2020-04-28

The Effect of Agricultural Training on Youth Farm Entrepreneurial Attitudes: Evidence from Folk Development Colleges in Tanzania

Nade, Paschal B.

African Research Review

https://doi.org/10.4314/afrrev.v14i1.17

African Research Review: An International Multidisciplinary Journal, Ethiopia
AFRREV Vol. 14 (1), Serial No 57, January, 2020: 194-209
ISSN 1994-9057 (Print) ISSN 2070-0083 (Online)
DOI: http://dx.doi.org/10.4314/afrrev.v14i1.17

The Effect of Agricultural Training on Youth Farm Entrepreneurial Attitudes: Evidence from Folk Development Colleges in Tanzania

Nade, Paschal Banga
School of BUSH
The Nelson Mandela African Institution of Science and Technology
Arusha, Tanzania
paschalbanga@gmail.com
Mobile: +225782540121

Abstract

Given the paucity of youth employment opportunities in the non-agricultural formal sector in developing countries much more needs to be done to attract youth into the agricultural sector. The main objective of this paper was to assess the influence of the agricultural training on youth farm entrepreneurial attitudes. A cross-sectional design was employed and 300 respondents were randomly selected from three Folk Development Colleges (FDCs). The data were analysed using descriptive and inferential statistics. The findings show that youth have favourable attitudes towards farm entrepreneurship. Furthermore, a significant difference was found in terms of farm entrepreneurial attitude across sex, age groups, college and programme studied. It is concluded that training in colleges where agricultural courses are blended with an entrepreneurship course have positive influence on youth attitude towards farm entrepreneurship. It is generally recommended that more theoretical components on the socio-economic benefits of farm entrepreneurship need to be added to the existing curriculum.

Key Words: Courses, entrepreneurial attitude, intention, unemployment

Background to the Study

Unemployment among young people has become a major policy challenge for many governments due to slow economic growth. This situation forces stakeholders to look for economic activities that create and generate more employment opportunities for youth. Globally it is estimated that about 71 million (13.1%) young people between the ages of 15 and 24 years were unemployed in 2016 and the number was expected to remain 13.1% in 2017 while in Tanzania it stood at 13.4% against overall 11.7% for the year 2013 (ILO, 2016; NBS, 2014). Government (the major employer) employs only 3% to 7% of approximately one

million graduates entering the labour market each year in Tanzania (Guloba, 2015; Peter, 2013).

Nonetheless, agriculture is the main economic activity in Tanzania but it has suffered neglect from youth especially the educated ones, yet it is the sector which provides more opportunities for employment compared to the non-agricultural sector (Sangingaet *al.,* 2015). Gella (2013) noted that the state of being in school significantly opens up the imaginations of young people as to what is considered possible and achievable and is therefore of more importance in the construction of attitude and imagined futures. Margolis (2014) analysed entrepreneurial qualities of the youth self-employed in farming and found that those with entrepreneurial skills and mind set were earning more income than their counterparts. Following the positive results for farm entrepreneurship it is important to orient youth toward farm entrepreneurship so as to minimize youth unemployment.

However, Agricultural Education and Training (AET) as a tool for preparing the youth for farm entrepreneurship is still debatable since majority of youth have negative attitude toward farm related careers, despite the abundant untapped opportunities in the agricultural sector, government initiatives in training, and the serious youth unemployment in Tanzania. Adams *et al.,* (2013) found that 39% of self-employed Folk Development College (FDC) graduates were partly involved in farming. Christian (2002) found that FDC graduates were searching for employment in town, despite 55 % of their syllabus being practical skills-based. In addition, Redeckeret *al.* (2000)noted that FDC graduates were migrating to nearby towns in search of employment and often do not work in their field of training. It is also further estimated that only 13% of lower tertiary technical college (Vocational Education and Training Authority and FDCs) graduates annually are self-employed in farming (URT and IIEP, 2011).

Exposure to Agricultural Education and Youth Attitude towards Farm Entrepreneurship

Attitude is the key to understanding human behaviour. Attitude toward an object is a function of the sum of the perceived attributes weighted to the perceived importance of the object (Ajzen and Fishbein, 2005). This indicates that attitude is how one judges or evaluates an object. Attitude toward a career has been associated with youth unemployment and the main reason being job prestige (Cvikl, 2014; Vargas-Lindius, 2011). This association is made only to the careers with the attributes that are negatively judged by the youth.

