IMPROVED PERFORMANCE OF AGRICULTURAL EXTENSION AGENTS WITH INFRASTRUCTURAL FACILITIES AND TRAINING THROUGH JOB SATISFACTION

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Abstract: The research aims to find out whether there is any significant correlation between infrastructural facilities, training, and performance of agricultural extension agents, mediated by job satisfaction in the Agricultural Extension Office in Malang Raya. This research used a qualitative method. The data was collected using a questionnaire, and the technique used in taking the sample was saturation sampling. The sample comprised all agricultural extension agents who were also civil servants, who had working experience of a minimum of one year, and worked at the district-level agricultural extension office in Malang. The total respondents were 145 people. The data analysis was conducted using Partial Least Square (PLS) Method by employing the 3.0 SmartPLS program. The research results showed that all the hypotheses put forward were corroborated except the one dealing with infrastructural facilities. Infrastructural facilities did not have a significant effect on job satisfaction because their availability had not been considerably capitalized on in carrying out the agricultural extension. Besides, it was found that job satisfaction did not mediate the influence of infrastructure on the performance of the extension agents. Recommendations for research in the future on similar topics may use an additional comparison between the satisfaction of expert and skilled agricultural extension agents, and the research method may be developed using qualitative methods.

Keywords: infrastructural Facilities, training, job satisfaction, employee’s performance

Cite this article as: Mumakinah, T., M. Setiawan, and D. W. Irawanto. 2020. Improved Performance of Agricultural Extension Agents with Infrastructural Facilities and Training Through Job Satisfaction. Jurnal Aplikasi Manajemen, Volume 18, Number 4, Pages 721–729. Malang: Universitas Brawijaya. http://dx.doi.org/10.21776/ub.jam.2020.018.04.11

Organizational success is the desire of every individual who is involved in it so that the organization can compete and follow each progress needed to achieve the organizational goals properly. Organizational success is influenced by many factors, one of them is the performance of its employees. Sasidaran (2018), stated that human resources are the organization’s main resource. Employee performance holds an important role in achieving an organization’s competitive
advantage or else can cause destruction. Therefore, management must understand the importance of investment to improve employee performance.

Employee performance can be said to be good when the employees can complete their tasks according to the standards or targets that have been previously set. The ability of employees to complete their tasks needs to be supported by the availability of adequate work infrastructure because, without facilities and infrastructure to support the completion of work tasks, they will not be able to solve it properly. Issah et al., (2016), stated that infrastructure facilities are one of the factors that can improve employee performance.

Besides, to respond to the challenges in the competitive business world, organizations face a lot of pressure in building a talented workforce, to continually improve their ability and skills. Thus, training is needed by organizations to assist in gaining a competitive advantage. Training is proved as a parameter to escalate the ability of the workforce to achieve organizational goals. According to Kulkarni (2013), training programs play an important role in every organization. Training helps the employees to renew their knowledge and improve their skills to escalate their performance in the workplace. By using training programs, the evaluation of employee performance will be easier for the management and it can be used in decision making. Besides, it can also force the employees to work effectively and efficiently.

In the organization of government bureaucracy, there is a phenomenon of the availability of inadequate infrastructure and training activities that are less than optimal compared to private organizations. Some possible reasons for these conditions were due to the limited funds, as well as unprepared training as one of the company’s needs. Also, the target in training, both the material delivered and the lack of interest in the training participants and the lack of training provided for each employee are matter.

As one of the government bureaucracy organizations, the Agricultural Counseling Agency (BPP) is an agricultural extension institution at the sub-district level which is a non-structural institution that is under and is responsible to the Head of the Agriculture Service of the City / Regency. The Center for Agricultural Counseling has to carry out the preparation and implementation of regional policies in the field of agricultural extension. The Agricultural Extension Center has an important role in supporting the Ministry of Agriculture’s program to actualize the Main Strategy for Strengthening Agricultural Development for Food Sovereignty (P3KP). As a part that is engaged in carrying out the duties and functions of the Center for Agricultural Extension, the existence of agricultural extension agents is very necessary. The agriculture instructor tasks directly dealing with farmers in the field. The various functions of extension agents and counseling are highly dependent on the performance of agricultural extension services in the area. Thus, the performance of Agricultural Extension Agents in Indonesia shows different characteristics, and it has not brought satisfactory results.

Malang is a region in East Java Province that shows potential for the development of the agricultural sector (Febrianto, 2019), with the fifth-greatest number of agricultural extension agents in East Java (Simluhtan, 2019). Unfortunately, the advantage has not been balanced out with the evenly distributed infrastructure provision across Agricultural Education Center at the sub-district level (Simluhtan, 2019). Hence, the competence and performance of agricultural extension agents in Malang are, in general, deemed not to have contributed to satisfactory results (Wicaksono et al, 2016). Training conducted has not resulted in the optimum upskilling of agricultural extension agents.

