International Journal of Progressive Sciences and Technologies (IJPSAT)
ISSN: 2509-0119.

http://ijpsat.ijsht-journals.org
Vol. 8 No. 2 May 2018, pp. 180-187

Evaluation of Business Service Program Services (UPJA) to Rice Farm Productivity in Sub District Percut Sei Tuan, District Deli Serdang

Indah Nurul Ridha*, Iskandarini, Dan Sri Fajar Ayu

Master Program of Agribusiness, Faculty of Agriculture,
University of North Sumatera

Abstract **- The purpose of this research is to analyze UPJA development from 2013-2017 in Percut Sei Tuan Subdistrict of Deli Serdang Regency To analyze Farmer Evaluation using UPJA Program to Productivity of paddy rice farmer in Percut Sei Tuan Subdistrict, Deli Serdang Regency. Data Analysis Method for identification problem 1 was analyzed by using descriptive analysis that explains UPJA development from year 2013-2017. While for identification problem two is analyzed with CIPP evaluation model which combined with scoring method by giving question to sample of research. With CIPP evaluation model (Context, Input, Process, Product) will be given the question of UPJA usage and the question is only given to farmers because the farmer will do the assessment on UPJA usage. From each model has assessment indicators followed by the criteria based on the constructed theory. The data used are secondary and primary data. Research results obtained: 1) From the results of the study is known UPJA development from 2013 to 2017 has increased in the form of increasing the number of farmers who join, the number of alsintan owned UPJA in District Percut Sei Tuan 2) Based on questionnaires using CIPP method showed that the average respondents agreed with the existence of procurement of machines from UPJA program in research area. Seen on the percentage of achievement percentage indicator of 70.54% with a score of 10.57. In the input indicator percentage of achievement of 71.08% with a score of 8.56. On the indicator percentage of achievement of 67.33% with a score of 10.1. On the indicator of the product percentage of achievement of 67.83% with a score of 8.14.**

Keywords **– Evaluation; Context; Input; Product; Process.**

I. INTRODUCTION

Indonesia is an agrarian country, of course, most of its territory consists of agricultural land and most of its inhabitants work as farmers. Indonesia's agricultural development has been carried out in stages and sustainable in the hope of increasing agricultural production as much as possible so as to increase farmers' income in order to achieve prosperity, Increasing food production, increasing income and welfare of farmers is the direction and goal of agricultural development.

The program to increase agricultural production is basically one of the efforts to improve the efficiency of agriculture by utilizing the available natural resources and human resources efficiently, effectively and selectively, in order to increase the production of agricultural products optimally and can increase the income of paddy rice farmers. In increasing agricultural production, production processes covering production activities to post-harvest require the support of various effective production facilities and infrastructure, including the support of agricultural machinery (alsintan).

Agricultural tools and machinery are needed to save production, and appropriate postharvest treatment. The yield losses during postharvest handling have an effect on national rice production. Loss of yield on rice harvested manually by about 8% -15%, whereas if using harvest machine yield loss can decrease up to 1% -3%. According to the Research and Development Agency (2015), farm profits using agricultural mechanization technology increased 81.61% compared to manual technology. The full use of agricultural mechanization technology in rice farming also increased production by 33.83%, also saving manpower and production costs.

Corresponding Author: Indah Nurul Ridha

Kecamatan Percut Sei Tuan is the largest rice production center in Deli Serdang Regency. The development of land area in Percut Sei Tuan tends to fluctuate. Productivity over the last five years has increased. Here is the Achievement of Rice Productivity in Percut Sei Tuan District.

Table 1. Achievement of Rice Field Productivity in Kecamatan Percut Sei Tuan

No	Year	Production Potential (ton/ha)	Productivity (ton/ha)	Percentage (%)
1	2011	8,05	4,27	53,04
2	2012	8,10	5,56	68,64
3	2013	8,54	5,97	69,90
4	2014	9,72	6,75	69,44
5	2015	9,06	6,28	69,31
	Average	**8,69**	**5,76**	**66,06**

Source: Deli Serdang District Agriculture Office (2015)

From Table 1 it can be seen that the achievement of productivity has increased the average productivity of 5.76 ton / ha, with the percentage of 66.06%. Increased productivity of paddy rice in Kecamatan Percut Sei Tuan is caused by several factors such as the use of superior seed, fertilization, use of machinery, etc.

