

# Institutional Performance of Agricultural Extension on the Rice Plant Production Improvement and Sustainable Food Security in West Java, Indonesia

Lukman Effendy<sup>1,\*</sup>, Detia Tri Yunandar<sup>1</sup>, Ismaya Parawansa<sup>2</sup>, Agusabti<sup>3</sup>, Sujarwo<sup>4</sup>, Ume Humaeda<sup>5</sup>

<sup>1</sup>Sustainable Agricultural Extension Study Program, Polbangtan, Bogor, Indonesia

<sup>2</sup>Institutional and Manpower Sector, Agricultural Education Center, BPPSDMP, Jakarta, Indonesia

<sup>3</sup>Faculty of Agriculture, Syiah Kuala University, Aceh, Indonesia

<sup>4</sup>Faculty of Agriculture, Brawijaya University, Malang, Indonesia

<sup>5</sup>Agricultural Extension at the Center for the Assessment and Application of Agricultural Technology (BBPPTP) Bogor, Indonesia

Received November 7, 2022; Revised February 15, 2023; Accepted February 22, 2023

## Cite This Paper in the Following Citation Styles

(a): [1] Lukman Effendy, Detia Tri Yunandar, Ismaya Parawansa, Agusabti, Sujarwo, Ume Humaeda, "Institutional Performance of Agricultural Extension on The Rice Plant Production Improvement and Sustainable Food Security in West Java, Indonesia," *Universal Journal of Agricultural Research*, Vol. 11, No. 1, pp. 208 - 216, 2023. DOI: 10.13189/ujar.2023.110121.

(b): Lukman Effendy, Detia Tri Yunandar, Ismaya Parawansa, Agusabti, Sujarwo, Ume Humaeda (2023). *Institutional Performance of Agricultural Extension on The Rice Plant Production Improvement and Sustainable Food Security in West Java, Indonesia*. *Universal Journal of Agricultural Research*, 11(1), 208 - 216. DOI: 10.13189/ujar.2023.110121.

Copyright©2023 by authors, all rights reserved. Authors agree that this article remains permanently open access under the terms of the Creative Commons Attribution License 4.0 International License

**Abstract** The performance of agricultural extension institutions is thought to have contributed to the increase in rice production which has an impact on food security, therefore research was conducted in several sub-districts of Karawang, Cianjur, Sumedang and Tasik Regencies as rice production centers in West Java. This study aims to: (1) describe the performance of agricultural extension institutions at the sub-district level in increasing production and food security, (2) analyze the factors that influence performance, and (3) find strategies to increase performance. Determination of respondents was carried out in stages starting with the sub-district extension coordinator, sub-district extension officers, and 225 farmers assisted by extension workers. Data collection was carried out through direct interviews using a questionnaire that had been tested for validity and reliability. The research results found; (1) institutional performance directly affects the increase in rice production, besides being influenced by extension technical competence and organizational commitment; institutional performance in Karawang Regency by most respondents was considered unsatisfactory with an average score of 2.663, so it still needs to be improved to increase rice production, (2) agricultural extension

institutional performance (Y1) is determined by the availability of agricultural development programs (X6) and achievements (X5); and (3) The strategy for increasing institutional performance in increasing rice production can be started by running available development programs, at the same time encouraging agencies to continue to achieve achievements.

**Keywords** Performance, Agricultural Extension, Rice Plant Production, Sustainable Food Security

## 1. Introduction

The existence of Law No. 23 of 2014 about Regional Government impacts on the agricultural extensional institution. According to the law No. 16 of 2006 about Extensional Institution in province level called *Bakorluh*, district/city level called BP4K, and district level called BP3K, have all been erased following the respective regional government selection. By erasing the extensional institution, the extension worker becomes unclear, specifically in career development, which affects the

extension worker and motivations in performing their functional duties.

In this condition, the Indonesian Ministry of Agriculture in 2019 has started the national program called *Komando Strategis Pembangunan Pertanian* (Agricultural Development Strategic Commands, KOSTRATAN), as a movement to improve the export commodity production and productivity at the sub-district level called KOSTRATANI for optimizing the agricultural extension bureau (Balai Penyuluhan Pertanian) roles and supporting the production and productivity improvement program [14]. Moreover, BPP is a data and information center, extension worker and farmer training center, agribusiness consultation center, partnership networking center, and sub-district regional development coordination. Indonesian Ministry of Agriculture

Priority Program is conducted as a strategic effort to improve the production and productivity of agriculture commodities for 267 million inhabitants' food supply in Indonesia.

In two years (2019 – 2021), the KOSTRATANI movement during the pandemic period in certain duties was still not optimal, which can be suspected to affect the extension activities.

