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## AGRICULTURAL EXTENSION AGENTS' EDUCATION AND TURNOVER INTENTIONS IN PUBLIC EXTENSION SERVICES IN ETHIOPIA

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### ABSTRACT

Agricultural extension agents provide informal education to equip farmers with new knowledge and skills. They play critical roles for the transfer of agricultural knowledge, technologies, and innovations. However, most of them dissatisfied and intend to find other employment in Ethiopia. Thus, this study was conducted to examine agricultural extension agents' education, perceptions towards job satisfaction, and turnover intention in public agricultural extension services in Ethiopia. The sample frame was the list of all first, second, and third-year mid-career students joined Haramaya University to upgrade their educational qualification. Total 123 extension agents were involved in the study. Primary data were collected using a structured questionnaire and analyzed using descriptive statistics. Results revealed that about 89.40% of extension agents acquired new knowledge, skills, practices, and attitudinal change during attending their education at Haramaya University. Results also showed that extension agents were dissatisfied with their current job and organization in terms of payment, promotion, benefits, and recognition. Furthermore, survey results indicate that about 68.3% of extension agents intended to leave their current position and extension organization after completing a Bachelor of Science degree. Therefore, government, private sectors and other stakeholders who work in extension organizations should work on the education and training programs, work motivation, and job satisfaction of agricultural extension agents by designing various incentive packages to increase their work motivation and reduce turnover intentions.

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### INTRODUCTION

Agricultural extension services in Ethiopia are mainly plied by the government through the ministry of agriculture. Agricultural extension agents are personnel who are responsible for meeting the goals of the extension system (Khalil *et al.*, 2009). They are the key employees of the extension organization who serve as front-line extension professionals involved in multiple activities of agriculture and rural development like

transferring agricultural knowledge, technologies and innovations to the farmers (Leta *et al.*, 2018). Extension agents are also responsible for teaching and advising farmers. They provide farmers with essential knowledge, skills and behavioral change that would lead to increased production. Moreover, extension agents provide general advisory services in crop, livestock, and natural resource management at the community level (Tesfaye *et al.*, 2010). Thus, the success of agricultural

extension work depends on these competencies. Extension agents should possess professional competencies particularly in areas of their job description such as technical and advisory skills, extension research skills, teaching/communication skills, script-writing and audience analysis. Skilful agricultural extension staff is needed for local facilitation, planning and implementation (Hornidge and Ul Hassan, 2010; Maguire, 2012; Hassan, 2013). Therefore, proper training and education of extension agents are critical for Ethiopian agricultural strategies and policy implementation.

The current Ethiopian agricultural extension system is structured from the Ministry of Agriculture to the line regional Bureau of Agricultural Development, then to the zone, district, and the lower administration unit, the kebele. The system uses Farmers' Training Centers (FTCs)-based agricultural extension approach, which is considered to be an entry point for the grass-roots extension services. FTCs assisted by agricultural extension workers. They give agricultural extension services such as farmer training, demonstration of improved farming techniques, market information, and advisory services to farmers in their vicinities. Moreover, Agricultural Technical, Vocational Education and Training (ATVET) College established to produce development agents in different fields of specializations, particularly crop production, animal production, and natural resources management (ATA, 2015).

Agricultural advisory services are under criticism to make significant impacts on the lives of smallholder farmers (Kassa and Alemu, 2016). This pressure is creating new demands for agricultural education, not only in terms of appropriate curricula but also in the mode of instruction. In universities, extension agents trained to upgrade their qualification from diploma or level four to BSc degree level in value chain oriented agricultural extension in nine Ethiopian public universities namely; Haramaya, Hawasa, Bahirdar, Mekelle, Wollo, Jimma, Jigjiga, Samera and Arbaminch Universities. Maguire (2012) explained that ATVET's trainers lack practical field and laboratory experiences, extension skills and knowledge during their study period so they cannot properly train practically oriented courses. As a result, university training focuses on mitigating these quality gaps through full time and/or seasonal on-the-job skill training for extension agents (Davis *et al.*, 2010; Leta *et al.*, 2018). In this way, an

increased number of extension agents have opportunities to receive quality extension education to improve their technical and advisory skills that enable them to work directly with rural people. The training seeks to provide practicum, hands-on laboratories, problem-focused courses and field-based enterprises. As part of their training, they returned to their work-place and conducted action research known as Supervised Extension Projects (SEPs) on farmers' farm with the support of their employers. These strengthen the practical experience of agricultural extension professionals to deal with the challenges of agricultural development in their respective districts.

