this technique aims to gain an

appropriate consensus among experts on important issues without a face to face discussion (Fazio, 1987). The type of validity used is constructed validity, which is a form of validity that can be used to know what constants are measured by a certain scale (Solimun, 2002). This test tool is used to determine the ability of operational variables as well as measuring concepts that should be measured. In addition, to measure the validity in this study we used excel for windows and SPSS for data analysis (Ghozali, 2006).

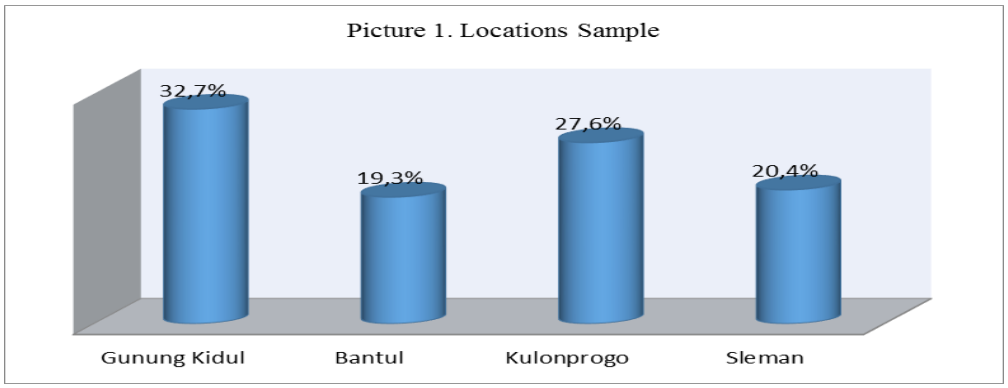
Meanwhile, the test of data validity and qualitative reliability is analyzed descriptively and then given the meaning (interpretative). The steps were taken by reducing (selection, centralization, simplification, and abstraction of course data) matching the focus and purpose of the study. In addition, the data are described in accordance with the data analysis according to Miles and Huberman perspectives, (1994) i.e., the process of analyzing data flowing from the initial stage to the conclusion. The methods of analyses used in this research were a descriptive statistical analysis, ANOVA with Two-Way Interaction, and MANOVA with Interaction (Hapsoro and Suryanto, 2017).

3. Research Results and Discussion

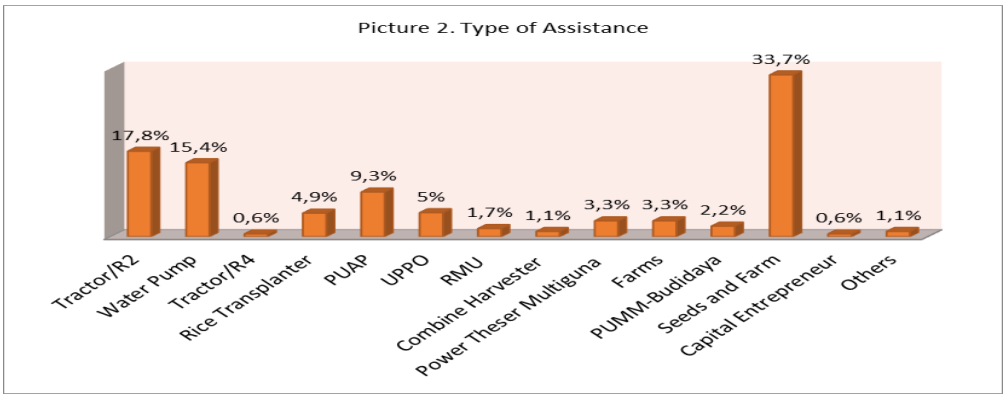
The sample distribution of this research refers to four regencies—Bantul, Kulonprogo, Sleman, Gunungkidul—which consists of mountainous areas, coastal, forestry, and rice fields/farms (Picture 1). This sample data was taken from 98 locations with the assumption of one village per one community working group (kelompok kerja masyarakat—pokmas); combined peasant groups (gabungan kelompok tani—Gapoktan); peasant groups (kelompok tani—Poktan); livestock groups; fishery groups; women's working groups (kelompok wanita tani—KWT); tourism awareness working groups (kelompok kerja sadar wisata—Pokdarwis); fishermen groups and others.