Based on the description above, there are at least three conditions that will become the problems and challenges, namely; (1) the agricultural extensional institution has not been steady as an implication of Laws No. 23 of 2014, mainly in the institutional entity, (2) The Indonesian Ministry of Agriculture has been continuously required to improve rice plant production to supply the food for 267 millions of inhabitants during the pandemic period, (3) BPP as a leading extensional institution has been expected as commodity production and productivity improvement controllers by optimizing the BPP roles as data and information center, extension workers and farmers training center, agribusiness consultation center, partnership networking center, and sub-district regional development center. This condition encourages the authors to conduct a further study to discover a strategy for improving the institutional performance of agricultural extension. Therefore, this study aimed to: (1) describe the institutional performance of agricultural extension for rice plant production and food security improvements, (2) analyze the factors that affect the rice plant production and food security improvements, and (3) discover a strategy for the institutional performance of agricultural extension improvement for increasing the rice plant production and food security in West Java.

## 2. Literature Reviews

According to Bernadin and Russel [5], performance is defined as notes regarding many results obtained from somebody or achievements. Meanwhile, Atmosoeparto [4] stated that performance is a synergic effect of two factors:

ability level and motivation level. Similarly, Ainsworth et al. [1] stated that performance is function of capability and motivation, which means that performance is somebody's product of capability and desire.

Simply, performance model contains  $P$  (Performance) =  $f \{A$  (ability)  $\times M$  (motivation) $\}$ . Performance can be affected by several factors, due to the performance of various factor integrations (Hersey and Blanchard, [10]. Performance is an integration of various factors, namely: knowledge, data and information source, strategic position, process, and structure. Knowledge factor contains technical problems, administrative, human processes, and system. According to Robins [15], there are four individual variables that affect performance: (1) biographical characteristics, such as age, sex, marital status, number of responsibilities, and working period, (2) capability, such as intellectual capability, physical capability, job and capability conformity, (3) personality, and (4) learning. Ainsworth et al. [1] explained further regarding performance that can be divided into several factors,  $P = \{Rc \times C \times E \times V \times Pf \times Rw\}$ ; namely: role clarity, competence, environment, values, preferences, and rewards, which can be formulated as Harun [11] described that the company worker performance factor is determined by leadership, commitment, and organizational culture. Similarly, Hasibuan [12] stated that leadership is extremely necessary for an institution or organization, both government and non-government. Leadership attaches to a leader for acting and authorizing his leadership by directing his subordinates to work on half of his job, which can reach institutional or organisational goals. According to Saebani [16], leadership success is also determined by the leadership characteristics: capacities, such as intelligence, precautions, public speaking, originality, and assessing capability, Achievement, such as bachelor title, knowledge, successive, and sports, Responsibility, such as independent-initiative, diligent, aggressive, confident, and desire to move forward, Participation, such as active, sociable, cooperative, adaptable, and humorous.

Allen & Smith [2] said that commitment is a psychological state that binds individuals to organizational units, which is psychologically visible from the employee's relationship with the organization and has implications for decision making. Organizational commitment in general is a provision that is mutually agreed upon by all personnel in an organization regarding guidelines, implementation and goals to be achieved together in the future. Organizational commitment is generally the terms approved by all personnel in an organization regarding guides, implementation, and goals that can be achieved together in the future.

Wibowo [21] stated that commitment can also be defined as a strong acceptance by the individual of goals and organizational values. Individuals strive and work with a strong desire to stay in the organization. Meanwhile, Sutrisno [17] stated that commitment is a loyal character by workers in his organization and a process of expressing

attention and participation in the organization. Wibowo [21] also described that commitment is basically an individual willingness to be bound and loyal to the organization because of the involvement feeling in the organization's activity.

The entity in the Indonesian General Dictionary is defined as a tangible unit. An entity can also be defined as an individual or an institution with law enforcement. Therefore, an agriculture extensional institution entity is defined as a unique form and character in an agriculture extensional institution [20]. Theoretically, there are basic elements, that are generic in a regional governmental institution to assist the regional government by conducting the autonomy optimally, mainly as a democratization creator and a local welfare creator, we should understand philosophically the basic elements that form the regional government as a governmental entity. According to Hasibuan [12], the achievement is the result of the work that a person achieves in carrying out the tasks charged to him, based on proficiency, experience, seriousness, and time. Meanwhile, As'ad [3] defined working achievement as personal success in carrying out a job.

A success value in a job can be determined by achievement. Therefore, the assessment of working achievement is a process in an organization that evaluates or assesses the working achievement. According to Effendy [9], the working-achievement factors that need to be assessed are: (1) Working quantity; The number of jobs conforms with the working period, what needs to be considered is not routine results, but how quickly the work can be completed, (2) Working quality; quality of work that is based on established standards, which can be usually measured through accuracy, skill, and cleanliness, (3) Reliability; Workers can be relied based on their ability to fulfill or follow instructions, initiative, care, diligence, and cooperation, (4) Initiative; The ability to recognize problems and take corrective actions, provide suggestions for improvement, and accept the solving responsibility, (5) Diligence; A willingness to perform routinely-conducted tasks without coercion, (6) Behavior; Worker characters on the company, superiors, or colleagues, and (7) Presence; Workers should present in the company to work based on a certain working time/hours.