The effectiveness of agricultural extension work highly depends on extension professionals who are qualified, motivated, committed and responsive to the ever-changing social, economic and political environment. This means the lion share of extension organization services is handled by frontline extension workers. Thus, motivating agricultural extension agents will achieve sustainable agricultural development and organizational goals (Bolarinwa, 2017). However, most of extension agents intend to find out office level work or other employment after their BSc training. Actual turnover and turnover intention among extension agent is a significant problem for public extension services. Different studies from Ethiopia confirmed that extension agents are often dissatisfied with their salaries, promotion, workload, benefits, recognition, and being stationed in remote rural areas with limited facilities which result in high annual staff turnover (Swanson and Rajalahti, 2010; Gebru *et al.*, 2012; Kelemu *et al.*, 2015). The motivation was found as a core driver of employee behavior in the workplace. Intrinsic motivation in the work-place decreases turnover intention by increasing job satisfaction and decreasing emotional exhaustion (Cho and Lewis, 2011).

Although research work has been done in some parts of Ethiopia by other researchers on factors affecting work motivation and job satisfaction among extension workers, little or nothing has been done on the up grading educational qualification, job satisfaction, and turnover intention among extension agents in Ethiopia. For instance, Golla *et al.* (2017) conducted on job satisfaction and its determinants among development agents in North Gondar Zone, Amhara Region, Ethiopia. Gebru *et al.* (2012) worked on challenges of development agents' performance in technology

dissemination in Southern, Nation, Nationalities and Peoples Regional State, Ethiopia. It has therefore become very pertinent to embark on this research. Therefore, this study aimed to describe socio-economic characteristics of extension agents; to examine agricultural extension agents' education; perceptions towards job satisfaction and turnover intention in public extension services in Ethiopia; and to identify major problems extension agents faced to serve as frontline workers up-on the completion of their B. Sc. degree.

## **METHODOLOGY**

### **Description of the study area**

The study area, Haramaya University, was established in 1954 near the town of Haramaya in a small village called Bate. The university is located in Haramaya district, East Hararghe Zone, Oromia Regional State Ethiopia at a distance of 526 km from the capital city of the country, Addis Ababa. The university is located at a distance of 25 km from the capital city of the Zone, Harar. The university boasts several recreational facilities and amenities, including a standard stadium, various sports grounds, shopping centers, broadband and wireless internet services, cafeterias and lounges, a kindergarden, a model primary and secondary school, hotels with accommodation services, and other facilities.

### **Sampling method**

This study was carried out amongst agricultural extension agents who joined Haramaya University to upgrade their educational qualification from diploma or level IV holders to degree level. The sample frame is the list of employees who have been serving as extension agents in various regions of Ethiopia including Oromia, Harari, Gambella, Afar and Dire Dawa regions. These employees are currently enrolled students at Haramaya University to upgrade their educational level from diploma level or level four to Bachelor of Science degree program. The program they attended is known as Mid-Career. All batches of mid-career students were selected to participate in the study. In 2019/20 academic year, the total number of first, second and third (final) year students were 48, 42, and 33, respectively. Thus, a total of 123 mid-career students were included in the study as respondents.

### **Methods of data collection and analysis**

Primary data were collected using structured questionnaires to obtain information from the agricultural extension agents in January 2020. The

questionnaires consisted of information about socio-economic aspects of extension agents, their education, and perceptions towards job satisfaction and turnover intention. The data were quantitative and five-point Likert Scale (strongly disagree to strongly agree) was used for the rating of responses. Secondary data were reviewed from the related published articles, books, proceedings, conferences. Data collected from frontline extension workers through structured questionnaires were processed and coded using SPSS software for further analysis. The data were analyzed using descriptive statistics such as frequency distribution, percentages, means, standard deviations, minimum, and maximum.

## **RESULTS AND DISCUSSION**

### **Socio-Economic characteristics of respondents**

The respondents came from various regions of Ethiopia to attend their BSc degree education in agricultural extension. These are Oromia, Harari, Gambella and Afar Regions, and Dire Dawa City Administration. Half of the respondents came from rural areas of the Oromia Region while 17.10% of them came from rural areas of Dire Dawa City Administration. Currently, they are attending education training at Haramaya University, Ethiopia. The compositions of the respondents include first year (39.10%), second year (34.10%) and third (final) year (26.80%) students. In terms of gender, 92.70% of them were male whereas 7.30% female. This showed that female extension agents are less in working as frontline extension workers, and as upgrading their educational qualification due to indoor workload activities (Table 1). The mean age and working experience of respondents were 29.94 and 8.36 years respectively, while the mean household size and children under age 18 years of the respondents were 3 and 1 persons, respectively. This indicates that majority of the respondents within the age bracket of active work, and served the government in extension organization on average eight years. Furthermore, the results showed that one respondent consumes and cover costs of three persons on an average in one household. However, agricultural staffs in general and extension agents in particular are the most poorly paid members compared to other sector officers. The monthly salary for the extension agent is unattractive. The mean monthly gross salary of respondents was 4107 birr (ETB). The minimum and maximum monthly salary of frontline extension workers

were 2004 and 7000 birr respectively. Government tax and pension are deducted from the gross salary. The respondents use this salary to cover their social expenses (Table 2).