Agricultural technology aid data is collected, with 1765 types of aid (Department of Agriculture DIY, 2016). The type of assistance channeled directly supervised by members of the legislative commission 4 from Yogyakarta, either channel the program directly or provide recommendations recipient name to the central and regional governments (Picture 2). Demographically, four research sites—coastal areas, forestry, mountains, and paddy fields— 2 Pokmas coastal areas, 2 Pokmas forestry areas, 26 Pokmas mountain areas, and 68 Pokmas rice field/farm.

By looking at the data of this research, many spreads are in the area of paddy fields and forestry. This indicates that the agricultural technology assistance program focuses on the area of paddy fields, because in this area assistance is given to the working group in accordance with the life and livelihood of the community such as fisheries, agriculture, livestock, and other agribusiness assistance-capital for farming and livestock.

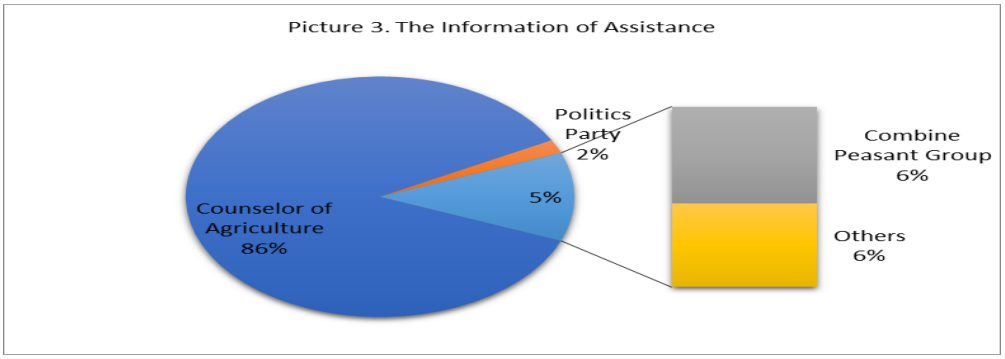


Source: *Primery Data, 2017.*



Source: *Primery Data, 2017.*

The assistance of agricultural technology program be taken out by the government, commonly people can be information access from department or agricultural counselors, politic party, public figure, combine of peasant groups, and others. From data presented in above, the people in submit of the program, they have been to prepare a proposal to submit based on group working them (Picture 3).



Source: *Primary Data, 2017.*

In addition, assistance supplied by the government, until now is not enough because the supply of assistance is given to the group which has legality law, or it is registered by the department of agriculture.

3.1 The Evaluation of Agricurtural Technology Assistance Program

The evaluation of agricultural technical assistance program, can be done by quantitative and qualitative approaches. The qualitative approach is achieved from respondents whi have filed the questionaries. Submitting an opened opinion, with material to be measured, uses a questionnaire (Arikunto and Safruddin, 2004). Most participants responded to questions positively. But, there are still some who do not have a thorough attention to the questions posed.

The question in the qualitative form is an affirmation of the indicators prepared in the quantitative approach. The qualitative approach in this research is based on data that has been presented by the questions (Arikunto, 2002). The qualitative data is intended to explore in depth the items of evaluation of aid programs that have not been revealed clearly and plainly. The results of quantitative data with indicators of program evaluation is using the approach of one sample test method. This method compares, if $t_{count} > t_{table}$ the analysis of conclusions is verified. Meanwhile, if $t_{count} < t_{table}$ the analysis of conclusions in not verified. Table 2 presents the results of the evaluation program.

Table 2. *The Result of Evaluation Program*

No.	Evaluation Indicators	One-Sample Test			N
		Sig. (2-tailed)	t count	df	
1.	Understanding of Program	0,091	6,08	97	98
2.	Responsiveness	0,104	3,62	97	98
3.	Effectiveness	0,144	7,02	97	98
4.	Efficiency	0,173	3,16	97	98
5.	Impact of the Program	0,195	3,90	97	98

Source: *Primary Data, 2017.*

First, indicators of the program: Table 2 above shows that $t_{count} > t_{table} = 6,08 > 0,091$, therefore the analysis of conclusions is verified. In a narrative way, conclusions based on people's understanding show that responses are positive. This means that for all programs from the government, that people understood the program. The Pokmas (kelompok kerja masyarakat/working people groups) are received assistance, understanding the purpose of government aid programs.

This context is a kinship networking having concept society the adhesiveness. The action for legislators is that since there is 'a sticky issue' because the interaction of

people they have to be fair. This is a partially control from the rule of legislators (Lala et al., 2007).

