

Factors Influencing Job Performance of Development Agents: The Case of Soro Woreda of Hadiya Zone, Southern Ethiopia

Desalegn Abo¹, Nuri Lefebo(PhD)

1. Expert of Research & Community Service Engagement, Wachemo University, Ethiopia
2. Assistant professor, College of business and economics, Wachemo University, Ethiopia

Abstract

The purpose of this study was to investigate the Job Performance level of development agents and the factors influencing their Job Performance. The main data used for this study were collected from a sample of 120 development agents, out of all 168 DAs and to measure the performance level of DAs, self rating only may not be reasonable data source. Therefore, farmers' selection for DAs job performance rating purpose using simple random sampling technique through structured questionnaire. In analyzing the data both descriptive and inferential statistics were employed. In addition, secondary data were collected from different organizations and pertinent publication in order to elaborate the present situation of job performance of development agents in Ethiopia. Ordinal Logit econometric model was used to analyze factors influencing job performance of development agents. The value of job performance level are found to be 26.67%, 47.5% and 25.83% low, medium and highly performed respectively. A total of seventeen explanatory variables were included in the model of which five variables were found to be significant. Thus, if better pay structure and enhanced recognition, responsibility, perceived job security, perception about work itself and attitude of development agents towards their job, the development agents more motivated to perform goal of organization. Therefore, concerned agricultural office managers, process owners, subject matter specialists and supervisors in the study area should conduct a periodic assessments to determine the level of Job Performance of Development Agents' and have to plan for improvement.

Keywords: Job performance, motivation, development agents, Ordinal Logit, Hadiya zone, Ethiopia

1. INTRODUCTION

Ethiopia is one of the poorest nations in the world, where agriculture is the basis of livelihood for the majority of the population; and it is predominantly an agrarian country with the vast majority of its population directly or indirectly being involved in crop and livestock production. To bring a realistic transformation of Ethiopian agriculture from the current subsistence to a market oriented production system, farmers need to improve their knowledge, skill and attitude and have access to information, technologies, markets, etc. To do so, agricultural extension plays a critical role, as it contributes to the development of the skill and knowledge of farmers to adopt new and improved technologies (Birhanu et al., 2006). Extension services in Ethiopia until about 2002 were focused on increasing production and productivity in view of achieving food security (Mathewos and Chandargi, 2003). The main focus of the extension system was transfer of technology (TOT). This model was non-participatory and top-down approach, and its supply driven nature has limited the identification of development alternatives that are based on the bio-physical and socio-economic realities of the various agro-ecological zones of the country (Birhanu et al., 2006).

On the other hand, a closer look at the different extension approaches adopted revealed that, they have been planned and implemented without the participation of the people for whom they have been designed. After a critical review of past experiences and lessons learnt, the government of Ethiopia has introduced PADETES which provides inputs through packages provided directly to farm households, and functions with a low number of visits by public DAs. Recognizing that and many of the challenges faced by the PADETES program resulted from insufficient extension staff, the government acknowledged the need for additional human resources in extension in order to continue to bring about high rates of adoption and production. Hence government plans to use the Technical and Vocational Education and Training centers (TVETs) to produce additional development agents (IFPRI, 2010). However ineffectiveness in their performance due to lack of motivation will have undesirable consequences on the dissemination, adoption and diffusion of technologies. It is, important to develop strategies influencing DAs for better performance.

Currently our government is following rural centered development policies and strategies. To enhance agricultural transformation and rural development the strategy calls for human resource development to create modern farmers in rural areas. To realize the implementation of strategy, it was envisaged responsive and effective agricultural knowledge and information services to resource - poor and women producers. Accordingly, agricultural extension should deliver services that can meet specific needs in diverse agro - ecology and socio - economic contexts to sustainably increase productivity, to stimulate diversification into high value products, to shift into value addition, and to enhance smallholder competitiveness in both domestic and export markets. This will make the delivery of extension services complex and more knowledge - and information - intensive (MOARD, 2009). However, in spite of a core part of the government's investment in agriculture is the public

agricultural extension, at the field-level extension service is characterized by passive transmission of recommended messages to farmers, with little technology adaptation to local contexts; and eroded credibility of the frontline field-level extension workers among smallholder farmers, the provision of optimal extension service in the country is being hampered by low staff morale, contact between farmers and extension agents are very few. Only few farmers had the reach for extension services, DAs also show low morale, absenteeism and intention of leaving their job, and DAs are not motivated and committed to their jobs in agricultural and rural development activities, at the sometime there are serious constraints in the capabilities and mind sets of most DAs because they seek alternative career opportunities due to low job satisfaction (IFPRI, 2010). Hence, from total trained 63,000 DAs so far about 45,000 only are engaged as service providers in these FTCs at the country level.

While according to Haddiyas' zone agricultural development department (HZFED, 2012) annual report, at the zonal level from trained total 1,400 DAs only 1,120 DAs supplies extension service in the 280 FTCs. Though, this overall total for DAs trained compared to DAs currently serving at both national and zonal level indicates that some ATVET graduates have left the extension system since graduating from the ATVET system to joining other non-agricultural sectors, against this background. Therefore, this study intended to assess factors influencing Job Performance of Development Agents in the specific local context.

2. Literature review

Performance is a multi-dimensional concept. On the most basic level (Borman and Motowidlo, 1993; cited by Frese and Fay, 2001) distinguish between task and contextual performance. Task performance refers to an individual's proficiency with which he or she performs activities which contribute to the organization's technical core. This contribution can be both direct (e.g., in the case of production workers), or indirect (e.g., in the case of managers or staff personnel). Contextual performance refers to activities which do not contribute to the technical core but which support the organizational, social, and psychological environment in which organizational goals are pursued. Contextual performance includes not only behaviors such as helping co-workers or being a reliable member of the organization, but also making suggestions about how to improve work procedures (Ibid).

Rigyal and Wongsamun (2010) states to obtain a quantitative measure of respondents' perceptions towards the job performance of DAs extension issues, rating scales with a pool of positive and negative statements were framed. A four point rated scale was used to rate the overall job performance of Extension Agents working under the target respondents based on their understandings and perspectives. The categories used to measure job performance include: (1) technical competency, (2) communication skills, (3) planning and design making skills, (4) knowledge management, (KM) ability to generate and share ideas, (5) ability in net working and building linkages, (6) performance achievement in programs, Projects and in meeting targets, (7) quality of extension work output, (8) delivery of work output on time, (9) attendance and punctuality, (10) interpersonal relationship, (11) initiative, (12) attitude towards extension work, (13) team work, (14) commitment to extension work and (15) reliability in assigning an extension task (Ibid).

Factors affecting job performance of extension agents in Oyo as stated by Adeasiji and Akinsomtan (1995) were (1) salary increase (2) job security (3) better promotion (4) opportunity for further training (5) recognition (6) increased responsibility (7) adequate vehicle loan (8) revision of good supervision (9) annual leave opportunity (10) adequate housing allowances. These factors has to be confirmed by them should be first adequately provided before considering those factors they disagree with or were not sure about (Adeasiji and Akinsomtan 1995).

Yohannes (2009) and Zelalem (2011) conducted studies on work motivational level of DAs and the underlying factors influencing DAs work motivation in achieving extension organizations goals in Ethiopia. The study results showed that the main causes of poor level of work motivation among DAs in the study districts were due to organizational management and management related problems. Of those factors recognition system, the work itself, and organizational administration for the first job satisfaction factors (work incentives, work location, job security, supervision system), institutional factors (job description, perceived performance appraisal, perceived policy environment), and psychological factors (attitude of DAs towards their job) were found most important to influence DAs work motivation.

3. Research methodology

3.1. Description of the Study Area

Soro *woreda* is situated on the south-west direction of Addis Ababa, the capital city of Ethiopia at a distance of 262 Km. It is one of the eleven *woredas* of Haddiya zone, in the Southern Nation and Nationalities People Regional State (SNNPR). The boundaries of the Soro *woreda* are in the North and North-East Gomibora, in the South Kembata and timbaro and Oromia in the South-West. The total population of the *woreda* amounts to over 226,000 of which 110,740 are female and 115,260 are male. The total number of households is 41,000 and the average family size being 5.5. The total land size is 107,584 ha. It is subdivided into 46 PAs. The study *woreda* is largely dominated by *Woina-Dega* 57%, *Kolla* 26.25 %, and *Dega* 16.75%. The average annual temperature, rainfall, and altitude range of the *woreda* is 18.95°C, 984 mm per year (annum) and 1000-2800 masl respectively.