According to the Theory of Planned Behaviour a person forms belief about an object and he or she automatically develops attitude toward that object. However, the beliefs (information, feelings, experiences and actions) link the object to some attributes through evaluation (Ajzen, 1991). Therefore, youth in FDCs are expected to have developed beliefs about farm entrepreneurship by studying an agricultural course and to evaluate its attributes so as to develop a positive attitude. But the evaluation is based on the importance and value attached to it.

The dilemma that exists between what is studied (courses) and the respective career preference among youth is mainly associated with attitude of the career under study. Studies substantiate this mismatch; for instance, Kidane and Worth (2013) found that 75% of the respondents were acquiring agriculture knowledge to target the public institutions for employment and also responded negatively to the delivery process of agricultural sessions. Besides, Rahman and Pathak (2013) analysed the order of preference for career choices by

youth in agriculture colleges and found the ranking as job in banks, teaching agriculture in the university, private sector self-employment in farming as most and least preferred respectively. In the same vein, 73.8% of students joined agricultural college for getting a job, and only 2.5% joined for farm enterprising. It was also observed that aspirations of the students towards agriculture enterprise were positively and significantly associated with their fathers' education; fathers' occupation; family size and the aim of joining (Asstt, 2014). Youth who have studied up to some level of secondary education are less likely to get involved in agriculture (Eissler& Brennan, 2015).

Likewise, World Bank (2007) pointed out that students' interest in agriculture in Africa is waning as students seek careers associated with urban lifestyle. Hock-Eam*et al*. (2015) noted that the number of graduate entrepreneurs especially in the agricultural sector is still far below what has been targeted despite the various efforts taken by the governments in developing countries. Youth did not consider occupation in agriculture as they associated it with labour intensive, difficult working conditions, low income and market inefficiencies (Anyindoho*et al.*, 2012). Mangombe and Sabiiti (2013) observed that low quality of training and mass production of ill-equipped agricultural professionals has lowered the outlook of agriculture as a career.

Furthermore, Riediel (2006) found that students did increase their agricultural literacy but the perception scores of students regarding agriculture were not statistically significant. Ibitoye (2011) revealed that youth have negative attitude towards agriculture as a future profession and there were statistically significant differences in job preference for agriculture between male and female youth. Abdullah and Suleiman (2013) revealed that knowledge factor is not significant in influencing interest of youth to become farm entrepreneurs, rather family support, government support and promotion through carnivals and festivals were noted as influencing factors.

In contrast, few studies reported positive attitude and significant relationship between both the students' entrepreneurship attributes and interest to work in the agricultural sector and their attitude towards farm entrepreneurship after attending agriculture course (Batliner, 2013: Luckey, 2012). Among the reasons given was that youth believed that agriculture has an important status politically and socio-economically at both macro and micro levels as it could fulfil some of higher order needs of themselves such as: health and self-esteem, interests and ambitions, satisfaction and success in their lives.

The Relationship Between Farm Entrepreneurial Attitude and Intention

Intention is the cognitive state immediately prior to performing the behaviour and is the best predictor of behaviour (Sanchez, 2012). Azjen and Fishbein (2005) defined attitude as "a learned predisposition to respond in a consistently favourable or unfavourable manner with respect to a given object". Attitude towards the behaviour reflects the individual's global positive or negative evaluations of performing a particular behaviour. Therefore, attitude is one of the antecedents of intention. According to Ajzen (1991) other antecedents include self-efficacy and subjective norms.

Empirically, Tshikovhi and Shambare (2015) indicated that both entrepreneurial knowledge and personal attitudes have significant influence on entrepreneurship intentions; personal attitudes were observed as having a greater influence on the former. Esnard (2012) found that agribusiness programme had positive but insignificant effects on both entrepreneurship attitude orientations and entrepreneurial intentions. In addition, she found significantly higher

entrepreneurial intentions for male students in comparison to female students. Dahalan (2015) noted that attitude influences entrepreneurial intention and the relationship between attitude toward start-up and entrepreneurial intention was mediated by opportunity recognition. Attitudinal factors, educational support and behavioural factors have a positive and significant relationship with entrepreneurial intention (Alhaj *et al.*, 2015).