A working program is a planned schedule that has been designed and agreed together for being conducted in a certain period. A working program should be created

directionally, which will become an organisational manual for reaching a goal. Moreover, the working program can also become a benchmark to achieve the target when carrying out a job, as the result will be evaluated at the end of the committee. The program presence aims to: 1) Assist the vision and mission of the company, 2) Answer the organizational necessity, and 3) Direct the organization to work systematically-structured. The developmental strategy of agriculture is performed to reach, food security, starting from the agricultural data gained from BPP.

Agriculture development aims to supply food for 267 million inhabitants, increase farmer welfare through agricultural commodity export, production and productivity increases, quality, and continuity of agricultural commodities. To reach these goals, agricultural development strategy command (KOSTRATANI) has been established, based on the PERMENTAN [14].

### **Framework**

The Agricultural Extension Center (BPP) has quite important urgency on regional development. The advanced farmer group is influenced by the contribution and activeness of agricultural extension workers, coordinated by BPP, so BPP is also the leading institution at the sub-district level as the main node in agricultural human resource management.

In addition to becoming the leading human resource development node BPP has roles to improve service quality as an agricultural stakeholder involved in a sub-district level, so the wheel of agricultural development at a sub-district level can move, following the respective duties. Therefore, sufficient institutional support and facility are necessary to create an ideal condition. Based on the literature review above, this study identifies several independent variables closely related to performance, namely: extension worker competence ( $X_1$ ), leadership ( $X_2$ ), human resource commitment to the institution ( $X_3$ ), institution entity ( $X_4$ ), achievement ( $X_5$ ), and working program ( $X_6$ ), while the dependent variable is BPP performance ( $Y_1$ ), based on the Kostratani duties, i.e. data and information center, extension worker and farmer training center, agribusiness consultation center, partnership networking center, regional development center, production improvement ( $Y_2$ ), and food security ( $Y_3$ ), which are schematically presented in Figure 1.

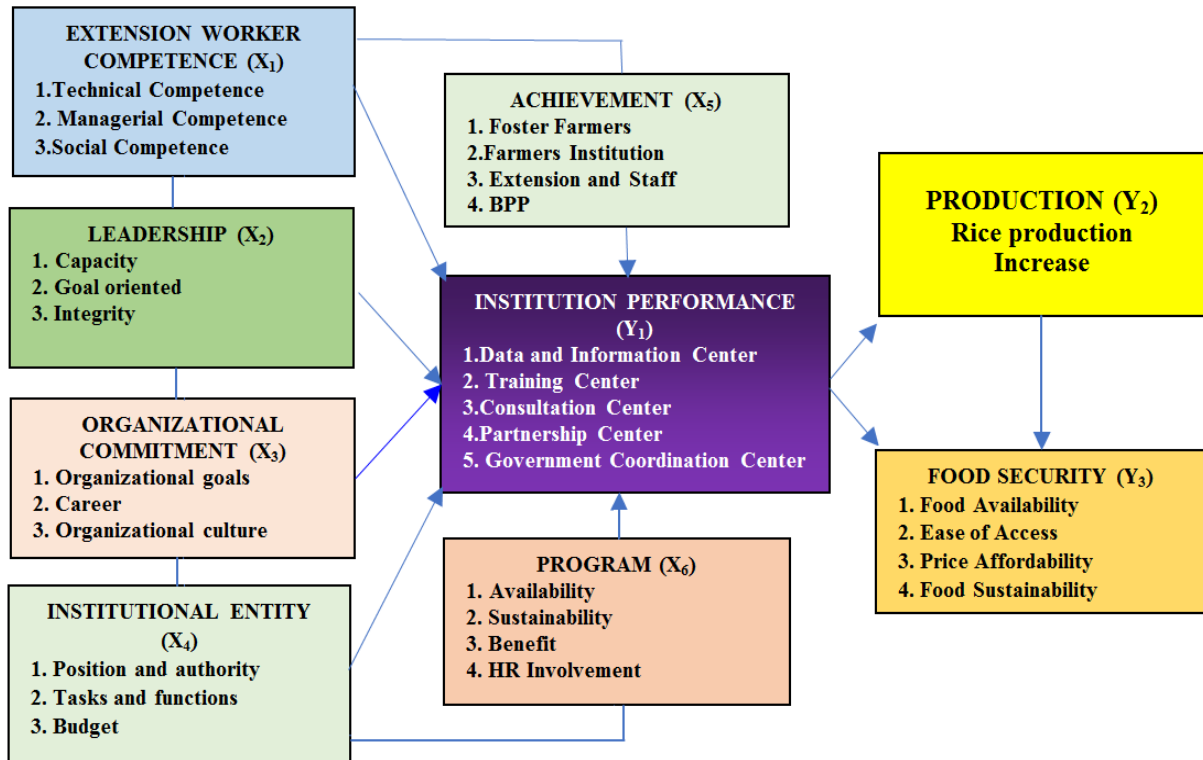


Figure 1. Hypothesis framework on The Institutional Performance of Agricultural Extension in Rice Plant Production and Sustainable Food Security Improvements in West Java