Alsintan in Kecamatan Percut Sei Tuan is managed by UPJA. UPJA is a rural economic institution engaged in services in the framework of optimizing the use of tools and agricultural machinery to gain business benefits. The alsintan of the UPJA program has a positive impact on rice farmers, because it saves time, reduces labor, reduces costs, increases productivity and reduces lost results. Loss of yield at harvest times ranging from 10-12% with use of Combine Harvester can suppress a loss of up to 3%. Other benefits of modern agriculture using alsintan are reduced farming costs and increased farmer income.

Thus the authors feel interested to evaluate the extent to which the implementation and performance of farmers in implementing alsintan of the UPJA program in the area of research so that through this research other farmers are encouraged and able to follow and follow up in his farm. The appropriate evaluation model to evaluate farmer performance is CIPP evaluation model.

The CIPP evaluation model is one of several existing program evaluation techniques. This model is based on the four dimensions of context dimension, input dimension, process dimension, and product dimension. This evaluation intends to compare the performance of various program dimensions with a number of specific criteria, to finally come to a description of the strengths and weaknesses of the evaluated program (Rozak, 2013).

II. Literature Review

A. Theoretical basis

Farming is a process of agricultural production is a process of activities that seek input to produce the product (output). Input is everything that is used in the production process, while the output of the crop produced by the farm. the concept of production is a concept that can not be separated from the basic principles of economic science that is with limited production factors (certain) how to produce the maximum output or to produce a certain level of production how to reduce costs to a minimum. In other words, production is a relative measure of a company's ability to use inputs to produce certain outputs at a certain technological level.

Evaluations have related meanings, each pointing to the application of some value scale to the program. In a more specific sense, evaluation is concerned with the production of information on the value or benefits of policy outcomes. When the results of the policy in reality have value, this is because the results contributed to the goal or objective, in which case it is said that the policy or program has reached a meaningful level of performance, which means that the policy issues are made clear or resolved

The CIPP model (Context, Input, Process, and Product) is one of the models in determining evaluation. This model looks at four aspects, namely context, input, process, and product. The uniqueness of this model is on any type of evaluation related to decision-making devices related to the planning and operation of a program or cooperation undertaken. The advantages of the CIPP model are to provide a comprehensive evaluation at each stage of the evaluation, ie the context, input, process and product stages.

B. Previous Research

Rahayu (2012), has conducted research on "Evaluation of Seed Procurement and Analysis of Revenue of Potato Farming at Farmer in Sabani Farm of Pangalengan Subdistrict, Regency of Bandung", which used Evalusai CIPP analysis. The results of the study stated that the form of cooperation run between Sabani Farm with farmers is profit sharing system, where the percentage of profits depends on the agreement at the beginning and based on the amount of equity participation issued by both parties.

Claudia (2016), in his research "Evaluation of Implementation Implementation of System Of Rice Intensification (SRI) Implementation System in Rice Farmers, (Case: Kramat Gajah Village Galang District Deli Serdang District)", using CIPP evaluation method. The result of this research stated that the result of research using CIPP (Context, Input, Process, Product) model shows that the implementation performance of System of Rice Intensification (SRI) planting pattern by rice farmers in Kramat Gajah Village Galang Subdistrict Deli Serdang Regency good enough with the overall score obtained by 44.02 from the expected score of 57, with percentage of achievement of 77.23%.

III. Method Research

A. Method of Site Selection

The location of the research is purposive, in Percut Sei tuan District, Deli Serdang Regency, North Sumatera Province, with the consideration that in this sub district is the active farmer group of UPJA receiver in North Sumatera.