Youth have generally perceived agriculture as poor man's job, laborious and a stepping stone to other careers (Adebo and Sekumade, 2013). Also, it is found that 69.6% of youth expressed unfavourable attitude towards agriculture and attitude did not significantly influence interest in agriculture (Aphunu&Akpobasa, 2010). Moreover, about 53% of high school youth have negative to neutral attitude towards organic farming (Freyer*et al*, 2005). Likewise, rural youth have been interested in career related to agriculture but they lack aspirations of becoming an entrepreneur (Heinert& Robert, 2016).

Mixed results in youth attitudes towards agriculture related entrepreneurship after studying AET can therefore be noted. Some of those who reported positive attitude still prefer a job in government. Also, a significant and non-significant difference in farm entrepreneurial attitude across sex is noted. Thus, this study focused more on the effects of FDC training on youth attitudes towards farming, since one of the FDCs' main objectives is to provide trainees with life skills for self-reliance. Also, from the literature, the debate for youth attitudes toward farming is not yet settled. Therefore, the paper attempts to answer the following questions: First, how does the agricultural training influence youth attitude towards farm entrepreneurship? Second, how does attitude influence youth farm entrepreneurial intention?

Methodology

The Study Area

The study focused on three FDCs, out of 55 FDCs in the country namely; Mamtukuna (Kilimanjaro Region), Monduli (Arusha Region) and Chisale (Dodoma Region). The three colleges were selected purposively because of the similarity in the nature of the agricultural courses which were blended with an entrepreneurship course. The study population was all final year Certificate students pursuing agriculture courses.

Study Design, Sampling Procedures and Sample Size

A cross-sectional design was employed in this study which is appropriate for this study because the data were collected from three colleges which are located in three different regions at one point in time. A sample size of 300 students was developed from an estimated population of 1200 from the three colleges using the formula by Israel (2009):

$$n = N/(1 + N(e^2)) \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (1)$$

where *n* is the sample size, *N* population size, ***e*** is the level of precision. The formula assumes that p=.05 (maximum variability). The desired confidence level is 95% and the degree of precision/sampling error accepted is ± 5%. Therefore $n = 1200/(1 + 1200(0.05)^2) = 300$ Every element in the sample was selected by using simple random sampling, as this procedure considers the sampling elements to have homogenous characteristics (all are finalists and their courses are blended with entrepreneurship courses). The sampling frame was drawn from admission records.

Data Collection, Processing and Analysis

Primary data were collected by using questionnaires, focus group discussions and key informant interviews while various documents were reviewed for secondary data. Pre-testing of questionnaires was done before administering. 300 questionnaire copies were administered and 294 (98%) properly filled questionnaire copies were used in data analysis. Six focus discussion groups each consisting of seven students were formed through nomination strategy. Also, six college staff (2 staff per college) and two Ministry of Health, Community Development, Gender, Elderly and Children officials were purposively selected and involved in interview as key informants based on their roles and experiences. The data were analysed by using descriptive statistics, inferential statistics and content analysis. Specifically, respondents' socio-demographic characteristics and levels of farm entrepreneurial attitudes were analysed descriptively. The differences in farm entrepreneurship attitude across sex, age, college, background of residence and programme studied were analysed by using Kruskal-Wallis non-parametric test. The relationship between courses studied and youth farm entrepreneurial attitude were analysed by using Structural Equation Modelling (SEM). Likewise, SEM was used to analyse the relationship between farm entrepreneurial attitude and intention. The model was used because it allows examination of the set of relations between one or more independent variables with one or more dependent variables, be they discrete or continuous.

Exploratory factor analysis was first performed to specify the underlying principal factors for expected learning outcomes, attitude and intention. In determining the relationship between courses studied and farm entrepreneurial attitude multiple linear regression was estimated using maximum likelihood estimation method as used by Ullman (2006) as is the most frequently used estimation method in structural equation modelling.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \varepsilon_0 \text{ .....} \quad (2)$$

Where: Y -farm entrepreneurial attitude, β_0- Y-intercept,$\beta_1$change in Y for each 1 increment change in X_1, X_1-skills learning outcomes,B_2change in Y for each 1 increment change in X_2, X_2-knowledge learning outcomes and E_0-error term.