### 3. Methods

This research was conducted in four districts of West Java rice production centers, namely Karawang, Cianjur, Sumedang, and Tasikmalaya districts, as considered to have a sub-district extensional institution. The study was performed for 7 months on February – August 2022. This study used a survey method with a questionnaire containing questions and statements associated with selected variables and indicators [18]. Before using the questionnaire, it was first tested for validity and reliability. The population and sample were determined in stages (three stages; coordinating extension agents, field extension workers, and assisted farmers). Three BPP were selected based on the land area and rice plant productivity level. Respondents were selected based on a quota of extension workers and farmers in each BPP and district, which were found at 225 respondents. Collected data were composed of several variables, namely independent variables (X), i.e., extension worker competence (X<sub>1</sub>), leadership (X<sub>2</sub>), organization commitment (X<sub>3</sub>), institution entity (X<sub>4</sub>), achievement (X<sub>5</sub>), and working program (X<sub>6</sub>). The dependent variables (Y<sub>1</sub>) contain institutional performance, i.e., data and information center, extension worker and farmer training center, agribusiness consultation center, partnership networking center, regional development center, rice plant production (Y<sub>2</sub>), and food security (Y<sub>3</sub>).

A validity test was performed to determine the validity

of each question. Item validity can be determined by observing the Pearson’s Product Moment correlation between the item and the total of each instrument with SPSS. Meanwhile, the reliability test result was obtained from the Alpha Cronbach, as each variable was 0.872 – 0.996 (all variables were 0.981), thus the questionnaire can be used as a data-collecting tool. The collected data were analyzed in two ways; descriptive statistical analysis and inferential statistics called Partial-Least Square (PLS). *Partial least squares structural equation modeling (PLS-SEM) is one of the options used to analyze mediation effects.*

### 4. Results

#### 4.1. Extensional Institution Regulation and Resource

Based on the available information and data, the location has several aspects, such as different extensional institution regulations, various numbers of extension workers, number of villages 7-12 villages, various land areas and extensional regions, and rice plant production contribution in West Java is 2.5 – 13.35%, as presented in Table 1.

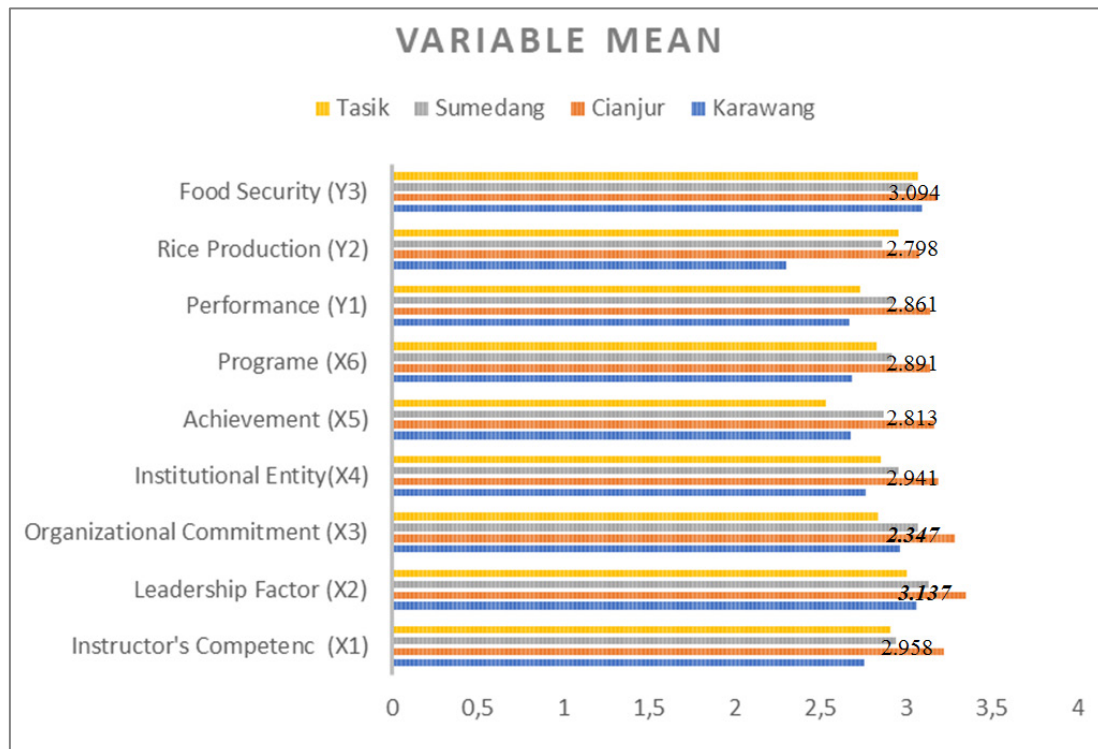
Table 1 explains that the extensional institutions in four districts already have regulations, although different following the bureau, whereas Karawang and Tasikmalaya Districts are based on the Regent Laws (PERBUP), while Cianjur and Sumedang Districts are based on the Head of