3.2. Data Sources and Types

The sources of the data for this study were both primary and secondary sources. From these sources reasonable data were collected. To get the background information of DAs of the study area, secondary data were reviewed from various sources such as reports, records of DAs, the number and list of DAs in the study area were collected from the *woreda* agricultural development office. Other published and unpublished documents, internet, previous findings which were found to be relevant to the study were also used. The other related information and primary data were collected from different category of respondents such as DAs, management body, extension officers, DAs' representatives and farmers in the study area by using questionnaire, discussions and key informant interview data collection instruments. Primary and secondary data had been collected to answer the objectives of the study. It includes data on demographic characteristics, job satisfaction factors, institutional factors and, psychological factors which were assumed to affect DAs motivation and job performance.

3.3. Sample Size and Sampling Procedure

The number of respondents was one of the most important issues the investigator critically considered in conducting this research. It may be possible to gather information through census procedure. However, complete coverage of a population is unbearable due to many factors, one of which is resources scarcity in terms of money, personnel and equipment. As a result, it is preferable to go for sampling; which is part of the total population. Different authors stressed the principal motive of examining a sample rather than population being the cost consideration and the fact that statistical inferences can permit us to draw conclusion about a population parameters based on the sample (Keller *et al.*, 1988 as cited in Gezahegn, 2007).

The target population of the study was the DAs in Soro *woreda*. In this study to determine sample size, different factors were taken into consideration including research cost, time, human resource, accessibility. Whereas, sampling enables us to obtain results on time; and helps us to get data of good quality. By considering these factors into account the updated list of total number of DAs and their names were taken from Woreda's Agriculture Development offices. Based on the list obtained out of all 168 DAs in the Woreda 120 DAs were selected using simple random sampling/lottery method as well as, the sample represented 71% of the total target population. Finally, survey was carried out on November, 2012.

To measure the performance level of DAs, self rating only may not be reasonable data source

Therefore, farmers' selection for DAs job performance rating purpose was applied a simplified formula provided by Ymane (1967) as cited by Twodros (2007), to determine the required size of sample farmers at 90% level of precision.

$$n = \frac{N}{1 + Ne^2}$$

When n is the sample size, N is the population size (total households), e is the level of precision. Thereby 116 farmers were selected to rating job performance of DAs. To select farmers, three steps procedure was used in the study *Woreda*. First, on the basis of agro-ecology, the 46 total *kebeles* was stratified into: 15 lowland, 24 midland and 7 highland *kebeles*. Secondly, using lottery method of simple random sampling technique, two *kebeles* were selected from the first category, three from the second category and one from the third category (a total of six *kebeles*). Finally, using the same simple random sampling technique 116 farmers were selected from six *kebeles*. The households were selected from each *kebele* and they fixed by considering number of households in each *Kebe* using probability to proportional to population size.

3.4. Methods of Data Collection

The instruments used in this research for data collection were questionnaire. The questionnaire was pre-tested on October, 2012 among non-sampled DAs at soro *woreda* of Haddiya Zone having a total size of 48 DAs who were assigned by *woreda* agricultural extension process coordinator, before distributed and used for data collection from sampled respondents. Consequently, there were no big amendments of sentence and idea or design of the study item except some miner grammatical correction. Based on the result of pre-test, questionnaire was used to collect both quantitative and qualitative data from the study sample.

The questionnaire was self-administered and the respondents filled it under direct supervision of the researcher to control the quality of the data collected in getting only individual outlook of respondents and after a while collected back. However, to measure the performance level of DAs self rating only was not satisfactory data source. Hence, the data was collected from randomly selected farmers; this help the researcher to triangulate the data collected from DAs through the questionnaire for their job performance rating then, one enumerator was recruited from each *kebele* and given one day training how to conduct interview and approach respondents to administer survey.

3.5. Methods of Data Analysis

Different types of analytical methods were used to analyze different research data and make a sound conclusion

for a given survey information. However, each and every analytical method has its advantages and limitations; it is always advisable to select the one that can better suit to answer the specific purpose (Hopkins, 1996). In measuring quantitative data of the study variables, a five point continuum Likert-type scale was used except for variables such as; age, sex, marital status and work location whereas all Job Performance variables were measured by using the five point continuum Likert-type scale as suggested by Pareek and Rao (1992) and Thurstone (1976) with slight modifications. The scale or categories used to measure job performance variables were 1=strongly disagree, 2=disagree, 3=neutral, 4=agree and 5=strongly agree. The scoring was given in ascending order from 1 to 5 for positive responses. But, for negative items, the scoring patterns were reversed. However, a study by Castillo and Cano (2004) as cited in Zelalem (2011) suggested that by utilizing one item/single item measure than multi item measure for the factors of job performance would have practical advantages. Thus, the space on an instrument, cost and face validity are among the practical limitations which supported the use of single item measurement. Therefore, for this study a single item measure for the selected variables were applied to analyze the job performance factors.

3.5.1. Descriptive and inferential statistics

Demographics of DAs farmers were analyzed by using descriptive statistics like mean, standard deviations, frequencies, percentages and cross-tabulations. Furthermore, the potential variables hypothesized to influence Job Performance of DAs were tested for statistical difference using inferential statistics such as, F-test and chi-square (χ^2) tests. Spearman's coefficient of correlation and ordered logit regression analysis were used to summarize data.

The F-test (one-way ANOVA) was used to test the significant mean value differences of the continuous variables among the DAs, the term 'one way' means that there is only one factor or independent variable. Moreover, potential dummy and ordered categorical variables were tested using the chi-square (χ^2) distribution. Spearman's rho Coefficient of Correlation (rho) was applied to measure, the degree of association or correlation between two variables. Spearman's rho is a rank-order correlation coefficient which measures association at the ordinal level (Gomez and Gomez, 1984; Kothari, 2003).

3.5.2. Econometric model

Ordinal Logit econometric model was used for this study because response categories are ordered. There is a clear ranking among the categories. Responses with ordered categories cannot be easily modeled with classical regression. Ordinary linear regression inappropriate because of the non-interval nature of the dependent variable- the spacing of the outcome choices cannot be assumed uniform. Ordinal logit and probit models have been widely used for analyzing such data (Liao, 1994). Some polychotomous dependent variables are inherently ordered (we don't restrict our response to yes and no or dichotomies categories only it may tracheotomies or polychotomies or multiple categories response). Although the outcome is discrete, the multinomial logit or probit models would fail to account for the ordinal nature of the dependent variable. The ordered probit and logit models have come into fairly wide use as a frame-work for analyzing such responses (Zavoina and MacElvey, 1975).

In previous studies conducted by Bekele (2008) and Yohannes (2008), this econometric model was used for the study of factors influencing information access and utilization of farm households in relation to different technological practices in different areas and factors influencing job performance of development agents. Since in this study the nature of the dependent variable is ordinal type, the same ordered logit model was used to analyze factors influencing Job Performance of DAs having five categories highly discouraging, discouraging, neutral, encouraging, and highly encouraging (Green, 2000).

Ordinal logit models specification: Following Liao (1994), Green (2000) and Wooldridge (2002) the functional form of ordered logit model is specified as follows:

$$y^* = \sum_{k=1}^K \beta_k x_k + \varepsilon$$

y^* = is unobserved and thus can be thought of as the underlying tendency of an observed phenomenon.

ε = we assume, it follows a certain symmetric distribution with zero mean such as normal or logistic distribution.

What we do observe is

$$y = 1 \text{ if } y^* \leq \mu_1 (=0)$$

$$y = 2 \text{ if } \mu_1 < y^* \leq \mu_2$$

$$y = 3 \text{ if } \mu_2 < y^* \leq \mu_3$$

$$y = j \text{ if } \mu_{j-1} < y^*$$

Where y is observed in j number of ordered categories, μ_s are unknown threshold parameter separating the adjacent categories to be estimated with β_s . The general form for the probability that the observed y falls into category j and the μ_s and the β_s are to be estimated with an ordinal logit model is

$$prob(y = j) = 1 - L\left(\mu_{j-1} - \sum_{K=1}^K \beta_K X_K\right)$$

Where $L(\cdot)$ represents cumulative logistic distribution

Marginal effects on the probabilities of each job performance category were calculated by

$$\frac{\partial \text{Pr ob}(y = j)}{\partial x_k} = \left[f\left(\mu_{j=1} - \sum_{k=1}^k \beta_k X_k\right) - f\left(\mu_j - \sum_{k=1}^k \beta_k X_k\right) \right] \beta_k$$

Where $f(\cdot)$ represents the probability density function.