For question two, the same structural equation modelling was applied whereby:

$$Y = \beta_0 + \beta_1 X_1 + \varepsilon_0 \text{ .....} \quad (3)$$

Where Y-farm entrepreneurial intention, β_0Y-intercept,$\beta_1$change in Y for each 1 increment change in X_1, X_1-attitude and E_0-error term. The observed variables in this measurement model are indicators of farm entrepreneurial attitude and stand as exogenous variables. The farm entrepreneurial intention indicators are observed variables and stand as endogenous variables. In both questions goodness of fit was tested to assess the correspondence between the theoretical specification (all parameters) and empirical data. The tests include Chi-square likelihood ratio, Comparative fit index, Trucker-Lewis index and Root Mean Square Error of approximation.

Reliability and Validity

The internal reliability of items for self-administered questionnaire was measured by Cronbanch alpha as defined by Fami (2000):

$$\alpha = K/K - 1 \times S_T^2 - \sum S_I^2 \text{.....} \quad (4)$$

Whereα (alpha) coefficient; K the number of items;S_T^2 is the total variance of the sum of the item and the S_I^2variance of individual item. The Cronbanch alpha coefficient having performed the reliability test for attitude items is 0.758, for expected learning outcomes is 0.707 and for intention read is 0.870 Content validity was determined through reviewing previous studies in assessing the adequacy and accuracy of what it measures. The questionnaire items that measured farm entrepreneurial intention were adopted and modified and fixed to the context from work of Liñán and Chen (2006), Ajzen (1991) and Malebana (2012). The development of courses/topic list and associated expected learning outcomes was guided by the following studies: Damian and Wallace (2015), Vesala and Pyysiainem (2008), Adeyemo (2009) and Klein (2006).

Results and Discussion

Socio-demographic Characteristics of Respondents

The analysis of descriptive statistics shows that females exceed male by11.6% as shown in Table 1. The mean age of the respondents was 20.6 years, with minimum age being 15 years, and maximum age 31 years. Also, the statistics for age categories show that majority of the respondents fall in the age category of 20-24 years of age. The average age is within the age criterion defining youth by United Nations. It is also in line with the operational definition of youth as used in this study.

Youth Farm Entrepreneurial Attitude

The attitude was measured by using six items Likert scale with five levels of responses as shown in Table 2. The findings show that youth have favourable attitude towards farm entrepreneurship. The favourableness is illustrated by the ratings in which most scores are aligned to agree and strongly agree levels of measurement. The sixth item "My qualification has contributed positively to my attitude toward becoming a farm entrepreneur" for farm entrepreneurship attitude received higher ratings than other items implying that the attitude developed has associated with the kind of training provided by the colleges. The findings are further supported by focus group discussions.

> "… I love the field of animal husbandry since I was young because it has a lot of profit …." "The career like poultry keeping provides basic needs for everyday …." "I want to engage in vegetable farming because I see it as a paying job in farming …."

Such statements show that they see the field of farm entrepreneurship as attractive. Also, they are able to specify the areas that are crucial in terms of results or better economic outcomes.

With regard to satisfaction, the students associate the field of farm entrepreneurship with success. A discussant explained:

> "… In general, the field of agriculture is paying and it is the field that everyone and even businessmen depend on …."

Also, students mentioned various courses/topics that had supported their interest in perceived choice of farm entrepreneurship career for example, pasture management and poultry management. This is contrary to other studies which have reported that agricultural outlook is poor as viewed by youth (Mangombe and Sabiiti, 2013; Riediel, 2006). Otherwise a study on attitude needs to be conducted for other categories of youth who are out of school or who

have studied courses which are not agriculture related and/or not blended with entrepreneurship course.An index was developed to determine the overall attitude of the respondents which was then analysed by descriptive statistics. Generally, the descriptive analysis in Table 3 shows that youth in FDCs have favourable attitude towards farm entrepreneurship.