B. Sample Determination Method

Based on the information obtained from BP3K Percut sei tuan there are 11 UPJA Group, with the number of members 215 farmers in 2017.Untuk determine the number of samples, then in this study was done by using Slovin formula. From the results of the study known the number of samples taken is as many as 68 farmers. From the calculation of the sample by using the above formula, then obtained the number of samples from members of farmer groups as much as 68 sample farmers who carry out rice farming business. Then the number of respondents in the Research Village to be selected as the sample is selected based on the number of farmers who are members of the farmer group, the allocation of proportional samples.

C. Data analysis method

To evaluate the identification problem 1 is analyzed by using descriptive analysis that explains UPJA development from year 2013-2017. While for identification problem 2 is analyzed with CIPP evaluation model which combined with scoring method by giving question to sample of research. With CIPP evaluation model (Context, Input, Process, Product) will be given the question of UPJA usage and the question is only given to farmers because the farmer will do the assessment on UPJA usage.

IV. Result And Discussion

A. Development of UPJA

The existence of Service Business Services Alsintan (UPJA) dilatarbelakangi by the existence of business opportunities where there is a gap between the needs of alsintan (machine tools agriculture) with the availability of alsintan in a region. Whereas alsintan is needed by farmers to accelerate the processing of soil, water supply, increased index of plants, reduce yield loss and so on. Meanwhile, farmers do not have enough capital to buy alsintan. By using UPJA farmers only spend the cost of rent (according to agreement) without having to buy alsintan own.

Based on data of UPJA Kecamatan Percut Sei Tuan and interview with Head of BPP Coordinator of Percut Sei Tuan, Head of UPT of Agriculture Sub-District of Percut Sei Tuan and Extension of Percut Sei Tuan Sub-district and UPJA member and management and questionnaire distributed to 68 Respondents are known UPJA development from year 2013 - 2017 has increased in the form of increasing number of farmers who join, the number of alsintan owned UPJA in Percut Sei Tuan District.

B. Increased Number of Active Farmers

Based on the data provided from UPJA and it is known from year to year the number of farmer groups in Percut Sei Tuan subdistricts who joined UPJA program always increased. This can be seen in the following table.

Table 2. Number of Active Farmers in Kecamatan Percut Sei Tuan

No	Year	Number of Rice Farmers	Number of Active Farmers UPJA	Percentage
1	2013	250	159	63,6
2	2014	250	189	75,6
3	2015	250	195	78
4	2016	258	202	78,2
5	2017	258	215	83,3

Source: Appendix 3

From the table above from year to year there is an increase in the number of wetland paddy farming groups joining the UPJA program. This is because rice farmers feel there is an increase in productivity from the former not using alsintan from UPA program.

C. Increasing the Number of Alsintan

From 2013-2017 there is an increase in the inventory of agricultural machineries. This increase occurs in the form of new tools as well as the number of tools owned. Below is the list of alsintan owned by UPJA in Kecamatan Percut Sei Tuan from 2013-2017.

Table 3.The Alsintan list owned by UPJA Dos Roha

Year	Type of Alsintan					amount
	TR4	TR2	PThrsr	CH	PA	
2013		2				2
2014	1	2				3
2015	1	3	1		1	6
2016	1	4	1	1		7
2017	1	4	1	2	1	9

Source: Appendix 4

From the table above can be seen that the number of alsintan owned UPJA Dos Roha every year increased. Increasing the number of alsintan proportional to the number of members of farmers groups in UPJA is increasing every year.

Table 4. List of Alsintan owned UPJA Saroha

Tahun	Type of Alsintan					Amount
	TR4	TR2	PThrsr	CA	PA	
2013		1				1
2014		2				2
2015		2		1	1	4
2016		2		1	1	4
2017		3	1	1	2	7

Source: Appendix 4

From the table above can be seen that the number of alsintan owned UPJA Saroha every year increased but tend to remain in 2015 until 2016. UPJA Saroha is UPJA which has the number of active farmer group members about 3 farmer groups.