Like logistic regression, ordered logit uses maximum likelihood methods, and finds the best set of regression coefficients to predict values of the logit-transformed probability that the dependent variable falls into one category rather than another. Logistic regression assumes that if the fitted probability, p , is greater than 0.5, the dependent variable should have value 1 rather than 0.

Ordered logit doesn't have such a fixed assumption. Instead, it fits a set of cutoff points. If there are r levels of the dependent variable (1 to r), it will find $r-1$ cutoff values k_1 to k_{r-1} such that if the fitted value of logit (p) is below k_1 , the dependent variable is predicted to take value 1, if the fitted value of logit (p) is between k_1 and k_2 , the dependent variable is predicted to take value 2, and so on (Bruin, 2006). The interpretation of the marginal effects for the first alternative (low motivated, low performed) and the fifth alternative (high Job Performance) straightforward. For the low motivated and performed, a positive value for the marginal effect means this probability of being low motivated whereas, a negative marginal effect means the probability of shifting out of the low level into higher categories increases. Shifting out of the low level does not necessarily mean moving into the next level but simply means a probability job performance shifts into higher categories (Borooah, 2001). In the case of the high level, a positive marginal effect implies an increased probability for the DAs work, whereas a negative marginal effect indicates increased probability for DAs to move into low level of work motivation.

Estimation procedure: Following the completion of the data collection process, the responses were coded and entered into stata version 11 software for analysis. Ordinal logit econometric model was used to see the relative influence of different variables on Job Performance of DAs. Therefore, these independent variables were considered for further analysis using the Ordinal logit model. However hypothesized explanatory variables were checked for the existence of multi-co-linearity problem, before entering to the model to exclude the highly collinear explanatory variables

Variables Definition and Hypothesis

The research design and methodology for a particular assignment depends, to a great deal, up on the nature of the research assignment and the objectives of the research. It is essential, at the beginning of the exercise to lay down the research variables, which have emerged from the review of literature and materials available, on the issue under investigation. Therefore, potential variables, which were supposed to influence, Job Performance of DAs, have been explained next.

Dependent variable

The dependent variables of the study were Job Performance of development agents measured with a five point likert type scale. The variable was operationalized as a DAs concentration, direction and persistence of efforts towards better performance to attaining organizational goals.

Definition of independent variables and hypothesis

The independent variables that are hypothesized to affect the dependent variable job performance of DAs are described as follows.

Age (AGE): This is a continuous variable which was measured in years. It refers to age of the respondent DA in years. Older DAs mostly have their own family, and were expected to shoulder the burden of family and an interest to take care of family members. Younger DAs were more likely expected to be free from family related issues. Therefore, younger DAs is expected to be motivated and performed more in work since they are free from different burdens related to family.

Sex (SEX): This refers to the sex of the DAs. Sex is a dummy variable and takes the value, 0 if female, and 1 of male. In this study, sex is expected to be negatively related to Job Performance. Tesfaye (2012) followed the same procedure to measure the variable and reported a significant association between male and female DAs in relation to their Job Performance.

Marital status (MART): It refers to the marriage status of the development agent. Marital status in this study was considered as a dummy variable with the value 1 if the DA is married and 0 otherwise. Unmarried DAs are more likely to be motivated and performed in work since they are relatively free from different burden related to family. In this study, unmarried DAs are expected to have high job performance than married.

Achievement motivation (ACHM): It is an ordinal type of variable measured using a five point continuum Likert-type scale. It is a personality trait of the development agent with a desire and striving to perform and accomplish any task with some degree of excellence. An individual with higher degree of achievement motivation has a strong hope of success than fear of failure. This variable is hypothesized to have positive relationship with Job Performance of DAs.

Advancement (ADVA): It is a categorical variable which refers to an actual change that enhances the position or status at work. Professionally or in their career structure, development opportunity can be key motivator for many DA's. Thus, it was hypothesized to have positive relationship with Job Performance of DAs and was measured using five-point Likert type scale (McClelland, 1961).

Recognition (RECO): Operationally this can be defined as acts of notice (perceive with the mind), praise, or blame given by one or more supervisor, colleague, management person, client, and/or the general public. Also recognition includes DAs recognition by formal such as award and bonus or informal recognition such as a verbal thank you systems with recognition events held per period. DAs can be motivated and performed more to work hard if they know that their organization reorganizes and appreciates their contribution. Hence, it is expected to have positive relationship with Job Performance of DAs. Yohannes (2009) followed the same procedure to measure the variable and his study showed significant association between recognition and DAs motivation at work and it is a categorical variable which was measured using five-point Likert-type scale.

Perception about pay structure (PST): Refers to salary and other benefits which DAs get from their organization and his/her perception about the adequacy of their salary. As the DAs' salary and perks get larger and increased properly according to the structure with reference to years of experience and performance as well as with the living expenses the DAs would become more motivated to their work and perform their job in a better way. It is one of categorical variable since, was measured using five-point Likert-type scale.

Supervision (SUPE): It is one of the categorical variables which were measured using five-point Likert-type scale and is operationally defined as the supervisors' accessibility, ability, and willingness to guide, motivate, teach, and fairly treat subordinate, and so on. If the supervisor is comfortable to DAs in line with the above mentioned criteria, he/she is likely to be motivated towards the work and vice-versa. This implies that DAs perception on the existence of supervisors have positive impact on the Job Performance. of DAs. It was measured using Likert-type scale which is Zelalem (2011) and Tesfaye (2012) followed the same procedure to measure the variable and their study showed significant association between supervision and DAs Job Performance.

Perception about work itself (PWISE): This means the actual job which a DA is expected to perform in the organization as part of his duty. If the nature of job is interesting to the DAs, she/he is likely to be motivated and performed more towards the work and vice-versa. In this study "work itself" expected to influence the job performance positively and it is measured using Likert-type scale.

Organizational administration (ORAD): It is one of the categorical variable which clearly defined rule, regulations, procedures, and transparence especially those relating to DAs. If the organizations administration is comfortable to them DAs are expected to have high motivation and performance. It is related with job performance of DAs positively and measured using five-point Likert-type scale with responses ranging from 1 highly discouraging to 5 highly motivating.

Promotion criteria (PRCR): It is act of rising in rank or position; most studies revealed employees' promotion opportunities are more related to years of service than to individual Job Performance. Hence employee's promotion are more likely to reinforces highly work motivation. Thus it was expected to have positive relationship with job performance of DAs. Zelalem (2011) followed the same procedure to measure the variable and his study showed positive relation between promotion and DAs motivation at work and it is one of the categorical variable since was measured using five-point Likert-type scale.

Responsibility (RESP): Operationally this can be defined as a being given control of personal work. It is expected that as DAs given responsibility to make ultimate decision on the issues under his/her responsibility, she/he may motivated more. If there is an interference of supervisor, *kebele* administration, officials and other DAs motivation and performance could be influenced significantly. Therefore, responsibility is expected to have positive relationship with job performance of DAs. It was one of the categorical variables and so five-Point Likert-type scale was used to measure this variable.

Perceived working condition (PWOCO): It is one of the categorical variables that refers to physical condition in which DAs work, facilities available, tools, space and other environmental aspects. As it is known the DAs are working in rural areas with the farmers where there are no good facilities. Even if a great facility is not expected, the presence of residence, market in the near vicinity etc are very crucial. The working condition was hypothesized to have positive relationship with job performance of DAs and it was measured using five-point Likert-type scale.

Work distance (WRDO): This variable is continuous variable which was defined as the distance of working place from the DAs' family residence. It was measured in kilometers. The working place of DAs might be far from his or her family. It is expected that long distance of placement from home place discourage DAs. It was measured based on the significance of the mean value differences among DAs with different work location in relation to their motivation at work and job performance. The one-way ANOVA was used to test the significance of variable. In the present study this variable was expected to influence job performance negatively.