Department Decree. Number of extension workers in Karawang is relatively equal in each sub-district, namely 9 people, whereas Tasikmalaya has 6 -11 people, Cianjur has 6 – 7 people, and Sumedang has 5 – 9 people. The worker income allowance (TPP) outside extension operational cost (BOP) in each district is also different, whereas the highest allowance is obtained by workers in Karawang District at 4 – 11 million, while the lowest allowance is obtained by Tasikmalaya workers at Rp 1,150,000 – 1,450,000. The

respondents' land area and BPP-handling land area in each district are different, whereas the widest land area is owned by farmers in Karawang District (0.887 ha), while the lowest land area is owned by farmers in Tasikmalaya District (0.276 ha). Furthermore, the widest handling land area is found in Kawarang District (4,894 ha). For the highest average of rice price, the highest value is found in Sumedang District (Rp 13,000) and the lowest value is found in Karawang District.

**Table 1.** Location Resource Condition

No	Description	District			
		Karawang	Cianjur	Sumedang	Tasikmalaya
1	Agricultural Extensional Institution Regulation	Karawang Regent Laws No.24 of 2018 Regional Technical Action Unit	Head of Department Decree No. 591/Kep.50/BINUS/2019	Head of Department Decree	Regent Laws No.90 of 2021 Regional Technical Action Unit
2	Number of extension workers (Average/extension workers)	9 / BPP (1.34 Villages)	6 - 7 / BPP (1.64 Villages)	5 - 9 / BPP (1.12 Villages)	6 - 11 / BPP (1.57 Villages)
3	Number of villages	9 - 11	11 - 12	9 - 12	7 - 11
4	Respondents' field area	0.877 Ha	0.638 Ha	0.320 Ha	0.276 Ha
5	Assisted Area	4.894 Ha	1.629 Ha	5.295 Ha	1.833 Ha
6	Status as Field-owner	69.56%	53.19%	86.48%	72.97%
7	Worker Income Allowance (TPP) outside BOP	4.5 - 6.6 millions	2.9 - 4.5 millions	2.5 - 6 millions	1.15 - 1.5 millions
8	Production Contribution	13.35%	6.49%	2.51%	5.32%
9	Rice plant price	Rp 8,000 - 10,000	Rp.9,500 - 10,500	Rp.9,000 – 13,000	Rp.10,500 – 11,000



**Figure 2.** The average score of independent (X) and dependent (Y) variables

## 4.2. Variable Description

The descriptive analysis of variables presents that the average score of all variables is included in a sufficient category (2.301 – 3.352). In general, there is a variation in the average variable score in each district. Cianjur District has the highest average score in all variables compared to other districts, while the lowest average value is found in Karawang District, except for food security ( $Y_3$ ), achievement ( $X_5$ ), organization commitment ( $X_3$ ), and leadership ( $X_2$ ). Leadership ( $X_2$ ) has the highest average score (3.18) in Cianjur District, while the lowest average score (2.301) occurred in rice plant production ( $Y_2$ ) in Karawang District. The average score from each variable is presented in Figure 2.

When compared to Figure 2 and Table 1, there are several important conditions to explain. Karawang has the highest contribution (13.35%) but shows lower food security than Cianjur with a 6.49% contribution. Although Karawang has the highest contribution to rice plant production in West Java, this district has the lowest score (2.301), compared to other districts. Figure 2 also shows that the organization commitment variable ( $X_3$ ) generally shows the lowest average score compared to other variables at 2.347, while the highest average score is found in the leadership factor ( $X_2$ ) at 3.137, although presenting no significant difference in institutional performance.

## 4.3. Factors Affecting Performance, Rice Plant Production, Food Security

The analysis results of Partial Least Square (PLS) show that five of six independent variables ( $X$ ) have a significant difference from the dependent variables, namely extension worker competence ( $X_1$ ), organization commitment ( $X_3$ ), institution entity ( $X_4$ ), achievement ( $X_5$ ), and program ( $X_6$ ), while leadership factor ( $X_2$ ) obtains a non-significant different value on Organizational Performance ( $Y_1$ ). In detail, the variable influence is presented in Figure 3.

Figure 3 can be described below:

- (1) Institutional performance is affected directly by extension worker competence ( $X_1$ ), achievement ( $X_5$ ), and program ( $X_6$ ). Worker competence ( $X_1$ ) is represented by the technical competence ( $X_{11}$ ), while achievement ( $X_5$ ) is represented by institutional achievement ( $X_{53}$ ) and extension worker achievement ( $X_{54}$ ), while program ( $X_6$ ) is represented by sustainability ( $X_{62}$ ) and program benefit ( $X_{64}$ ).
- (2) Institutional performance ( $Y_1$ ) affects directly rice plant productivity ( $Y_2$ ) and food security ( $Y_3$ )
- (3) Rice plant productivity ( $Y_2$ ) is also affected directly by extension worker competence ( $X_{11}$ ) and organization culture ( $X_{33}$ ) while working achievement is represented by extension worker achievement ( $X_{54}$ ), while the program is represented by the program availability ( $X_{61}$ ), sustainability ( $X_{62}$ ), and benefit ( $X_{63}$ ). Rice plant production is directly affected by institutional performance ( $Y_1$ )
- (4) Indirectly, productivity is affected by the institutional achievement, as represented by the institution achievement ( $X_{53}$ ) and extension worker achievement ( $X_{54}$ ), while institutional entity ( $X_4$ ) is represented by the authority ( $X_{43}$ ), and the program is presented by program benefit ( $X_{63}$ )
- (5) Food security ( $Y_3$ ) is directly affected by institutional performance ( $Y_1$ ), rice plant productivity ( $Y_2$ ), authority ( $X_{43}$ ), and program ( $X_6$ ). Meanwhile, the indirect effect originated from the productivity variables, namely extension worker competence ( $X_{11}$ ), institution authority ( $X_{43}$ ), institutional achievement ( $X_5$ ), and program ( $X_6$ ). Furthermore, indirect effect from the performance variables are institutional achievement ( $X_5$ ) and program ( $X_6$ ).
- (6) It can be concluded that the agricultural development program is important to improve the rice plant production increase that will impact sustainable food security, as the program ( $X_6$ ) directly affects ( $Y_1$ ), ( $Y_2$ ), and ( $Y_3$ ).

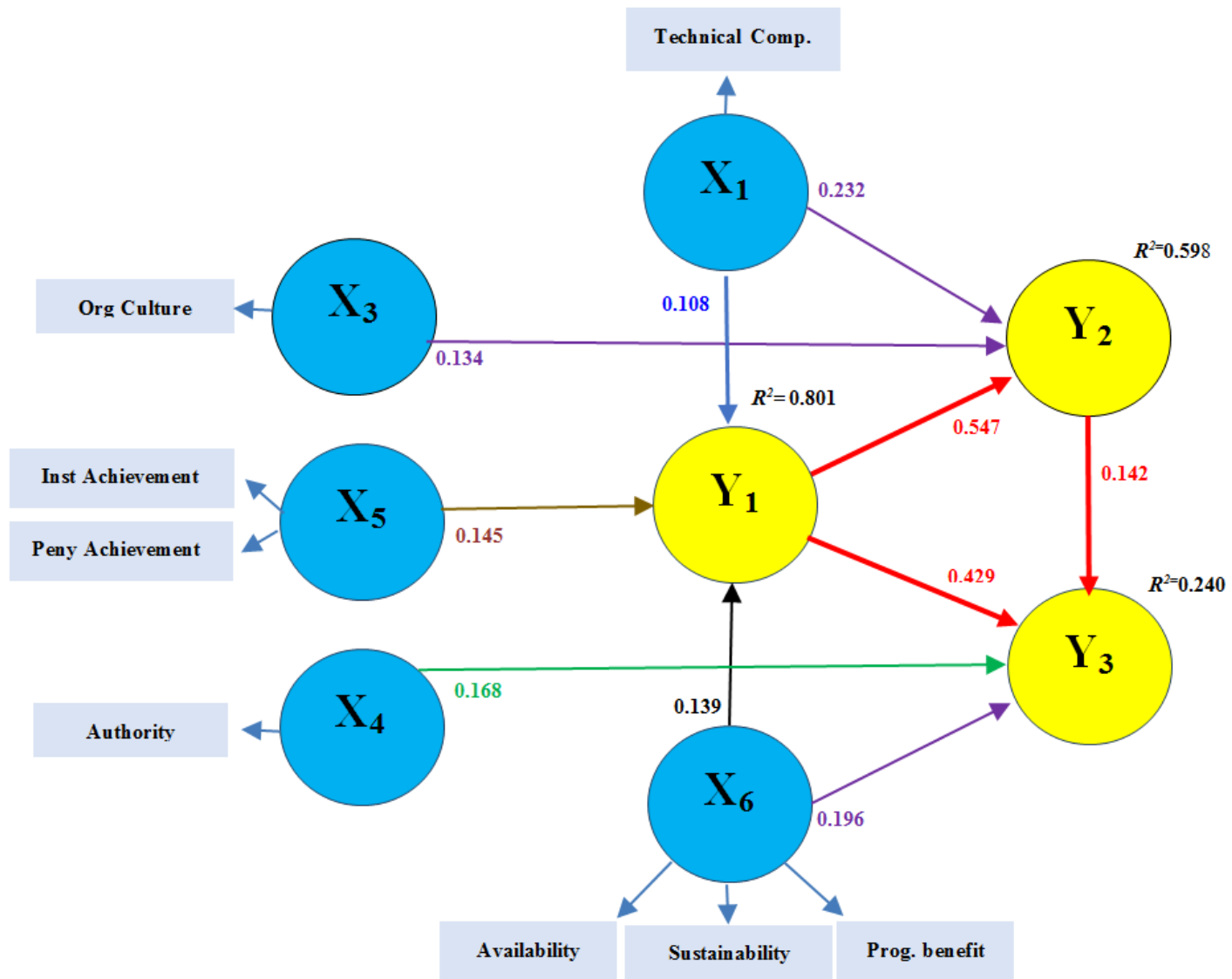


Figure 3. Factors Affecting the Institutional Performance of Agricultural Extension