D. Result of Program Evaluation Model Using CIPP Method

With the CIPP model, this model divides the evaluation into four types: context evaluation (planning), input evaluation (regulates decisions to achieve specific goals), process evaluation (helps decisions to what extent the program has been implemented) and product evaluation

(review of decision). The four kinds of CIPP evaluation (Context, Input, Process, Product) consist of indicators on each dimension of CIPP evaluation model that describes how the use of alsintan from UPJA Program in research area

The four dimensions of CIPP evaluation are visualized into aspects of the assessment of the use of alsintan from the UPJA Program. To see the assessment of each indicator and criteria can be seen as follows:

Table 5. Application of Alsintan Usage From UPJA In Percut District

Sei Tuan, Deli Serdang District

No	Model CIPP	Performance Indicators
1	Context	• UPJA program as a planner to increase knowledge and skills of farmers in cultivation using alsintan • UPJA Program as Planning Agency participates in the use of machinery • The UPJA program plays a role in establishing superior farmers in the group. • UPJA program to plan in improving productivity and effectiveness of rice farming through the use of alsintan • The UPJA program of farmers using alsintan increased.
2	Input	• Through the UPJA Program the farmers are willing and ready to accept the use of alsintan for their farms • UPJA program plays a role in the availability of agricultural production facilities • UPJA is willing to assist and provide training as a facilitator • The UPJA program provides space for group discussions and extension activities
3	Proses	• UPJA program meets the availability of Alsintan • UPJA program facilitates the leasing of Alsintan • The UPJA program provides direction and guidance on the use of Alsintan • UPJA works with farmers in the maintenance of Alsintan • Participation and Communication of farmers in the use of alsintan from UPJA
4	Product	• Production in increased rice fields using alsintan from UPJA • The existence of UPJA Program, farmers are able to utilize facilities in managing their farms • The UPJA program contributes to the development of

innovation and motivation in farming using alsintan

- The existence of Dynamics in farmer groups and UPJA

Source: Processed on the basis of Theory and Concept of UPJA guidelines

Table 6. Category of Assessment per Performance Dimension According to the Evaluation Model CIPP

No	Model CIPP	Assessment Range	Range (X end - initial X) / 3	Category Scores	Assessment Category
1	Context	5 – 15	3,33	5 - ≤ 8,3	Disagree
				≥8,4 - ≤ 11,7	Agree
				≥ 11,8 -15	Strongly agree
2	Input	4 – 12	2,66	4 - ≤ 6,6	Disagree
				≥ 6,7 - ≤ 9,3	Agree
				≥ 9,4 – 12	Strongly agree
3	Proses	5 – 15	3,33	5 - ≤ 8,3	Disagree
				≥8,4 - ≤ 11,7	Agree
				≥11,8 – 15	Strongly agree
4	Product	4 – 12	2,66	4 - ≤ 6,6	Disagree
				≥ 6,7 - ≤ 9,3	Agree
				≥ 9,4 – 12	Strongly agree

Source: Appendix 3 Processed

Based on assessment indicators UPJA usage in Research Areas that have been described before it can be seen the transformation of UPJA usage in the whole research area (context, input, process, and product) can be seen in the following table:

Table 7. Results of Transformation of UPJA Use Value by Farmers Wetland Rice in Research Area

No	Indicator Description	Expected Score	Scores gained	Achievement (%)	Assessment Category
1	Context	5 – 15	10,57	70,54%	Agree
2	Input	4 – 12	8,56	71,08%	Agree
3	Proses	5 – 15	10,1	67,33%	Agree
4	Product	4 – 12	8,14	67,83%	Agree
Number of Scores Expected		18 – 54			
Range		12			
Number of Scores gained			37,37		AGREE
The total number of% CIPP achievements				69,19%	

Source: Appendix 3 Processed

V. Conclusions And Sugesstions

A. Conclusion

1. Based on data obtained from the year 2013-2017 shows that the use of Alsintan from UPJA. Evidenced by the increasing number of alsintan from year to year, Increasing the number of rice farmers and increasing alsintan straight proportion. The biggest UPJA group is Dos Roha and Saroha, UPJA Dos Roha group has alsintan 9 units with 5 kinds of alsintan and categorized in UPJA developing, while group of UPJA Saroha have alsintan totaling 7 units with 5 kinds of alsintan and categorized in UPJA developing.