Perceived job security (PJBSC): It is an ordinal type variable measured using a five point continuum Likert-type scale. It is operationally defined as freedom from insecurity, such as loss of position or loss of employment altogether. If they assume as they loss their job at any time in the future suddenly, they are highly frustrated. So,

it was hypothesized that the absence of security negatively affects the job performance of DAs. Zelalem (2011) followed the same procedure to measure the variable and his study showed positive association between job security and DAs motivation at work.

Attitude of the DAs towards their job (ATDA): Attitude is a categorical variable which indicates of a person's latent tendencies or inclination to stimuli that are present in the environment. It can be employed to describe and explain the behavior of the individual. A characteristic of attitude is its persistence, that is, it tends to persist over time unless there is a significant effort to change it. The researcher operationally defined attitude in this study as the degree of positive/favorable or negative/unfavorable attitude of DAs towards their job. Therefore, favorable attitude of the DAs towards their job was hypothesized to influence DAs job performance positively. This variable was measured using a five point continuum Likert-type scale suggested by Thurstone (1976). The scale or categories used to measure these variables were 1=strongly disagree, 2=disagree, 3=neutral, 4=agree and 5=strongly agree. The scoring was given in ascending order from 1 to 5 for negative to positive responses. Whereas, for negative items, scoring pattern was reverse.

Perceived policy environment (PPOEN):- It refers to availability of clearly defined policies mainly related to employees and organizational goal. The measure is whether DAs perceive organizational policies are clearly understood and favorable to their Job Performance. Thus, it was hypothesized to have positive relationship with DAs Job Performance. It is an ordinal type of variable measured using a five point continuum Likert-type scale. Tesfaye (2012) followed the same procedure to measure the variable and their study showed positive association between organizational policy environment job performances of DAs.

4. RESULTS AND DISCUSSION

4.1. Descriptive analysis results of Job performance Level of Development Agents

Job performance of DAs is measured depending on twenty-five items to know how DAs perform under their PAs. The data collected by using scheduled instruments for job performance self and beneficiary (farmer) rating methods. Each item had a five point Likert scale 1=Unable to do, 2=partially doing, 3=Doing but with difficulty, 4=Doing somewhat well, 5=Doing very well based on twenty-five items given weighted scores as per the responses and judgments given by DAs themselves and farmers, then summed up and divided by two to get the mean score of the dependent variable. The data collected through the above ways were used to categorize DAs into low, medium and high performed. Therefore, the obtained data which is rated by DAs themselves and farmers were projected by calculating its mean value for general evaluation shown in Table 1.

Table 1: Comparison of ratings within the scores

Types of ratings	Job performance category	Score	F	%	Overall	
					Mean	SD
Self rating	Low	28-49	32	26.7	2.79	0.88
	Medium	50-93	58	48.3		
	High	94-114	30	25		
Farmers rating	Low	30-44	34	28.33	2.75	1.01
	Medium	45-97	54	45		
	High	98-123	28	23.33		
Mean value	Low	29-47	32	26.67	2.77	0.94
	Medium	48-96	57	47.5		
	High	97-115	31	25.83		

Note: f=frequency Scale: 1=Unable to do, 2=partially doing, 3=Doing but with difficulty, 4=Doing somewhat well, 5=Doing very well.

Source: Own computation from survey data, 2013

As shown in Table 1, the two types of rating have different mean (2.71 and 2.75) and standard deviation (0.88 and 1.01) for self and farmer job performance rated, respectively. The result on rating comparison of Table 3 also shows that in the three categories almost the same for medium performed DAs 48.3% (n=58), 45% (n=54) and 47.5% (n=57) for job performance of self rating, farmer rating and mean value, respectively. Therefore, for the sake of appropriate measurement of the study variables, here after the mean score value of the two scores is used as mid-point of measurement. The distribution of DAs respondents by level of job performance mean score categories are presented in Table 2.

Table 2: Level of job performance among development agents

Job performance category	Score	F	%	Overall	
				Mean score	SD
Low	29-47	32	26.67	2.77	0.94
Medium	48-96	57	47.5		
High	97-115	31	25.83		
Total		120	100		

Source: Own computation from survey data, 2013

As indicated in Table 2, the obtained score of job performance ranges from 29-115. The job performance categories were calculated on the bases of mean and standard deviation. DAs job performance level were measured on a Likert type scale with the five scale measurement, based on actual mean score distribution (72.45-24.94) the mean values were defined as 29-47 as low performed, 48-96 as medium performed, 97-115 as high performed. Thus 26.67 % (n=32), 47.5 % (n=57), 25.83 % (n=31) low, medium and high performed respectively. Accordingly, overall mean of job performance score 2.77 on a scale of 1 to 5 (1=unable to do/lowest and 5=doing very well/highest). This indicates that the job performance level of DAs was almost medium performed and need efforts to improve this condition. This is one of the evidences for low provision of extension service of the organization for the farmers of the study area. From the above result, it can be concluded that job performance of DAs in the study area is at less performance level, because the majority of the DAs identified as below the desired level of job performance.

It is therefore, interesting to discover the factors that have contribution for the current undesirable level of job performance of the DAs which needs efforts to improve the current condition in the study area. The result of relations between development agents 'job performance levels as dummy and continuous variables considered here on Tables 3 and 4.

Relationships of Dummy and Continuous Explanatory Variables Job Performance

Table 3: Relationships of dummy variables with job performance of development agents

Demographic factors		Job performance categories								
Sex	Male	20	16.6	52	43.3	29	24.2	101	84.2	0.61 NG
	Female	2	1.6	12	10	5	4.2	19	15.8	
Marital status	Married	14	11.6	49	40.8	26	21.7	89	74.2	0.16
	Unmarried	8	6.6	15	12.5	8	6.6	31	25.8	NG

Source: Own computation from survey data, 2013

Sex: As it can be seen in Table 3 from the respondents bigger percentage 84.167% (n=101) of DAs were male. The rest 15.83% (n=19) of the respondents were female. Accordingly sex distribution of the DAs in all three job performance categories has the highest proportion for males with a few female DAs as indicated in Table 5 for both Job Performance. The result of the statistical analysis shows that there was no significant difference between different categories of job performance of the DAs and gender. The relationship between sex and job performance reveals that the male and female DAs have similar job performance level. But the result of this study shows that was not seen significant difference for both Job Performance. It is the same as the study conducted by (Cano and Miller, (1992) showing that gender is not associated with job performance of DAs. Whereas other empirical studies done by Belay and Deginet (2004) and Belaynesh (2008) also reveal that agricultural extension services in the country are male-dominated from the national to the local level. This has an implication to address the needs and problems of women farmers, because front-line, male extension workers tend to work with male farmers and sometimes with female household heads.

Marital status: Majority of the respondents were found married 74.167 % (n=89). Though, marital status was hypothesized to influence job performance of DAs in favor of unmarried DAs. Contrary to this as the result indicates in Table 5, there was no relationship existed between marital status and work motivational and job performance level of the DAs. This finding is in line with the other studies which have shown no significance among married and unmarried DAs (Herzberg et al., 1967 and Zelalem, 2011). However, other study have shown the relationship between marital status and the Job Performance, indicating that married DAs have more motivation than that of unmarried agents (Fetsch, 1997)

Table 4: relationships among continuous variables, job performance of development agents

Variables		Job performance categories				Total	
		Low	Medium	High	Total		
Age	Mean	31.43	30.59	31.73	31.33	2.3***	
	SD	4.91	4.50	2.98	2.443		
Work distance	Mean	7.37	7.47	7.23	7.29	2.02*	
	SD	1.56	1.41	1.41	1.429		

Source: Own computation from survey data, 2012

Age: The result from one-way ANOVA (F-test) on Table 6 indicated that job performance of DAs had significant mean difference with their age. FGD with extension managers, process owners and extension officers confirmed that, even if the working environment of DAs is challenging most of the aged DAs are highly tolerant and not eager to leave the extension system. Because of such reasons, older agents in the study area have high job performance than the younger DAs. This result is consistent with a study of Bowen *et al.*, (1994) which indicates that older workers are more motivated in their work than younger workers. However, some studies have shown that a negative relationship between job performance and age, indicating that younger workers are more motivated in their work than older workers (Yohannes, 2009).