## 5. Discussions

### 5.1. Factors that Affect Extension Worker Performance

As described in the previous section (Figure 3), institutional performance ( $Y_1$ ) is directly affected by the extension worker competence ( $X_1$ ), working achievement ( $X_5$ ), and program ( $X_6$ ). The extension worker competence ( $X_1$ ) is represented by the technical competence  $p(X_{11})$ , while achievement ( $X_5$ ) is represented by institutional achievement ( $X_{53}$ ) and extension worker achievement ( $X_{54}$ ), while program ( $X_6$ ) is represented by sustainability ( $X_{62}$ ) and program benefit ( $X_{64}$ ). If correlated with the descriptive analysis results in three variables, namely competence, achievement, and program availability, these variables present a relatively high average score, compared to other variables. These results can be interpreted that half of the farmers from four locations agree to assess worker competence, achievement, and program availability are considered important for institutional performance improvement. This condition was similar to Umri [19], who concluded that workers are someone's capability in affecting the rice plant's productivity. Also, Effendy [8] mentioned that the extension worker performance was determined by technical competence, namely guiding the farmer's capability in controlling the plant-disturbing organism (OPT), and indirectly competence is affected by the behaviour. In addition, Effendy [8] stated that governmental support, namely program availability tends to attract someone to perform, supply, and diffuse it, which can be reflected in the performance.

The institutional performance follows the hypothesis that can directly involve rice plant production and sustainable food security; thus hypothesis ( $H_1$ ) is accepted. This result was similar to Effendy [7], who reported that the institutional worker also determined the adoption of integrated pest control technology in rice plant commodities in West Bandung and Sumedang.

### 5.2. Factors that Affect Rice Plant Production

Rice plant productivity ( $Y_2$ ) is also affected directly by extension worker competence ( $X_{11}$ ) and organization culture ( $X_{33}$ ), while working achievement is represented by extension worker achievement ( $X_{54}$ ), while the program is represented by the program availability ( $X_{61}$ ), sustainability ( $X_{62}$ ), and benefit ( $X_{63}$ ). Indirectly, productivity is affected by the institutional achievement, represented by the institution achievement ( $X_{53}$ ) and existence worker achievement ( $X_{54}$ ), while institutional entity ( $X_4$ ) is represented by the available authority ( $X_{43}$ ), and program ( $X_6$ ) is represented by the program benefit ( $X_{63}$ ). According to Jumiaty [13], production is determined by capital, employee, natural resource, and technology. Meanwhile, these results indicate that technical competence has role in rice plant production improvement,

which followed the following citation above that mentioned employee determines the production improvement. Increased production can also be affected by extension worker achievement, which means better work and institutional achievements will provide a positive effect on rice plant production improvement. Moreover, organization culture also presents a high influence, which indicates that higher organization member commitment along with the organization's goals, then a positive impact will gain to improve the rice plant production. These study results supported Effendy [7] who concluded, that values and norms adhered to by the organization affected the farmer's participation in applying an innovation.

### 5.3. Factors that Affect Food Security

Food security ( $Y_3$ ) is directly affected by institutional performance ( $Y_1$ ), rice plant productivity ( $Y_2$ ), authority ( $X_{43}$ ), and program ( $X_6$ ). Meanwhile, the indirect effect originated from the productivity variables, namely extension worker competence ( $X_{11}$ ), institution authority ( $X_{43}$ ), institutional achievement ( $X_5$ ), and program ( $X_6$ ). Furthermore, the indirect effect from the performance variables is an institutional achievement ( $X_5$ ) and program ( $X_6$ ). The descriptive analysis shows that food security obtains the average score of 3.094, as the second highest factor after leadership, which means that the respondents agreed to assess that food security was quite satisfactory in terms of food availability, affordability, and sustainability, especially in rice. These results can be interpreted as higher, rice plant production, stronger resilience or food security, and institutional performance with guaranteed food security [6].

In addition, the more development program, the stronger rice plant production improvement to support food security. From the discussion above, the agricultural development program is important to encourage increased rice production that has an impact on sustainable food security, because the program ( $X_6$ ) directly affects ( $Y_1$ ), ( $Y_2$ ), and ( $Y_3$ ).

## 6. Conclusions

The number of sub-districts selected as research locations was limited to three sub-districts so respondents still felt that this was one of the limitations of covering one district area. However, from the results and discussion there can be concluded: (1) the institutional performance of agricultural extension has not been satisfactory, which needs further improvement in increasing rice production, and the increased production, most of the respondent farmers agreed that the assessment is not high so that it still needs to be improved, while for food security the majority of respondents are satisfied with food availability, affordability, and sustainability; (2) factors that directly



affect the performance of agricultural extension institutions are the technical competence of extension workers, work performance, and the availability of development programs. Increased rice production is determined directly by the technical competence of extension workers and organizational culture, while food security is directly influenced by institutional performance, institutional authority, and program availability; (3) Improving the performance of sub-district-level agricultural extension institutions in increasing production and food security by maintaining and improving the competence of extension workers, encouraging members of the organization to show optimal work performance, and actively participating in every agricultural development program.