The test for differences in attitude across socio-demographic variables was performed by Kruskal-Wallis non-parametric test as shown in Table 4. The results of the computation show that there are significant differences for farm entrepreneurship attitude at 5% level of significance across sex, age, college and programme studied. The implication for sex differences by considering sum of ranks is that female youth have more favourable farm entrepreneurship attitude than their male counterparts. This implication has little linkage to the competencies offered; rather it may mean that males have exposure to more fields and other field job preference because of their cultural background.

The significant differences across age groups with their respective sum of ranks indicate that, the age category of 20-24years has more favourable attitude than other age categories. This level of attitude at this age could be associated with transition time from schooling to work as per the Tanzanian context. With regard to significant differences across programmes, the sum of ranks indicates that those respondents who specialized in animal husbandry have more favourable attitude than those who were studying general agriculture. This elevated level of attitude for the specialized group can be associated to their evaluation of the career returns in terms of life outcomes satisfaction because their decision to specialize is born by the awareness of the field.

The Relationship between Youth Farm Entrepreneurial Attitude and Training

In performing structural equation modelling, exploratory factor analysis was first performed for both expected learning outcomes and attitude constructs. The result of the analysis shows that two underlying principal factors were identified (χ^2 = 341.684, df= 36, p-value = 0.000, Kaiser-Meyer-Olkin (KMO) = 0.802 and variance explained by 52.19%) for learning outcomes and only one principal factor was identified for attitude constructs (χ^2 = 412.743, df= 15, p-value = 0.000, KMO =0.727 and variance explained by 54.44%).

The analysis results for the measurement model in Figure 1, implies that the youth have acquired the basic capabilities that could enable them to start up and run farm enterprises. The relevancy of the courses to the practice in the field of agriculture seemed to be limited as evidenced by least influence of the construct. This could be associated with improper implementation of the curriculum. Furthermore, the analysis for the maximum likelihood estimation shows that skills learning outcomes have more influence on youth farm entrepreneurial attitude with its specific parameter estimate showing statistically significant relationship (Coef. = 0.26, Std. err=0.083, z=3.14 and p>z=0.002). It explained youth farm entrepreneurial attitude by 37%. While only 16% of youth farm entrepreneurial attitude is explained by knowledge learning outcomes and its' specific parameter estimate showing statistically significant relationship (Coef. = 0.12, Std. err=0.019, z=2.09 and p>z=0.037). The sum of the two learning outcomes explained youth farm entrepreneurial attitude by 53%. This may further mean that the impact of education is fairly good towards farm entrepreneurial attitude.

The statistical test for goodness of fit indicates that the model is consistent and over-identified or fit well with the data. This implies that goodness of fit adequately explains the

hypothesized relationship between learning outcomes and youth farm entrepreneurial attitude. The goodness of fit is shown in Table 5 and it fits because the recommended cut-off points have been attained. Specifically, it is recommended that χ^2 value (1796.903) of sample moments must be greater than estimated parameters while its p-values have to be less than 0.005. The recommended cut-off points for Comparative Fit Index (CFI) is 0.9 to 1, Trucker and Lewis Index (TLI) 0.9 to 1 and Root Mean Square Error of Approximation is 0.06.

The Relationship between Youth Farm Entrepreneurial Attitude and Intention

Structural equation modelling was also performed in determining the relationship between farm entrepreneurial attitude and intention. In performing structural equation modelling exploratory factor analysis was first performed for both attitude and intention observable variables whereby only one principal factor for both constructs was identified (χ^2 = 1060.511, df= 36, p-value =0.000, KMO = 0.897 and variance explained by 50.75% for intention).