Home distance from the work area: The proximity of DAs family to the work area is believed to decrease stress. Thus, it was hypothesized that longer distance from home place affects job performance of DAs negatively. The result in Table 4 from one-way ANOVA confirmed that there is significant mean difference at less than 1% significance level among DAs job performance and their work location. This finding is similar to studies by Zelalem (2011) and Tesfaye (2012).

Data incorporated in Table 6 pointed out that advancement; organizational administration and Policy environment were important factors that help to motivate DAs for higher performance towards their work. On the other hand, Job security; Supervision and Responsibility were among highly discouraging factors leading to demotivation towards work that result in lower performance. The frequencies of DAs for different variables vary greatly across the 5 categories on the continuum.

Discussions Summary of Explanatory Variables with DAs' Level of Job Performance

There were 17 independent variables examined in the study. Four variables among personal factors (sex, age, marital status and work distance) were analyzed separately. This sub-section presents results of the association of DAs' job performance level with each of 13 ordered type explanatory variables under study in the study area. The factors considered under this sub-section include: Organizational Factors (Perceived Job security, Organizational Administration, Supervision, Policy environment, Recognition, and Promotion criteria), Work Related Factors (Responsibility, Perception about Work itself, Work Location, Pay structure, Perceived Work conditions and Advancement) and Psychological factors (Achievement and Attitude of DAs towards their job).

Table 6: Summary of study variables with DAs' level of Job Performance

Independent variables	job performance	
	χ^2 value	p value
Supervision	71.4***	0.000
Work it self	60.9***	0.000
Working condition	32.9***	0.007
Job security	40.3***	0.001
Responsibility	60***	0.000
Recognition	52.8***	0.000
Advancement	19.9**	0.013
Achievement	27.5**	0.036
Organization Administration	13.8	0.210
Attitude of DAs	88.6***	0.000
Policy environment	14.7	0.540
Promotion criteria	62***	0.000
Pay structure	57.5***	0.000

Source: Own computation from survey data, 2013

Supervision: It was hypothesized to have a positive relationship with the job performance of DAs. The result revealed that there is strong and statistically significant association at 1% level for job performance of DAs with supervision and has positive association ($\rho=0.575$) and ($\rho=0.539$) with job performance of DAs respectively. According to McCaslin and Mwangi (1994) point out that supervision supported to develop a high job performance level between supervisor and the agent. But it can be concluded that the mean obtained for supervision, expresses less superior support and supervision service. Agents expressed that upper administrative and specialist supports did not deserve amount to desired level of job performance of DAs. This finding is

confirmed by IPMS (2006), Belaynesh (2008), and Castillo and Cano (2004) who reported lack of supervision quality in extension service is one of the major problems in extension organizations. Therefore, the result of this survey showed that this issue needs high concern by the managers, process owners, extension officers and supervisors of *woreda* Agricultural Development Office.

Perception about work itself: The relationship among the “Perception about Work itself”, job performance level of DAs was analyzed using cross tabulation; chi-square and Spearman’s Coefficient of Correlation. The “Perception about Work itself” has a positive relationship ($\rho=0.489$) and ($\rho=0.426$) with the job performance of DAs at $<1\%$ level of significance. Appendix 2 indicates 64.16 % (n=77), 22.5 % (n=27), 12.5 % (n=15), 0.83% (n=1) and 59.16% (n=71), 23.3% (n=28) 33.33% (n=40), and 11.6% (n=14) highly discouraged, discouraging, neutral and encouraging them to job performance respectively.

This implies that the work of DAs by itself is not much encouraging factors concerned the job performance in the study area. But its relation with work motivation, the significant results indicates that it is among important factors which influence job performance of DAs. Maren (2002) concluded that organizations should focus in designing of jobs on issues central to the motivation and satisfaction of their employees motivational problems and employee’s frustration and thereby maximize satisfaction of DAs at their work.

Perceived work condition: As it is known the DAs are working in rural areas with farmer where there are poor facilities. Even if great facilities were not expected, the presence of residence, market in the near vicinity *etc.* are very crucial. This could have influence on job performance of DAs. The results of association of DAs working conditions and their level of job performance was analyzed using cross tabulation; Chi-square and Spearman’s rho Coefficient of Correlation the results are presented in Appendix 3. Perceived Work condition of DAs was significant at 1% level and as a Spearman’s rho Coefficient of Correlation has positive association with job performance of DAs ($\rho=0.754$) and ($\rho=0.395$). Perceived Work condition was important cause for 50.83% (n=61), 30 % (n=36), 11.6 % (n=14), 5.83 % (n=7), 1.66 % (n=2) highly discouraged, discouraging, neutral, encouraging and highly encouraging them to Job Performance.

The mean of working condition (1.78) indicate that the perceived work condition of the DAs were not good as perceived by them. This implies that DAs were not motivated by creating favorable working conditions in the study area and this finding is in line with (Stella, 2008) which conclude about a good physical environment as a good element towards good performance and (Purcell, 2003) suggested that work place condition could lead to work place commitment, which also linked motivation to how well a person performs on the job. Finally the study will agree with McGregor’s theory Y that urges organizations to behave in a manner that can be able to win the commitment of their workers.

Perceived job security: The relation among job security, job performance of DAs were analyzed using cross tabulation, chi-square and Spearman’s rho Coefficient of Correlation. The larger number of DAs, 18.3% (n=22), 22.5 % (n=27), 34.16 % (n=41), 17.5% (n=21), 7.5 % (n=9) highly discouraged, discouraging, neutral and encouraging them to Job Performance. Moreover existence of significant relationship at 1% level and as a Spearman’s rho Coefficient of Correlation ($\rho=0.185$) and ($\rho=0.193$) positive association among job security, job performance level of DAs.

This study is in line with Mayo’s conclusion which states the need of job security as being important in determining workers morale and productivity than the physical conditions under which the person works”. And also agree with Mc Gregor’s theory Y that urges organizations to behave in a manner that can be able to win the commitment of its workers. One of these ways could be through provision of good job security.

Responsibility: The result of the responsibility and job performance level of the DAs were analyzed using cross tabulation, Chi-square are presented in Appendix 5, Responsibility is significant at 1% level and as a Spearman’s rho Coefficient of Correlation ($\rho=0.470$) and ($\rho=0.402$) with job performance of DAs. And as indicated at the Appendix 5 result 61.7% (n=74), 29.16 % (n=35), 6.66 % (n=8) and 2.5 % (n=3), highly discouraged, discouraging, neutral, encouraging and highly encouraging respectively to both Job Performance.

This statistical results is in contrast to Yohannes (2008) who reported that 39.3% (n=55) DAs were highly motivated and 37.9%, (n=53) were motivated. From the total respondents only 2.1% (n=3) were highly discouraged with the existing responsibility being shared by them. But is somewhat similar to the findings of Stella (2008) who reported that the feeling of responsibility over one’s job as an incentive to good performance. During (FGD) discussion one of the respondents said, “My manager blamed his short falls on me. This caused people to think I wasn’t actually doing anything when I always trying to fix up his broken promises “There are many occurrences where office to us makes decisions without consultation us. The other respondent expressed, we are working under hard circumstances without anyone to remember us. This makes an individual to lose hope as well as an urge to help out in difficult situation in the future.

Recognition: This variable assesses how successful recognition systems are for creating job performance of DAs. The measure could be adapted to assess the effectiveness of formal recognition systems (such as award, sermons and bonus schemes) and informal recognition (such as words of appreciation, giving of gifts and awards outside any formal recognition system based on perception of DAs). The result of association of recognition and

respondents' level of job performance which were analyzed using cross tabulation and Chi-square. As a result, 32.5% (n=39), 20.8% (n=25), 34.2% (n=41), 10% (n=12), 2.5% (n=3) highly discouraged, discouraging, neutral, encouraging and highly encouraging them to Job Performance. The statistical results shows that recognition is highly significant at <1% level and positive association among recognition, job performance of DAs ($\rho=0.561$) and ($\rho=0.496$) respectively.