2. Based on the questionnaires using the CIPP method showed that the average respondent agreed with the existence of procurement of machines from the UPJA Program in the research area. Seen on the percentage of achievement percentage indicator of 70.54% with a score of 10.57. In the input indicator percentage of achievement of 71.08% with a score of 8.56. On the indicator percentage of achievement of 67.33% with a score of 10.1. On the indicator of the product percentage of achievement of 67.83% with a score of 8.14.

The assessment results of each dimension of performance evaluation of the use of alsintan of UPJA program are as follows:

a) In the context indicator, the highest score of 2.27 (75.6%) is that with the UPJA program more farmers use alsintan, while the indicator with the lowest score of 1.93 (54.33%) ie the UPJA program can play a role in planning improves the productivity and effectiveness of farming through the use of alsintan.

In the input indicators, the highest score of 2.37 (79%) is UPJA willing to assist and provide training as facilitator, while the lowest score indicator is 1.69 (56.33%) ie the UPJA program plays a role in the availability of agricultural production facilities.

In the process indicator, the highest score of 2.47 (82.33%) is the UPJA program provides direction and guidance in the use of alsintan while the lowest score is 1.69 (56.33) ie UPJA program facilitates the leasing of machineries.

In the product indicator, the highest score of 2.07 (69%) is the production of paddy rice increased by using alsintan from UPJA, while the lowest score of 2.00 (66.66%) ie the UPJA program, the farmer is able to use the means to manage the farming .

B. Suggestion

After doing analysis done in research hence writer have suggestion as follows:

1. For Farmers who have not followed UPJA program and use Alsintan, the authors suggest to apply the technology Alsintan of UPJA Program because based on the results of research proved to be able to improve efficiency, productivity, quality results and reduce the workload of farmers.

2. To the Government to provide assistance to farmers through UPJA both in terms of capital which will help in the procurement of alsintan and in terms of extension that will help farmers in learning the latest alsintan and help manage UPJA cash to seek new alsintan, and play a role in improving utilization alsintan and the development of the amount to support the rice productivity improvement program.

3. For further researchers, it is advisable to examine the income analysis of farmers who use UPJA and who do not use UPJA.

References

[1] Arikunto, Suharsimi dan Abdul Jabar, Cepi Safrudin. 2004. *Evaluasi Program Pendidikan, Pedoman Teoritis bagi Praktisi Pendidikan. Bumi Aksara: Jakarta.*

[2] Asni, 2013, *Sikap Dan Perilaku Nelayan Terhadap Kinerja Himpunan Nelayan Seluruh Indonesia (HNSI)* (Kasus : Desa Bagan Serdang Kecamatan Pantai Labu Kabupaten Deli Serdang), skripsi, usu

[3] Badan Litbang Pertanian. 2015. Prospek Pengembangan Modernisasi Pertanian-Full Mekanisasi. Bogor

[4] Badan Pusat Statistik. 2016. Produksi, Luas Panen Padi Sawah di Indonesia Sumatera Utara.

[5] Claudia, 2016. *Evaluasi Kinerja Pelaksanaan Penerapan Pola Tanam System Of Rice Intensification (SRI) Pada Petani Padi* (Kasus : Desa Kramat Gajah Kecamatan Galang Kabupaten Deli Serdang, skripsi, usu

[6] Corry, 2016, *Evaluasi terhadap Pelaksanaan Kesepakatan Agribisnis Kopi antara PT. Volkopi Indonesia dan Petani* (Kasus : Agribisnis Kopi

Kecamatan Lintongnihuta dan Kecamatan Paranginan Kabupaten Humbang Hasundutan, skripsi, usu

[7] Direktorat Alat dan Mesin Pertanian. 2011. *Penguatan Usaha Pelayanan Jasa Alsintan (UPJA) Pemula, Berkembang, dan Profesional. Dirjen Prasarana dan Sarana Pertanian. Kementrian Pertanian*. Jakarta

[8] Dewi, 2014. *Hubungan Antara Karakteristik Petani Peternak Sapi Dengan Kinerja Penyuluh*. skripsi, usu

[9] Dunn. William N. 1999. Analisis Kebijakan Publik. Yogyakarta: Gadjah Mada University Press.