The measurement model analysis results in Figure 2 show that the respondents' evaluation on attraction load higher coefficient in explaining youth farm entrepreneurial attitude. The evaluation for attraction means the youth perceive the field as respectable unlike other studies which reported agriculture as hard work and dirty (Adebo&Sekumade, 2013; Mangombe and Sabiiti, 2013). However, with regard to economic returns youth hardly developed positive attitude since the construct that measure it loaded second from least towards farm entrepreneurial attitude. This may further indicate that farm entrepreneurship can offer economic returns but there are other careers that may offer better economic returns. The analysis for the Maximum likelihood estimation shows that 87% of youth farm entrepreneurial intention can be explained by farm entrepreneurial attitude and its' specific parameter estimate shows statistically significant relationship (Coef=1.28, Std err=0.21, z=5.93 and p>z=0.000). This indicates attitude construct is a better predictor of intention unlike other constructs. These findings are supported except the strength by the Theory of Planned Behaviour which indicated that attitude is among the predictors of intention (Ajzen, 1991). They also concur with the study done by Armitage and Conner (2001).

The tests for goodness of fit of the model have further justified such strong relationship as shown in Table 6. The tests of fit have shown that the model is over identified (acceptable standards) as per recommended cut-off points. The recommended (χ^2 value (849.886) for sample moments must be greater than estimated parameters while its p-value has to be less than 0.005. The recommended cut-off points for Comparative Fit Index (CFI) is 0.9 to 1, Trucker and Lewis Index (TLI) 0.9 to 1 and Root Mean Square Error of Approximation is 0.06. This goodness of fit indicates that the model adequately explains the hypothesized relationship between youth farm entrepreneurial attitude and intention.

Conclusion and Recommendations

It is concluded that generally there is favourable attitude among the respondents towards farm entrepreneurship. Also, the training provided by FDCs has fair direct influence on farm entrepreneurial attitude. However, looking at the composition in contribution in terms of learning outcomes seemed to be aligned to basic practical skills, thus lacking the theoretical support. This implies that curriculum content lacks some basic information with regard to farm entrepreneurship. In the same vein, the curriculum seemed to have a mis-match between knowledge and skills offered as evidenced by the little contribution in influence to learning outcomes by the relevancy measurement construct.

Strong relationship between farm entrepreneurial attitude and intention has been found by this study. This indicates that youth view farm entrepreneurship positively and thus they are likely to establish farm enterprises upon their graduation. However, this strong relation is not only explained by training since its contribution is only 53% of total attitude that explained youth farm entrepreneurial intention. It is recommended that FDCs cooperate or consult with the stakeholders specifically the practitioners in the field of farm entrepreneurship so as to add or include in their curriculum any new developments that are taking place in the field, especially social, economic and technological changes. The emphasis of the addition or inclusion has to be targeted towards the link between what is offered in the classes (competencies) and what is required in the field.

References

Abdullah, A. A. &Sulaiman, N. N. (2013). Factors that influence the interest of youths in Agricultural entrepreneurship. *International Journal of Business and Social Science 4 (3)*:288-302. DOI: 10.30845/ijbss

Adams, V., Johanson, K., & Razmara, S. (2013). *Improving skills development in informal sector*. Washington. World Bank.

Adebo, G. M. &Sekumade, A. B. (2013). Determinants of career choice of agricultural profession. *Journal of Agricultural Extension and Rural Development 5 (11):*249-255. DOI: 10.5897/JAERD

Adeyemo, S. A. (2009). Understanding and acquisition of entrepreneurial skills: A pedagogical re-orientation for classroom teacher in Science Education. *Journal of Turkish Science Education6 (3):* 57-65. DOI: 10.12973/tused.10208a

Ajzen, I. (1991). *The theory of planned behaviour: Organizational behaviour and human decision processes*. University of Massachusetts. Academic Press Inc.

Ajzen, I. & Fishbein, M. (2005). *The influence of attitude on behaviour*. Massachusetts: University of Massachusetts at Amherst. Academic Press Inc.

Aphunu, A. &Akpobasa, B. I. (2010). Assessment of rural youth attitude toward agricultural production. *The Nigerian Academic Forum19 (1):*1- 4.

Anyindoho, N. A., Leavy, J. &Asenso-Okyere, K. (2012). *Young People's Aspiration in Agriculture. A case study of Ghana cocoa sector*. Ghana: University of Ghana.

Alhaj, B. K., Baharuddin, Dahari, S. H. (2015). The Relationship of the Antecedent Factors of Entrepreneurial Intention with Entrepreneurial Intention: A Case Study. *Global Journal of Business and Social Science4(1):* 486-498. DOI: 10.30845/ijbss

Armitage, C. J. & Conner, M. (2001). Efficacy of the theory of planned behaviour: A meta–analytic review. *Journal of Social Psychology40*: 471–499.