In line with this result the recent studies undertaken by Yohannes (2008) and Zelalem (2011) in their studies regarding factors influencing job performance of DAs in SNNPR Burji and Konso special *woredas* and Benishangul Gumuz Regional State respectively. Both studies confirmed that there is association between job performance of DAs and the recognition system of extension organizations. Additionally, Maren (2002) states "keep in mind that a simple 'thank you' still goes a long way with employees. Your employees will be more motivated to work hard if they know you recognize and appreciate their contribution". The indications are thus recognition is among key factors which influence job performance of DAs. In conclusion, the statement that can be drawn is DAs appear to be committed to their organizations and responsive to the farming community by recognition and respect they receive from their organization management, colleagues and from the farming community which assisted by them.

Advancement: The relationship of advancement with the job performance of DAs was analyzed using Chi-square and Spearman's rho Coefficient of Correlation. Accordingly from the total respondents 64.2% (n=77), 25.8% (n=31), 4.2% (n=5), 3.3% (n=4), 2.5% (n=3) advancement was highly discouraged, discouraging, neutral, encouraging and highly encouraging them to both Job Performance. The statistical results shows a significant at 10% level and as a Spearman's rho Coefficient of Correlation ($\rho=0.018$) and ($\rho=0.722$) positive relationship between advancement and job performance of DAs. The possible reason for this finding could be the absence of opportunity to compute at different position in the office level when compared to other government employees at the same education level. These could be the possible reasons why they were discouraged by advancement opportunity.

Achievement motivation; Appendix 8 indicates the association between achievement and job performance of DAs was analyzed using cross tabulation and Chi-square and Spearman's rho Coefficient of Correlation. The statistical analysis reported the existence of significant relationship and positive association ($\rho=.201$) and ($\rho=.198$) between achievement motivation with job performance at 5% significant level. Data result in the Appendix 8, indicates that a significant number of respondents, 49.16% (n=59), 30% (n=36), 9.16% (n=11), 5% (n=6), 6.66% (n=8) highly discouraged, discouraging, neutral, encouraging and highly encouraging them to both job performance by the achievement motivation in their work.

This study result is in contrast to Yohannes (2008) who reported that 45% (n=63) DAs were highly motivated and 42%, (n=60) were motivated with the achievement. Only 4.3% (n=6) of the respondents were found below the neutral range. In line with this, a study by Herzberg (1968) pointed out that to improve motivation and thereby increase staff performance, attention should be given to motivating factors by increasing the individual's sense of achievement and to demonstrate recognition of that achievement. Furthermore motivation theory pointed out those employees with a high achievement motivation shows a strong need for feed back as to achievement and progress in their work. For such employees achievement is more important for their motivation than material or financial reward. In view of the results it can be safely concluded that achievement is a determinant factor for job performance among the Development Agents.

Organizational Administration: The result of the relation between organizational administration, job performance level of DAs was analyzed in Appendix 9. using cross tabulation, Chi-square and Spearman's rho Coefficient of Correlation As result 15.83% (n=19), 15% (n=18), 15.83% (n=19), 21.6% (n=26), 31.6% (n=38) highly discouraged, discouraging, neutral, encouraging and highly encouraging them to job performance by the organization administration in their work. However, Chi-square test revealed that there is no significant difference. This reflects how the rules and regulations are applied and how DAs were managed by their superiors.

Attitude of DAs towards their jobs: Attitude of respondents' towards their job was reviewed due to the significant impact of DAs attitude concerning his/her behavior in their work place. In this study attitude defined as the degree of positive or negative attitude of DAs towards their job. This variable was measured using a five point Likert type scale. The results of the relationship of DAs attitude towards their job with their job performance was analyzed using cross tabulation, chi-square and Spearman's rho Coefficient of Correlation. As a result of both dependant variables, 40.8% (n=49), 40.83% (n=49), 16.6% (n=20), 1.16% (n=2) of respondents were highly discouraged, discouraging, neutral and encouraging them to job performance respectively.

A statistical result reveals that attitude of DAs towards their job has strong associations with DAs' job performance at <1% level of significance. This study agrees with McGregor's theory Y that urges organizations to act in a manner that can induce positive attitude of workers to produce increased output. Therefore, extension organization managers, process owners, extension officers and supervisors of the study area is expected to change the behavior of DAs with negative attitude towards their jobs by making their work environment as healthy as possible at the *woreda* level.

Policy environment: Policy environment refers to accessibility of complimentary and clearly defined policies mainly related to workforce and organizational goal. Results of the relationship of policy environment of the extension organization in the study area with the job performance were analyzed using cross tabulation, chi-square and Spearman's rho Coefficient of Correlation. As shown above, majority of respondents, 24.2% (n=29), 22.5% (n=27), 29.16% (n=35), 15% (n=18) and 9.2% (n=11) were found the organization policy is highly discouraged, discouraging, neutral, encouraging and highly encouraging them to job performance whereas, the statistical result also revealed that there is an insignificant association policy environment of the extension organization with their job performance of DAs.

Pay structure: In fact according to Herzberg's theory of motivation, pay and benefits were the most important factor influencing job performance of employees in the work place. As Marsland *et al.* (1999) pointed out that extension employees may be satisfied with their work. However, they may still be dissatisfied with their monthly pay package. In this study also perception about salary was seen in relation to job performance of DAs. The results of relationship between perception about salary and job performance level of respondent DAs was analyzed using cross tabulation, Chi-square and Spearman's rho Coefficient of Correlation.

The outcome of study indicates that the respondents, 29.16% (n=35), 24.16% (n=29), 34.16% (n=41) and 12.5% (n=15) responded that the salary was one of the factors that highly discouraged, discouraging, neutral and encouraging them to job performance respectively. As a Spearman's rho Coefficient of Correlation There is positive relationship between perception about salary, job performance level of DAs ($\rho=0.638$) and ($\rho=0.557$) respectively. The relation is highly significant at 1% level. This finding agreed with other studies like (Moris, 1987) that indicates low job performance among extension workers was aggravated by their poor pay structure (less pay and allowances) of the extension organizations as compared to their peers working in private, even in research and management positions. Hertzberg (1966) in his two stages process to motivate employees in an organization suggested that ensuring wages are competitive and reasonable that will help to reduce job dissatisfaction among employees.

Promotion criteria: This study also looked at the association among the promotion way currently used in extension organization of the study area and the perception of DAs of these promotion system on their Job Performance. The results were analyzed using cross tabulation, chi-square and Spearman's rho Coefficient of Correlation. As indicated majority of the DAs, 61.7% (n=74), 29.2% (n=35), 6.6% (n=8) and 2.5% (n=3) highly discouraged, discouraging, neutral and encouraging them to job performance respectively, with the existing promotion criteria of their organization. It was also found that there is significant association among Promotion Avenue, job performance of DAs at <1% significance level and as a Spearman's rho Coefficient of Correlation ($\rho=0.313$) and ($\rho=0.225$) has positive association.

In this regard, FGD with DAs representative discussion confirmed that promotion system which considers individual performance in addition to the years of service as selection criteria for promotion along with extra training would be more likely to promote higher work motivation. This finding is similar to a study by McCaslin and Mwangi (1994) on Extension Agents from Kenya's rift valley who reported that promotion led to frustration because the Extension Agents felt promotion was more on the basis of years of service and not on individual performance. The possible reason for this finding could be the absence of opportunity to compute at different position in the office level when compared to other government employees at the *kebele* level. The other reason could be that the chances of promotion avenues are very few for DAs. These could be the possible reasons why they were discouraged by advancement opportunity.