Table 1. General information of respondents (N=123).

	Characteristics	Frequency	Percent
Category of respondents	First year	48	39.10
	Second year	42	34.10
	Third year	33	26.80
Name of Regional State/City Administration	Oromia Region	62	50.40
	Dire Dawa City Administration	21	17.10
	Gambella Region	19	15.40
	Harari Region	15	12.20
	Afar Region	6	4.90
Sex	Male	114	92.70
	Female	9	7.30
Marital status	Married	105	85.40
	Single	18	14.60

Table 2. Descriptive statistics of continuous variables (N=123).

Variables	Minimum	Maximum	Mean	Std. Deviation
Age (years)	23	45	29.94	5.39
Household size (number)	0	7	3.34	1.93
Children living at home under age 18 (number)	0	4	1.48	1.19
Experience as frontline extension workers (years)	2	25	8.36	4.59
Monthly salary (ETB)	2004.00	7182.00	4107.01	1183.98

### Position of Frontline Extension Workers Served in Extension Origination

Before joining Haramaya University to pursue BSc education, respondents had served at various positions in district level extension organization. Of the total 123 sample respondents, 118(95.9%) of them served as frontline extension workers or development agents at kebele level while the remaining 5(4.1%) never served as DAs, but as Subject Matter Specialists (SMSs) in

extension organization (Table 3). Out of 95.9% extension agents served as frontline extension workers, 58.5% of them had worked as frontline extension workers whereas 37.4% of them served as both frontline extension workers and other positions such as supervisor (18.7%), extension officer (9.8%), head of the extension office at the district level, and 3.3% of them served as another position in extension organization at district level.

Table 3. Positions respondents served in extension organization.

Position respondents engaged in	Frequency	Percent
Served as frontline extension workers (DAs)	118	95.9
Not working as frontline extension workers but as SMSs	5	4.1
Only working as frontline extension workers (DAs)	72	58.5
Working both as frontline extension workers and other position	46	37.4

### Agricultural Extension Education for Frontline Extension Workers in Ethiopia

About 99.2% of respondents responded that BSc education for frontline extension workers at university

is relevant to expand and strengthen their knowledge and skills while 0.8% of them responded that it is irrelevant.

The results showed that respondents acquired new

knowledge and skills in the area of extension through attending practical and problem-solving focused courses. Field based courses such as Supervised Extension Projects (SEPs) were also delivered to the trainee from first year to third year. This means they took SEP-I (need assessment), SEPs-II (proposal preparation and presentation), SEPs-III (Project implementation phase at farmers farm), and SEPs-IV (evaluation phase of the field project) at first year second semester, second year first semester, second year second semester and third year first semester, respectively. In terms of acquiring new skills, knowledge and practices at Haramaya University during BSc education, about 96.70, 90.20, 87.80 and 85.40% of

respondents obtained skills and knowledge on communicating agricultural information, production and marketing of crops and animals, English language and basic computer, and extension research, respectively (Table 4).

About 89.40% of the respondents expressed that the competencies such as knowledge, skill, new practices, attitudinal change they acquired during BSc education enabled them to serve as frontline extension worker in the extension organization. They also responded that they were satisfied with the topics/contents covered in the BSc education, which in turn enables them after graduated from Haramaya University to continue as frontline extension workers/DAs.

Table 4. Methods of teaching and competencies acquired by respondents (N=123).