---

## REFERENCES

- [1] Ainsworth M, Smith M, Millership A.. "Managing Performance Managing People". Jakarta: Terjemahan, PT. Bhuana Ilmu Populer, 2002
- [2] Allen, N.J., Meyer P.J. And Smith C.A., "Commitment to Organizations and Occupations: Extension and Test of a Three-Component Conceptualization," *Journal of Applied Psychology*, Vol. 78, No. 4, 1993.
- [3] As'ad, Mohammad. "Psikologi Industri [Industrial Psychology]". Yogyakarta: Liberty, 1995
- [4] Atmosoeparto K., "Produktivitas Aktualisasi Budidaya Perusahaan [Company Cultivation Actualization Productivity]". Jakarta, 2000
- [5] Bernardin, H.J. & Russel, J.E.A., "Human Resource Management an experiential approach." Singapore: Mc Graw-Hill, Inc. PT Alex Media Komputindo, 1993
- [6] Davis K, Newstrom J.W., "Perilaku dalam Organisasi [Behavior in Organization]," 7th Ed. Jakarta: Penerbit Erlangga, 1985
- [7] Effendy L and Haryanto Y.. "Determinant Factors of Rural Youth Participation in Agricultural Development Programme at Majalengka District, Indonesia." *International Journal of Innovative Research & Development (IJRD)*. Vol. 9(5), p 1-10. 2010 Doi:10.24940/ijrd/2020/v9/i5/MAY20074
- [8] Effendy L, Kusnadi D, Maryani A, and Pradiana W. "Accelerating Farmers' Regeneration of Chili Farmers in Garut District, West Java, Indonesia". *The International Journal of Humanities & Social Studies (Theijhss)*. Vol. 8(5), May 2020. p 373 - 383. 2020. DOI No.:10.24940/theijhss/2020/v8/i5/HS2005-111
- [9] Effendy L. "The Role of Institution and Innovation in The Adoption of Integrated Crop Management Technology of Lowland Rice of West Bandung and Sumedang District". *International Journal of Multicultural and Multireligious Understanding (IJMMU)*. Vol. 7(4), p 279-293. 2020. Doi.org/10.18415/ijmmu.v7i4.
- [10] Hersey P, Blanchard K.H.. "Management of Organizational Behavior. Utilizing Human Resources" (4th ed). Jakarta: Terjemahan, Penerbit Erlangga. 1982
- [11] Harun, A.R. *Teknik Pengambilan Sampel dan Penyusunan Skala [Sampling and Scaling Techniques]*, Bandung. Program Pascasarjana, Universitas Pajajaran. 1993
- [12] Hasibuan, Malayu S.P. "Manajemen Sumber Daya Manusia [Human Resource Management]". Edisi Revisi. Jakarta: Penerbit PT Bumi Aksara. 2016
- [13] Jumiati. "Aalisis Faktor-Faktor yang Mempengaruhi Produksi Padi di Kecamatan Sinjai Selatan Kabupaten Sinjai [Analysis of Factors Affecting Rice Production in South Sinjai District, Sinja Regency]". Skripsi: Universitas Negeri Makasar. 2016
- [14] Kementerian Pertanian. "Permentan Nomor 49 Tahun 2020, Tentang Komando Strategis Pembangunan Pertanian [Minister of Agriculture Number 49 of 2020, Regarding the Strategic Command for Agricultural Development]". Jakarta. 2020
- [15] Robin S.P. "Perilaku Organisasi [Organizational behavior]" (edisi bahasa Indonesia Jilid 1). Jakarta: PT. Prenhallindo. 1996
- [16] Saebani, Ahmad. "Metode Penelitian Ekonomi Islam [Islamic Economics Research Methods]". Pustaka Setia, Bandung. 2014
- [17] Sutrisno, Edy. "Manajemen Sumber Daya Manusia [Human Resource Management]", Jakarta. Kencana Prenada Media Group. 2010
- [18] Singarimbun, M. & Sofian E. "Metode Penelitian Survei [Survey Research Methods]". Jakarta: LP3ES. Jakarta. 2010
- [19] Umri, Khairul. "Faktor-Faktor yang mempengaruhi Produktivitas Padi Sawah di Kec. Teunom Kabupaten Aceh Jaya [Factors Affecting Rice Paddy Productivity in Kec. Teunom Aceh Jaya District]" Skripsi Universitas Teuku Umur, Meulaboh, Aceh. 2014
- [20] Whitmore, John. "Coaching Performance." Jakarta: Gramedia Pustaka Utama. 1997
- [21] Wibowo. "Manajemen Kinerja [Work management] PT. Raja Grafindo Persada. Jakarta. 2007