4.2 Econometric model results of influential explanatory variables on job performance level of DAs

The outcome of the ordered logit model was used to recognize the effects of changes in explanatory variables on the level of job performance of DAs. In this section, all the explanatory variables were used to estimate the ordinal logistic regression model to establish the most significant variables influencing DAs job performance. The ordered logit regression model was also fitted to estimate the effects of a unit change in the individual hypothesized explanatory variable towards the variance of job performance level of DAs. Thus, the results of the marginal changes in significant explanatory variables on job performance level categories of DAs are presented in Tables 9 and 10

Table 7: The maximum likelihood estimation of ordered logit model for variables influencing job performance of DAs

Variables	Coefficient	Z	Marginal effect		
			Low	Medium	High
Age	0.001	0.03	-0.006	-0.001	0.001
Sex	0.605	0.94	-0.024	-0.039	0.063
Marital status	-0.226	-0.41	0.009	0.014	-0.023
Pay structure	1.10 ***	3.29	-0.044	-0.072	0.116
Organization admin	-0.168	-0.61	0.006	0.011	-0.017
Recognition	0.399	1.43	-0.016	-0.026	0.042
Work distance	-0.068	-0.42	0.002	0.004	-0.007
Job security	0.668**	2.41	-0.026	-0.043	0.070
Supervision	0.269	1.01	-0.010	-0.017	0.028
Advancement	-0.321	-1.19	0.012	0.020	-0.033
Policy environment	-0.370	-1.37	0.014	0.024	-0.039
Responsibility	0.722*	1.87	-0.029	-0.047	0.076
Working condition	0.091	0.36	-0.003	-0.005	0.009
Achievement motivation	0.304	1.47	-0.012	-0.019	0.032
Attitude of DAs	0.813***	3.62	-0.032	-0.053	0.085
Work it self	1.544***	3.85	-0.062	-0.100	0.163
Promotion avenue	-0.294	-0.91	0.011	0.019	-0.031

Maximum likelihood estimate:

Log likelihood = -67.929222 Number of obs = 120

LR chi² (17) = 105.00 Prob. > chi² = 0.0000 Pseudo R² = 0.4360

Note: ***, **and* are significant at 1%, 5% and 10% probability level respectively.

Source: Own computation of model output from survey data, 2013.

The estimated regression in this study has a high likelihood ratio and is significant at less than 1% level of significance. This means the model has high explanatory power of the joint association of factors influencing job performance of DAs. The model result is significant at less than 1% level indicating that the hypothesis that the coefficients the intercept are equal to zero is rejected. The marginal values provide the impacts that a unit changes in the individual independent variables have on different levels of job performance when all other variables are remaining constant.

As noted from Table 7, out of 17 explanatory variables only 5 of them were found to be significant at various levels of significance work motivation, the significant variables were recognition, the perception about work itself, perceived job security, pay structure, attitude of DAs towards their job and as marked from Table 11 five of them were significant for job performance such as attitude of DAs towards their job, perception about work itself, perceived job security, responsibility of DAs and pay structure. Whereas, as the model shows age, sex, marital status, organization administration, work location, advancement, policy environment, perceived working condition, achievement motivation, promotion criteria found statistically insignificant. Thus, it is advisable to present the influence of these explanatory variables compiling the two dependent variables: job performance by combining them at consecutive style in the preceding way. Those common variables for the job performance were job security, attitude of DAs towards their job, work itself, pay structure, while recognition, for job performance and responsibility of DAs towards their job were accountable for job performance of DAs of the study area.

Perception about Work itself: The model result reveals that the work itself had significant and positive impact on job performance of DAs at less than 1% level of significance. This study states that “the work itself” was one of the important factors which affect job performance of the DAs. All other being held constant, a unit change in “the work itself, the probability of job performance of how, medium and high category change by 10%, 1%, and 9% respectively whereas, the probability change for job performance level of low, medium and highly performed categories change by about 6%, 10%, and 0.16% respectively.

McCaslin and Mwangi (1994) indicated that one of the problems of developing countries in extension organization is that they do not have defined and limited job description for extension personnel. Singh(1989), found as the DAs face work related problems such as role ambiguity. Likewise in this study it is concluded as work itself was one of the factors which affect job performance of DAs. Even though it needs farther investigation, the study carried by (Belay, 2002) gives the clue as development agents are often required to be involved in various non extension activities like credit distribution and collection of repayment and so on. Those things which have no relation with their priority mandate could decrease the taste of their work and their work motivation. The finding of this study goes in line with the (Wiley, 1997); the knowledge about those strong motivators within the work

itself is of great value and may serve as a starting point for the re-design of the work itself in order to increase a DA's work motivation.

Responsibility of DAs: It was hypothesized that when DAs given responsibility to make ultimate decision on issues under his/her responsibility, she/he may motivated more. If there would be an interference of supervisor, *kebele* administration and officials, the DAs motivation could be influenced significantly. The analyzed survey result confirmed that responsibility in the organization for DAs positively influences their job performance at <10% significance level. Its marginal effect shows a unit change in a relevant responsibility in extension organizations for DAs of the study *woreda*, the probability change for job performance level of low, medium and highly performed categories change by about 2 %, 4% and 7% respectively. If a supervisor provides support and facilitation on the job, the DAs are likely to be assigned greater task responsibilities and accumulate learning experiences. However, during FGD discussion the DAs representatives suggested that we have encountered the problem of decision making and it take long time to gat responses from *kebele* administration because, all social, political and economical concern of *kebele* has performed by the good will of *kebele* administration thus, the roll of DAs is not considerable even at the agricultural extension activity such as soil and water conservation, land use and land administration etc.

Recognition: The ordered logit regression analysis output indicates that recognition is statistically significant at less than 1% level of significance for work motivation, and a unit change of recognition at the job performance category of low, medium and highly motivated change by 9%, 1% and 8% respectively .This implies that one approach to enhancing job performance is recognizing DAs for good performance. DAs' recognition can be a form of non-monetary, informal reward in which a manager acknowledges and praises DAs who have performed according to the organization's values and principles. One of DAs representative from FGD group member said that "here, they don't see us as a member of the staff for example, if they give money and material incentive to other staffs, they don't give them to us however, we have motivation for work but, we are not seen as members of the staff and we feel bad." and it kills our morale. However, great care should be taken during selection of DAs for the recognition by the organization. The selection mechanism should be carried out by the pre set criteria and transparently with the involvement of representative of DAs. If it miss-used it could be one of the cause for discouraging DAs.

Pay structure: This is a perception of DAs about the sufficiency of their salary and other benefit which were hypothesized as the DAs salary and perks get larger and increased appropriately according to the structure with reference to years of experience and performance as well as with the living expenses the DAs would become more motivated and well perform their work. The analyzed survey result confirmed that pay structure in the organization for DAs positively influences their job performance at less than 1% significance level. Development agents could not satisfied in payment made for them in the form of salary because it lacks different benefits compared to their job performed and living conditions. According to model output result a unit change of the pay structure at the job performance category of low, medium and high change by 8%, 1%, and 7% respectively whereas, the probability change for job performance level categories low, medium and high change by 4%, 7% and 11% respectively.

Therefore, FGD of DAs confirmed that "The salary we get is low. There is additional job, and there should be some kind of benefit. Everybody should get what he worked for. This holds you back from working because you work for long and you get tired, but the money you get is low. And also there is workload. The work is tedious and risky. You has to exert strong effort to change the attitude of the farm HHs." If you are paid well, it will attract you to do your job. and you will do it with interest. The other group member expressed that the salary we are getting paid does not match the work we do. We are doing a great deal of work and it is hard. When you see it from that point of view, it is hard to say you are getting paid. You might say, 'what do I get after working this hard?' It will make you lose hope and make you look for other choices." And "We all are worried about our salary. Our salary is not compatible with our work. Therefore, this condition influences job performance of DAs as well as development agents could not satisfied in payment made for them in the form of salary because it lacks different benefits compared to their job performed and living conditions.

Attitude of DAs towards their job: Development agents overall job performance was found to be influenced positively and significantly by their attitudes toward their job at less than 1% significant level. The marginal effect shows that, a unit change of the attitude of DAs towards their job in extension organizations in the study area change the probability of job performance for low, medium and high change by 12%, 1.4% and 1.8% and the probability change for job performance category by 3.2%, 5.3%and 8.5% respectively.

This research also observed from FGD and key informants that the working conditions of extension organizations require DAs to work long hours/travel long distances away from home or family in ragged topography, large number of farming household, walking long distance on foot for work during all season, etc. Thus current study pointed out that, DAs negative attitude towards extension work in the study area is important since it is seen to be positively associated with their lateness to work, absenteeism, low commitment, turnover which have implications for overall organizational low performance. It is generally accepted that, the consequence of having a negative attitude towards their job is that the agreeable atmosphere that exists in the work environment

of the extension agency will be make vulnerable.

In line with this, a study investigating job satisfaction in the cooperative extension service by Bues and Riggs (1993) discovered that extension agents feel an obligation to the clientele and have a positive attitude toward their jobs if they can balance the specific satisfactions against the specific dissatisfactions and arrive at a composite satisfaction with the job as a whole. Those variables suggested by Herzberg's motivators-hygiene theory have strong potential influence on work attitudes of extension workers. Therefore, the extension organization of the study area has to work to improve the negative attitude of DAs towards their work to make them motivated and increase their job performance. In general, improving the condition of all these factors creates motivation of DAs to perform their duties and responsibilities in effective and efficient way.