The use of the Job Satisfaction variable as mediation is because basically, Job Satisfaction can also be influenced by infrastructural facilities and training. Ramesh et al. (2017), stated that the availability of better infrastructural facilities can affect job satisfaction. Wang et al. (2017), also showed that training can improve job satisfaction. Research by Inuwa (2015), shows that job satisfaction perceived by employees has an impact on their performance. Therefore, infrastructural facilities and training support the formation of job satisfaction which will have an impact on improving employee performance.
LITERATURE REVIEW

As previously known, the availability of infrastructural facilities can to a certain extent influence the performance of agricultural extension agents. This research measures infrastructure available by using the information center approach, extension tools, administrative equipment, transportation, furniture, the needs for room, lighting, and experimental land. Polohindang et al. (2016), argued that infrastructural facilities are tools employed in terms of agricultural extension (computers, laptops, and other information). While the infrastructure in this research encompasses facilities used to support the implementation of agricultural extension.

According to Demiral (2017), training constitutes one of the endeavors intended to upskill human resources at work which applies to new employees and employees in employment. This training is conducted to meet constantly shifting job demands and confronting the changes in the work environment and strategy. Moreover, the training in this research is measured using three indicators adapted from that of Schmidt (2004) and developed by Demiral (2017), comprising organizational support for training, employee’s enthusiasm in the training, and satisfaction with the training given. In the next section, we review the comprehensive literature on the effects of infrastructure, training, and job satisfaction on employee’s performance as well as previous research to develop and support the research hypothesis. Furthermore, the following is the display of the conceptual framework:

![Conceptual Framework](image)

**Figure 1  Conceptual Framework**

**Infrastructure**

Infrastructural facilities are material resources made available to enable employees to put their productivity to their utmost when carrying out their tasks. Inadequate facilities in the workplace will not only impair employee’s productivity but also incur more loads of pressure or stress on employees to bear (Issah et al., 2016 and Karihe et al., 2015). To support the role of agricultural extension agents as intermediaries and to facilitate a wider range of extensions, it is necessary to provide means of transportation to help agricultural extension agents be more effective and efficient in paying visits to farmers (Ragasa et al., 2015). External factors (the availability of infrastructural facilities) can influence the performance level of agricultural extension agents (Polohindang, 2016). Nevertheless, there is a gap worth noticing in the research conducted by Khan et al. (2017), on 150 teaching and non-teaching staffs of Sargodha University in Pakistan as it showed that office facilities and workplace environments did not have a significant impact on employee’s performance. This research is therefore intended to examine the effects of infrastructural facilities, training, and job satisfaction on the performance of agricultural extension agents. We come up with the following hypotheses:
H₁. Infrastructural facilities have a significant effect on the performance of agricultural extension agents

Training

The training comprises one of the efforts made to enhance the quality of human resources at work that is geared up for new employees as well as employees who have been in employment. This training is conducted to meet job demands that are constantly changing and changes in the workplace environment and strategy (Demiral, 2017). Ifenkwe (2012), argued that one of the personal characteristics of agricultural extension agents that have a positive and significant correlation with their performance is training. The needs for agricultural extension agents to go for training and retraining do not only encompass agricultural technical matters, but also the educational psychology and communication techniques that are beneficial for their achievement of better performance. However, according to Aragon et al. (2013), training does not have a significant effect on employee’s performance since employees particularly in Europe have such a good competence that training does not have a noticeable impact on their performance. Therefore, the second hypothesis is

H₂. Training has a significant effect on the performance of agricultural extension agents.

Job Satisfaction as a Mediation

Job satisfaction is one’s attitude towards his work and emotions, his conviction, and behaviors regarding the nature of work, disposition, attitude, and his expectation (Wang et al., 2017). The more one takes satisfaction in his job, the better and the more positive attitude he shows that will result in better performance. An employee’s performance can be determined by to what extent he is satisfied with his job, his attitude toward work, and the justice he perceives (Inuwa, 2015). Factors that influence job satisfaction comprise individual, cultural, social, and organizational or environmental factors. Job satisfaction and employee’s performance share the same influential factors. Both do not have indirect effects on each other. Thus, satisfaction leads to performance and performance leads to satisfaction through mediating factors (Alromaihi, 2017).

The job satisfaction of agricultural extension workers can be improved by increasing work facilities so that extension services can be more effectively carried out (Olatunji et al., 2015). Besides, job satisfaction is also positively and significantly related to training. Employee satisfaction with training is one of the factors contributing largely to improving employee’s performance (Demiral, 2017). Therefore, the next hypothesis is as follows:

H₃. Infrastructural facilities have a significant effect on job satisfaction.