Teaching methods	Response	Frequency	Percent
Problem solving focused courses	Yes	97	78.90
	No	26	21.10
Field based research	Yes	92	74.80
	No	31	25.20
Practical based courses	Yes	70	56.90
	No	53	43.10
Laboratories	Yes	47	38.20
	No	76	61.80
<b>Type of competence</b>			
Agricultural communication skills	Yes	119	96.70
	No	4	3.30
Skill of crop and animal production and marketing	Yes	111	90.20
	No	12	9.80
English language and basic computer skills	Yes	108	87.80
	No	15	12.20
Extension research skills	Yes	105	85.40
	No	18	14.60
Decision making and problem-solving skills	Yes	93	75.60
	No	30	24.40
Soil and water conservation practices and management	Yes	92	74.80
	No	31	25.20
Technical and advisory skills	Yes	91	74.00
	No	32	26.00
Leadership skills	Yes	73	59.30
	No	50	40.70
Entrepreneurial skills	Yes	68	55.30
	No	55	44.70

### Perceptions of agricultural extension agents towards job satisfaction

One of the key problems of public extension services in Ethiopia is the poor incentive and reward system (World Bank and IFPRI, 2010). This is largely caused by the offering only a few/no rewards, poor facilities, and low

recognition for extension agents, leading to a general lack of motivation and morale (Swanson and Rajalahti, 2010). The extension agents often lack the job amenities and incentives such as daily allowance, shelter, transportation facility, insurance, or field kits. Davis *et al.* (2010) remarked that poor incentives are causes of

low job satisfaction among extension agents in Ethiopia. As a result, many extension agents are hardly able and/or willing to give efficient advisory services in their area of operation. The job satisfaction of extension agents in Ethiopia appears low. Many extension agents seek alternative career opportunities due to low job satisfaction (Swanson and Rajalahti, 2010).

Results revealed that about 78% of respondents satisfied with their current job whereas 22% of them dissatisfied. The perception of extension agents towards their current job satisfaction in terms of payment, benefits, and recognition was measured using a 5-point Likert-type scale from strongly disagree to strongly agree based on five items. For instance, 42.30% of respondents strongly disagree with the statement of fair payment for the work they have done while 14.6% of them strongly agree. This means, the majority of the respondents responded that payment for their work is

unfair compared to work load. Moreover, 34.2% of respondents strongly disagree with the statement 'there is too little chance for promotion on my job'. This indicates that promotion is not a serious problem in the extension organization.

Based on years of experience or educational qualification, extension workers are promoted to the next career development. Results also showed that 35, 26.8, 21.1, 16.3 and 0.8 percent of respondents agree, strongly agree, strongly disagree, and disagree respectively for the statement 'I am not satisfied with the benefits I receive'. Furthermore, the mean score of respondents' perceptions about the relationship between doing a good job and receiving recognition was 2.58 with a standard deviation of 1.58, whereas the mean score of their perception towards the sense of pride in doing their job was 3.82 with a standard deviation of 1.48 (Table 5).

Table 5. Respondents' perceptions and feelings towards job satisfaction by percent (N=123).

Statements/items	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean	SD
I feel I am being paid a fair amount for the work I do	42.3	30.1	2.4	10.6	14.6	2.25	1.46
There is too little chance for promotion on my job	34.2	28.5	1.6	20.3	15.4	2.54	1.51
I am not satisfied with the benefits I receive	21.1	16.3	0.8	35.0	26.8	3.30	1.54
When I do a good job, I received the recognition	35.8	26.8	0.8	16.3	20.3	2.58	1.58
I feel a sense of pride in doing my job	13.8	12.2	0.8	24.4	48.8	3.82	1.48

### Perceptions of agricultural extension agents towards turnover intention

Previous research in extension showed positive relationships between employees' turnover intention and heavy workload, occupational stress, work-life balance, low salary, long work hours, lack of recognition, and high requirements for advancement (Safrit and Owen, 2010; Young *et al.*, 2013; Harder *et al.*, 2015). Low job satisfaction increases extension employee turnover and turnover intention (Martin and Kaufman, 2013). Actual turnover and turnover intention among extension agent is a significant problem for extension services.

Survey results showed that about 68.3% of frontline extension workers intended to leave their current position and organization after completed BSc degree while the remaining 31.7% desired to continue as frontline extension workers in the same organization.

Out of 68.3% of respondents intended to leave their current position within public agricultural extension services, about 43.1, 41.5 and 36.6% desired to work as extension officer experts at district, regional and zonal levels, respectively.

Furthermore, some of them need to be assigned as a new managerial or political position in the same organization. For example, 35% of them intended to work as coordinator to supervise frontline extension workers whereas 27.6% of them want to serve as head or vice head of Agricultural Office at district level. Finally, few of them intended to transfer to other sectors outside agriculture in the same district (e.g cooperatives office, irrigation development office, etc). Some of the respondents also intended to search for another organization paying higher salary and provide benefits outside public agricultural extension services. For

instance, about 42.6, 27.6, 16.4 and 13.4% of respondents intended to join research centers, non-governmental organization, agricultural colleges and universities, and agriculture based private sectors, respectively.