Perceived Job security: As expected, job security is another important motivational factor that has a positive impact on job performance of DAs at 1% significance level. The estimated coefficient of the variable suggests that, being other variables kept constant, the probability of job performance category that low, medium and high categories change by about 11%, 1.2% and 9.9% respectively.

Whereas, the probability of job performance category that low, medium and high categories change by about 2.3%, 4.4% and 7% respectively. In line with this, a study by Jenning (1998) on extension workers job satisfaction confirmed that a fully-trained extension worker must have job security. The implication is that unless they can see permanent rewarding or possibilities of advancing to better job position in their organization, they could not be expected to give a dedicated and efficient extension services.

5. Conclusion and Recommendations

1. The model output revealed that recognition system of the agricultural development organization highly influenced the likelihood of job performance level of the DAs. Therefore Managers at grass root level, has to;

- Design additional incentive mechanism for the extra working hours and weekend tasks, and, must continuously look for opportunities to praise DAs for good ideas and work well done because, a simple 'thank you' still goes a long way with employees.
- Prepare a system whereby superior performance could be rewarded and motivated. These will attract, retain and motivate extension agents.

2. To make the nature of job is interesting to the DAs, the managers, process owners, extension officers of the study area should make sure:

- In designing of jobs on issues central to the motivation and satisfaction of their employees. Also, should focus motivational problems and employee's frustration and thereby maximize satisfaction of DAs at their work.
- Efforts have to be made to improve work related problems (like role ambiguity, non professional activities and work overload) in extension organization of the study area.

3. There were many occurrences where office makes decisions without consulting them thus, *woreda* managers, supervisors, *kebele* administration and officials of extension organizations should improve management system to motivate DAs Whereby providing opportunity to make ultimate decision on issues under his/her responsibility.

4. The issue calls for considerable efforts to be made by extension managers, process owners, extension officers and supervisors, so as to bring an appropriate motivational package which can gear up the DAs to develop positive attitude towards their job. Thus, the feasible recommendation in this regard would be:

- Decision of placement, promotion, reward, training opportunity, transfer, etc. Office of Agricultural Development (OAD) make clear, transparent and equal for all without any partition. Involve DAs in the designing of motivational systems because creation of sense of involvement might lead to a sense of ownership.
- Fulfilling well equipped facilities at *kebele* level such as building DAs house for office and living, building FTC and equip with teaching, farm and demonstration materials, and working clothes like rain coat, shoes, umbrella, sleeping bag and other durable and non-durable required materials.

5. To make free from job insecurity or loss of position, *woreda* managers, supervisors and officials of extension organizations in the study area has to;

- Prepare a suitable carrier structure which relates or considers individual performance than years of service; and Involve extra trainings (long and short term).

6. Organizations of agricultural extension in the study area has to prepare a carrier structure where by employees can be benefited from promotion and salary increments, based on the living situation in different agro-ecological zones. In considering agricultural extension work as a socially prestigious work, balanced payment has to make with the job to be done, the living and working condition in the remote rural areas to improve the current poor payments/remuneration system.

6. REFERENCES

- Belaynesh Kumisa, 2008. Contribution of Agricultural Technical Vocational Education and Training program in enhancing professional competencies of Development Agents: the case of Kombolicha, Haramaya and Kersa *Woredas* of Estern Hararghe Zone. A M.Sc. Thesis, Haramaya University, Ethiopia.
- Birhanu Gebremariam, 2006. Commercialization of Ethiopian agriculture. Extension service from input supplier to knowledge broker and facilitator.
- Borooah, V. K., 2001. Logit and Probit: Ordered and Multinomial Models. New Delhi, Sar Miller McCune, SAGE Publications.
- Bues, K. M., and K., Riggs, 1993. Job satisfaction in Extension. *Journal of Extension*. 31(2):27-36. <http://www.joe.org/joe/1993summer/a5.html>, Retrieved on October 6, 2012.
- Cano, J., and G., Miller, 1992. A gender analysis of job satisfaction, job satisfier factors, and job dissatisfied factors of agricultural education teachers. *Journal of Agricultural education*, 33 (3): 40- 46.
- Carol, W. E., 2005. Management skills for new managers. USA. AMACOM.
- Castillo, J. X and J., Cano, 2004. Factors explaining work motivation and Job satisfaction among faculty. *Journal of Agricultural Education* Accessed on Oct 22, 2012 from <http://www.fao.org/ag/ags/AGSP/news.html>.
- Gezahegn Gelebo, 2007. Analysis of Labor Out migration and its Implications on the Indigenous Soil and Water Conservation in Konso, Southern Ethiopia. An M.Sc. Thesis submitted to Haramaya University School of Graduate Studies.
- Gomez, K. A and A. A. Gomez, 1984. Procedures for Agricultural Research, John Wiley and Sons, New York.
- Green, W.H., 2000. Econometric Analysis. 4th edition, Prentice-Hall, Inc. Upper Saddle River, New Jersey.
- Gujarati, N. D., 1995. Basic Econometrics, 3rd edition, McGraw Hill, Inc., New York.
- Hopkins, K.D., 1996. Basic statistics for the behavioral science (3rd ed.). Simon and Schuster company: Oxford University press. [http://www.aiaee.org/attachments/064- Okorley-evol-16-2-3](http://www.aiaee.org/attachments/064-Okorley-evol-16-2-3). Retrieved on October 16, 2012.
- IFPRI (International food policy research institute), 2010. In-depth assessment of the public agricultural extension system of Ethiopia and recommendation for implimantation: Discussion paper, 01041.
- Jennings, D.M., 1998. Is length of employment related to job satisfaction? [http:// clearing house.missouriwestern.edu/manuscripts/8.asp](http://clearinghouse.missouriwestern.edu/manuscripts/8.asp). Accessed on January 28, 2013.
- Liao, T.F., 1994. Interpreting Probability Models: Logit, Probit, and Other Generalized Linear Models. Series: On Qualitative Applications in the Social Sciences. Thousand Oaks. Landon, New Delhi. 88p.
- McClelland, D. C., 1961. The achieving society. Prince-Hall Inc: New Jersey.
- McCaslin, N. L., and Mwangi, J., 1994. Job satisfaction of Kenya's rift valley extension *of Extension*, 32 (3). Accessed on October 28, 2012, from [http://www.joe.org/joe/1994 October /rb1.html](http://www.joe.org/joe/1994%20October%20/rb1.html).
- McClelland, D.C., 1975. Power: The Inner Experience. Irvington: New York
- MoARD, 2009. Overall number of extension agents data graduated from ATVET colleges. Unpublished, ATVET program coordination office, Agricultural Extension Directorate, MoARD, Addis Ababa.
- Pareek, U., and L., Rao, 1992. Work motivation and management decision. Concept publishing company, New Delhi.
- Tewodros .A, 2007. Analysis of Household Food security Status: The Case of Argoba Nationality in Fedis Woreda ,East Hararghe Zone of Oromia ,Ethiopia . An M.Sc. thesis Presented to the School of Graduate Study of Haramaya University haramaya .
- Thurstone, L. L., 1976. Attitudes Scale, In Measurement of Extension Research: Instrument Developed at IARI, 1963-72. IARI: New Delhi.
- Wiley, J. W., 1996. Linking survey results to customer satisfaction and business performance. In A. I. Kraut (Ed.), Organizational surveys: Tools for assessment and change. San Francisco: Jossey-Bass. Accessed on January 9, 2013, from [http://www.joe.org/joe/1994 October /rb1](http://www.joe.org/joe/1994%20October%20/rb1.html).
- Yohannes Mare, 2009. Factors influencing work motivation of development agents in Burji and Konso special woredas. MSc. Thesis Presented to School of Graduate Studies of Haramaya University.
- Zavoina, R and W.MacElvey, 1975. A Statistical Model for the Analysis of Ordinal Level Dependent Variables. *Journal of Mathematical Sociology*, summer. pp. 103-120.
- Zelalem Bekele, 2011. Factors Influencing Work Motivation of Development Agents, Assosa Zone, Benishangul Gumuz Regional State, Ethiopia. MSc Thesis presented to School of Graduate Studies of Haramaya Universit