Second responsiveness indicators: Table 2 shows that $t_{count} > t_{table} = 3,62 > 0,104$ therefore conclusions are verified. The conclusions regarding responsiveness indicators from the people received program assistance of agriculture are suitable by societies. In addition people needed more. They must be socialized, trained, and guided on programs‘ effectiveness. This expectation arises from the level of grassroots because the role of extension/companion is less than the maximum. If this can be realized well, it will increase agricultural productivity, so the need for training and assistance is going to be intense and sustainable. Training needs to be given to the beneficiary group so that they will be able to operate the relief goods properly and correctly. This training is also required for the maintenance and maintenance of relief items so that the conditions are maintained and always ready for use at all times.

The central government, so far, when rolling the aid program only refers to the Regulation of the Minister of Finance No. 168 of 2015 on Mechanism of Budget Implementation of Government Assistance to State Ministries/Institutions. The main priorities are:

1) to identify the needs of the beneficiaries;
2) to determine the type and form of government assistance provided;
3) to coordinate the provision of the type of government assistance.

Responding to this issue, the next step should be more synergistic from each related stakeholder. All needs and interests of the community can be contained optimally and efficiently, in accordance with expectations of the achievements of a program itself. Therefore, there should be further evaluation of this issue.

Third, the indicator of effectiveness (presented in Table 2): It is known that $t_{count} > t_{table} = 7.02 > 0.144$, then conclusions have been verified. This is based on the amount of aid received by the community which is running effectively. However, the effectiveness of a program assistance leaves various problems open, such as the average percentage of beneficiaries. From 98 respondents surveyed we had: 1-time acceptance = 25.6%, 2-receipts of assistance = 18.3%, and 3-times the acceptance of aid = 56.1%. From the data presented, the number of aid receipts reached 3 times more compared to 2014. This means that the acceptance of program assistance between 2014-2016 amounted to 1 to 3 times. The types of assistance provided to Pokmas are in accordance with requests and data from relevant agencies, in accordance with the proposals of the community. On the other hand, the response of non-beneficiary community groups leads to injustice. The reason is that farmers have problems in submission of assistance. The government should conduct a re-check or organize the stages of grenade assistance so that other community groups can also feel the aid program. In fact, this phenomenon is in contrary to the

prohibition of the ban of more than one recipient of aid refering to the duties and functions of the Directorate General of Food Crops in Presidential Regulation (peraturan pemerintah—PP) No. 45 of 2015 about the Ministry of Agriculture. This prohibition is intended to synergize food production from upstream to downstream in the archipelago.

Four efficiency indicator: It compares the result of data output at SPSS for Windows processing through one sample test method as in Table 2, $t_{count} > t_{table}$ = 3,16> 0,173, verifing the research hypothesis. This means that the efficiency of the aid program is generally due to the solidarity factor of each group of Pokmas surveyed in this study. The management of the government's relief goods collectively by farmer groups can be further strengthen for both groups. The condition of fate and shame can reactivate Pokmas who have been inactive for long. In addition, there were also community responses saying that this government aid program has not been able to improve agricultural harvest production, but only to help ease the processing. It should also be the government's concern to be more tailored to the next aid program.

Five the impact of efficiency indicator: Table 2 above shows that t count> t table = 3.90> 0.195, therefore the corresponding research hypothesis have has been accepted. In the narrative, the aid programs provided have a positive impact. The community is able to increase the productivity of its income. The real impact of this government assistance program provides significant benefits to the welfare of farmer groups, including:

1) timely planting period;
2) minimize production budget;
3) increase production output;
4) strengthen the spirit of enthusiasm (solidarity);
5) improving the welfare of members of the community working group.

4. Conclusion

The implementation of aid programs can be channeled to the community as a kind of beneficiary issue. Meanwhile, the evaluation of the tested program, based on the research hypotheses testing, is all accepted. Assuming the understanding of the program by the community it has been proved that effectiveness, responsiveness, efficiency and the positive impact for improving the welfare of the community are good indicators. However, the problem that arises from the program that is distributed is the lack of performance of the companion role that causes the conflicting interest. In addition, it is necessary for the government to redesign the pattern of aid distribution which prioritizes the principle of benefit, not on the suggestion of certain groups. The concept of empowerment becomes the key how the community to be involved in the preparatory stage for all the programs that are scheduled forward.

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