Regarding respondents' perceptions towards turnover intention, about 42.3% of them strongly agree with the statement of actively look for a new job up-on the completion of BSc degree while 22% of them agree. This means that 64.3% of them intended to leave the

extension organization. The remaining 15.4, 13 and 7.3% strongly disagree, disagree and neutral to the statement, respectively. In addition to this, 38.2% of respondents agreed that they often think about leaving the organization while 28.5 of them strongly agree with the statement, so that 66.7% of them already planned to leave the extension organization. The remaining 19.5, 11.4, and 2.4% of respondents disagree, strongly disagree, and neutral with statement, respectively (Table 6).

Table 6. Perceptions of extension agents towards their services as DAs and turnover intention after B.Sc. degree.

Statement/items	Strongly disagree (1)		Disagree (2)		Neutral (3)		Agree (4)		Strongly agree (5)		Mean	SD
	No.	%	No.	%	No.	%	No.	%	No.	%		
Completing BSc degree helps me to work in the office	5	4.1	12	9.8	5	4.1	40	32.5	61	49.5	4.14	1.13
Completing BSc degree equipped me with knowledge and skills	6	4.9	8	6.5	2	1.6	48	39.0	59	48.0	4.19	1.08
Extension organization should provide incentives for extension agents to attract employees at fieldwork	11	8.9	14	11.4	20	16.3	52	42.3	26	21.1	3.55	1.20
I am willing and motivated to work as extension agents at kebele level	47	38.2	34	27.6	5	4.1	21	17.1	16	13.0	2.39	1.46
I would like to work as an extension officer at district level after BSc degree	10	8.0	13	10.6	20	16.3	52	42.3	28	22.8	3.61	1.18
I will actively look for a new job on the completion of BSc degree	19	15.4	16	13.0	9	7.3	27	22.0	52	42.3	3.63	1.51
I often think about leaving the organization	14	11.4	24	19.5	3	2.4	47	38.2	35	28.5	3.53	1.38
I will probably look for a new job in the next year	10	8.0	20	16.3	6	4.9	37	30.1	50	40.7	3.79	1.34
The organization I am working for is not attracting employees	25	20.3	10	8.1	5	4.1	36	29.3	47	38.2	3.57	1.55
My current working environment is not conducive	15	12.2	23	18.7	4	3.3	49	39.8	32	26.0	3.49	1.38

### Problems hindering work motivation of frontline extension workers

Frontline extension workers faced various problems while rendering extension services to the farmers. Most of extension agents are working under difficult and disadvantageous conditions characterized by lack of infrastructural facilities such as transportation problem,

residential problem, remoteness, and health problems due to lack of health services in the rural area (Gebbru *et al.*, 2012; Asayehegn *et al.*, 2012). For instance, 30 (24.4%) of respondents faced transportation problems. About 22.8% of them mentioned lack of house and office at the workplace as one of the problems. Furthermore, the following problems were ranked by the respondents.

Table 7. Major problems influencing respondents' motivation to work at kebele level.

Problems	Frequency	Percent	Rank
Lack of transportation facilities for extension agents e.g motor-cycle	30	24.4	1
Lack of house and office for extension agents in their assigned kebeles	28	22.8	2
Lack of training materials such as stationeries, audiovisuals, manuals	18	14.6	3
Workload on extension agents	14	11.4	4
Insufficient short term and long-term training to carryout duties properly	8	6.5	5
Lack of ICT such as internet and other social media	7	5.7	6
Inadequate public funding for agricultural extension services	6	4.9	7
Lack of communication between district agricultural office and extension agents	5	4.0	8
Extension agents forced by supervisors to do nonprofessional activities	4	3.3	9
Lack of transparency in the organization	3	2.4	10

### CONCLUSION AND RECOMMENDATIONS

Results revealed that some of frontline agricultural extension workers were partly dissatisfied with their current job position and organization. Although agricultural extension agents are key employees of the extension organization who serve as front-line extension professionals, their work motivation and job satisfaction were influenced by various variables such as low salary, irregular promotion, unattractive work environment, no/little benefits, incentives, recognition and appreciation. Therefore, the Ethiopian government, private sectors and other stakeholders should work on the work motivation and job satisfaction of agricultural extension agents through providing different incentive packages, creating a favorable working environment, transportation facilities and field kits, to reduce turnover intention thereby improve extension services.

All government and non-government stakeholders working on agricultural extension across the Ethiopia should give a brief attention to on-the-job training for development agents in order to improve their level of knowledge, skill and attitude. Moreover, district, zonal and regional Agricultural and Rural Development offices/bureau should ensure regular promotions, handsome incentives and reduction of the workload of extension agents.

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