H₄. Training has a significant effect on job satisfaction.

H₅. Job satisfaction has a significant effect on the performance of agricultural extension agents.

H₆. Infrastructural facilities have a significant effect on the performance of agricultural extension agents through job satisfaction.

H₇. Training has a significant effect on the performance of agricultural extension agents through job satisfaction.

METHOD

The object of the research selected was a sub-district level agricultural extension center in Malang Raya. The population used in this research comprised 145 agricultural extension agents who civil servants were actively working for at least one year at the sub-district level agricultural extension center. The sampling technique used in this research was saturated sampling (census).

This research employed an instrument in the form of a questionnaire that consisted of five parts respectively, respondent’s curriculum vitae, 20 statements regarding infrastructural facilities are adapted from Permentan No. 51/2009, 12 items regarding training are adapted from Demiral (2017), 11 items regarding job satisfaction are adapted from Wang et al. (2017), and 21 statements to gauge the performance of the agriculture extension agents are adapted from Polohindang et al. (2016) and Permentan No. 91/2013. Multi-item measurement was designed on a five-point Likert scale, 1 for one strongly disagreeing to 5 strongly agreeing as listed.
in Appendix A, the analysis of data was conducted using Partial Least Square-Structural Equation Modeling (PLS-SEM) approach with the support of Smart-PLS 3.0.

RESULTS

Instrument Testing (Outer Model)

The outer Model is to prove validity and reliability. The indicators used in this research are reflective in the sense that Outer Models are evaluated using convergent validity, discriminant validity, and composite reliability.

Convergent validity is based on the loading factor, in which instruments having a loading factor greater than 0.6 indicate that the instrument meets the validity convergent. From the result of the goodness of fit outer model on infrastructural facilities (X1), training (X2), job satisfaction (Z), and performance of agricultural extension agents (Y), the loading factor value of each indicator obtained is greater than 0.600 and t statistic value of each indicator is greater than 1.960, so that the indicator of each variable is valid.

Discriminant validity is based on the measurement of cross loading in the table above, it can be seen that overall the indicators of infrastructural facilities (X1), training (X2), job satisfaction (Z), and performance of agricultural extension agents (Y), generates loading factor value greater than the cross-loading on other variables. Therefore, it can be stated that each indicator can measure the latent variables corresponding to the indicator.

Four variables in this research are reliable because they have composite reliability and Cronbach’s alpha above 0.7, namely infrastructural facilities variable amounted to 0.929 and 0.917, training amounted to 0.917 and 0.930, job satisfaction variable amounted to 0.799 and 0.860, and performance of agricultural extension agent variable amounted to 0.945 and 0.951.

Model Testing (Inner Model)

Structural model evaluation is intended to evaluate the whole accuracy of the model in the research by forming several variables and their concomitant items. There are several approaches to be used in evaluating structural models including determinant coefficients (R-Square or R²), Predictive Relevance (Q-Square or Q2), and Goodness of Fit (GoF). The testing of structural model results reveals that the value of R² for the job satisfaction variable is 0.379 categorized as a weak model moving towards moderate level and the performance of the agricultural extension agent variable is 0.547 categorized as moderate moving toward the strong model. In the meantime, Predictive Relevance (Q-Square or Q2) is 0.719 (0 <Q2 <1), meaning that the structural model in this research has a pretty good predictive relevance and Goodness of Fit (GoF) of 0.502. The conclusion that can be drawn is that the structural model of this research has a good predicting capacity. It reveals from testing conducted of R², Q², and GoF that the model formed is robust and that hypothesis can be tested out.

After the evaluation of the outer model and inner model is conducted, the next step is to assess the structural relationship. Structural models have been analyzed as indicated in Table 5. Infrastructural facilities have a significant effect on the performance of agricultural extension agents which is corroborated by Path coefficient of 0.233; 2.794 and the level of significance (p-value) at 0.005. Additionally, training have a significant effect on the performance of agricultural extension agents (revealed by the path coefficient = 0.426, t-statistics = 4.507 and p-values = 0.000). While hypothesis 3 (infrastructural facilities -> job satisfaction) is not supported as seen from path coefficient of 0.049, t-statistics of 0.432, and p-values of 0.666. Hypothesis 4 (training -> job satisfaction) is supported as the coefficient Path is 0.432 while t-statistics is 5.734 and p-values are 0.000. Hypothesis 5 (job satisfaction -> performance of agricultural extension agents is also supported as evidenced by the path coefficient which is 0.212, t-statistics, 2.332, and p-values, 0.02. Finally, job satisfaction mediates the effect of training on the performance of agricultural extension agents (path coefficient = 0.129, t-statistics = 2.083 and p-values = 0.038) meaning that H7 is supported. Whereas, job satisfaction does not significantly mediate the relationship between infrastructural facilities on the performance of agricultural extension agents (path
coefficient = 0.019, Standard Error = 0.010, t-statistics = 0.371 and p-values = 0.711), which means that H₆ is not supported.