[10] Febrina, 2014, *Persepsi Petani Terhadap Kinerja Kemitraan Kelompok Tani Dengan Perusahaan Eksportir* . skripsi, usu

[11] Hamidah, 2014, *Evaluasi Kinerja Usaha Agribisnis Kerapu* (Studi Kasus: Desa Pulau Sembilan Kecamatan Pangkalan Susu Kabupaten Langkat), Skripsi, USU.

[12] Mashudi. 2000. *Analisis Usaha Persewaan Traktor Tangan di Kabupaten Sleman*. Yogyakarta.

[13] Mosher, A. T. 2007. *Menggerakkan dan Membangun Pertanian*. Jakarta : Jayaguna.

[14] Moehariono, 2010, *Pengukuran Kinerja Berbasis Kompetensi*. Bogor, Penerbit Ghalia Indoneia.

[15] Mubyarto. 2004. *Pengantar Ekonomi Pertanian Edisi Ketiga*. Jakarta

[16] Mubyarto. 2009. *Ilmu Usaha tani, BPFE*. Yogyakarta

[17] Patton, Sawicki. 1991. Basic Methods of Policy Analysis and Planning. Prentice Hall.

[18] Rahayu, Firna adriyani, 2012. *Evaluasi Pengadaan benih dan analisis Pendapatan usahatani kentang pada petani di Sabani Farm Kecamatan Pangalengan, Kabupaten Bandung*. Skripsi, IPB

[19] Rozak, Achmad Miftahur. 2013. *Teknik Evaluasi Program Model CIPP (Context, Input, Process, Product).* www.kompasiana.com

[20] Sastraatmadja, Entang. 2006. *Untukmu Dewan Ketahanan Pangan*. Bandung : Masyarakat Geografi Indonesia.

[21] Sasmita, 2014, *Persepsi Petani Hortikultura Terhadap Kemitraan Agribisnis Dengan PT. Alamanda Sejati Utama* (Kasus: Gapoktan Maju Bersama Desa Tiga Panah Kecamatan Tiga Panah Kabupaten Karo), Skripsi, USU

[22] Siam, S. 2000. *Membangun Sistem dan Kelembagaan Usaha Pelayanan Jasa dan Mesin Pertanian (UPJA) Mendukung Program Ketahanan Pangan. Direktorat Jenderal Tanaman Pangan dan Hortikultura*. Jakarta.

[23] Sihite, 2013. *Analisis Hubungan Kinerja Kelompok Tani Dengan Pendapatan Usahatani Petani* (Kasus : Desa Sempajaya Kecamatan Berastagi Kabupaten Karo). Skripsi, USU

[24] Sebayang, Thomson, 2002. *Analisis Sistem Unit Pelayanan Jasa Alsintan (UPJA) dan dampaknya terhadap pengembangan ekonomi*. Laporan Akhir. Universitas Sumatera Utara

[25] Tayibnapis, Farida Yusuf. 2008. *Evaluasi Program dan Instrumen Evaluasi*. PT. Rineka cipta, Jakarta.

[26] Usman, Husaini dan Purnomo Setiady Akbar. 2008. Metodelogi penelitian sosial, Jakarta. PT. Bumi Aksara.

[27] Yulianto, Adi Kusumo , 2008. "*Analisis Kinerja Keuangan Bank Syariah Mandiri Periode 2002-2007*". Jurnal Ekonomi Islam, Vol. II, No. 1, Juli.

[28] http://www.agrina-online.com/redesign2.php?rid=7&aid=4803.Tabloid Agribisnis Dwimingguan Agrina, 6 Januari 2014.