**DISCUSSION**

Based on the analysis of the results of the PLS model, it is found that infrastructural facilities have a significant effect on the performance of agricultural extension agents. This corresponds to the findings that the availability of infrastructural facilities for extension activities influences the performance of agricultural extension agents in performing their duties (Ragasa et al., 2015 and Polohindang et al., 2016). Therefore, the inadequacy of infrastructural facilities in the workplace will not impair the employee’s productivity, but it also brings additional pressure on employees (Issah et al., 2016 and Karihe et al., 2015).

Moreover, training has a significant effect on the performance of agricultural extension agents. Conducting training for agricultural extension agents can leverage their performance. Empirically, this aligns with the findings by Demiral (2017), who stated that training constitutes a worthwhile effort made to upskill human resources at the workplace which is geared up for new employees and employees who have been in employment. This training is of necessity to meet job demands that are frequently changing and the changes in work environment and strategy. It is also one of the factors contributing largely to the improved employee’s performance.

The availability of infrastructural facilities does not have a significant effect on job satisfaction. It signifies that despite the availability of infrastructural facilities, agricultural extension agents do not sense increase job satisfaction. This is shown by the findings of the research conducted by Siska and Silviana (2018), that the variables such as incentive, competence, and facilities altogether have a positive and significant effect on their job satisfaction. However, partially, the incentive and facility variable does not significantly affect the job satisfaction of nurses, whereas, the competence variable partially has a significant effect on their job satisfaction in Wamena.
Hospital. The results of the study occurred because the utilization of available infrastructural facilities for agricultural extension agents activities had not been used optimally. They often use private-owned infrastructural facilities for agricultural extension activities.

That training has a significant effect on job satisfaction. This finding is in line with that of Wang et al. (2017), who stated that training can increase employee satisfaction. Attention is necessarily paid to allowing training opportunities and career paths to enhance job satisfaction of agricultural extension agents (Catherine et al., 2017 and Kelemu et al., 2014).

Job satisfaction has a significant effect on the performance of agricultural extension agents. This finding corresponds to that of Inuwa (2015), the more one is satisfied with his job the better or more positive his attitude will be that results in better performance.

The other two hypotheses put job satisfaction as mediation. This research views mediation as a bridge to buttress the performance of agricultural extension agents. That job satisfaction can mediate the relationship between training and the performance of agricultural extension agents. Moreover, job satisfaction is presented as a partial mediation because the mechanism occurs as an exogenous variable that significantly relates to endogenous variables and job satisfaction has a greater path coefficient than the relationship between an exogenous variable and an endogenous variable. But that infrastructural facilities did not have a significant influence on the performance of agricultural extension agents through job satisfaction as it should. These results indicate that Job Satisfaction and infrastructural facilities where agricultural extension agents cannot increase the performance of agricultural extension agents. The results of this study do not support the research conducted by Dumondor (2013), that the infrastructural facilities have a significant effect on the performance of agricultural extension agents through job satisfaction.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The results of this research have practical implications. Firstly, it is suggested that the importance of infrastructural facilities and training in enhancing employee’s performance be identified particularly in terms of public organizations. The results of this research support the implementation of the program of the Ministry of Agriculture in coming up with regulations on the Minimum Standards and Utilization of Agricultural Infrastructural Facilities Guidelines to leverage the performance of agricultural extension agents for which purpose adequate infrastructural facilities is required that the extension activities can be effectively and efficiently implemented. Besides, the results of the research provide input for the leadership over agricultural extension agents in regional and central offices to ensure the availability of infrastructural facilities to accommodate the needs and conditions in the field.

Secondly, the results of this research can offer feedback to the leadership over agricultural extension agents in regional and central office on the necessity of holding training programs both technical and non-technical to the tasks of agricultural extension agents.

This research has theoretical implications to develop the concept of human resources regarding the effects of infrastructural facilities, training, and job satisfaction on employee’s performance which according to the findings, infrastructure and training are both so important factors worth developing to enhance employee’s performance. Training also influences employee’s satisfaction. Individuals who receive training tend to be more satisfied with their work. Employee satisfaction enables employees to pull off a far better performance. Besides, job satisfaction mediates the effect of training on employee’s performance.

Recommendations

Recommendations for research in the future on similar topics may use an additional comparison
between the satisfaction of expert and skilled agricultural extension agents, between technical and nontechnical training which this research does not include and the research method may be developed using mixed methods or qualitative methods that lead to a more detailed and in-depth elaboration concerning the performance of agricultural extension agents especially related to infrastructural facilities and training.

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