Asstt, D. (2014). Aspiration of Agriculture students towards agriculture enterprise in West Bengal: A Case Study. *IndianRes. J. Ext. Edu14 (1):* 2014.64-67.

Batliner, R. (2013). *Youth and education, Project baseline study report*. Nairobi Kenya. Jaccobs Foundation.

Christian, H. (2002). *In focus Programme on Skills, knowledge and employability*: *New evidence from Kenya*. Tanzania and Uganda: ILO, Geneva.

Cvikl, K. (2014). *Youth unemployment*: *Do you have an attitude issue*. Policy Brief. Sarajevo. Bosnia.

Dahalan, N. (2015). *Attitude and entrepreneurial intention among rural community*: The mediating role of entrepreneurial opportunity recognition. UniversitiSains, Malaysia: School of Distance Education.

Damian, P. & Wallace, I. (2015). Revision aid: Agricultural Science. *Agri-Aware, IASTA and Irish Farmers Journal.* 1-156.

Esnard, T. (2012). Agripreneurs and/or Agriculture Science teachers? An examination of Agribusiness students' entrepreneurial attitudes orientations and entrepreneurial intentions. *Journal of Higher Education Theory and Practice 12(5):*1-20.

Eissler, S. & Brennan, M. (2015). *Review of research and practice for youth engagement in Agricultural education and training system*. The Pennsylvania State University USAID-Funded Project.44pp.

Fami, H. S. (2000). Development of scale to measure the attitude of rural women toward mixed farming. *Journal of Humanities2 (5):*25-30.

Freyer, B., Leitner, H. &Lindenthal, T. (2005). What will next generation do when they succeed their parents? Institute of Organic Agriculture. Vienna. Austria.ISOFAR: Proceedings of the Conference. 414-418pp.

Gella, A.A. (2013). *Rural youth, education and agriculture*: An exploration of youth aspirations and government policy in Ethiopia. UniversitasBergensis.

Guloba, M. (2015). *Promoting youth employment through entrepreneurship training, mentorship and start-up capital*. Turin, Italy: ILO International Training Centre.

Heinert, S. & Robert, G. (2016). *Engaging rural youth in entrepreneurship through extra-curriculum systems*. University of Florida.

Hock-Eam, L., Ahmad, S.A., & Jan, S. J. (2015). *The inferring predisposed factors for graduate agropreneur in Malaysia: Mismatch?* Proceedings of 9th Asia-Pacific Business Research Conference 5 - 6 November 2015. Singapore.

Ibitoye, S. J. (2011). Attitude of youths towards career in agriculture in Kogi State. *International Journal of Applied Engineering Research* 6 *(14):*1683-1693.

International Labour Organization (2016). *World employment social outlook*: *Trends for youth*, 2016. Geneva: International Labour Office.

Israel, D. G. (2013). *Determining sample size*. University of Florida.

Kidane, T. & Worth, S. H. (2013). Attitude of students in the formal educational sector towards Agricultural education and training in South Africa. *J. Hum. Ecol44(1):* 53-63.

Klein, P. G. & Bullock, J. B. (2006). *Can entrepreneurship be taught*? McQuinnCenter for Entrepreneurial leadership. University of Missouri-Columbia.

Liñán, F. & Chen, Y. W. (2006). *Testing entrepreneurial intention model*. UniversitatAutònoma de Barcelona: Bellaterra.

Luckey, A. N. (2012). *Assessing youth perceptions and knowledge of agriculture: The impact of participating in an Agventure program*. Texas: A & M University.

Mangombe, A.W. &Sabiiti, E. N. (2013). *Agricultural knowledge systems in the EAC Region*, University of Nairobi: College of Agriculture and Veterinary Sciences.

Malebana, M. J. (2012). *Entrepreneurial intent of final-year commerce students in the rural provinces of South Africa*. Business Management. University of South Africa.

Margolis, D. N. (2014). *By choice and by necessity: Entrepreneurship and self-employment in developing World*. Discussion Paper No 8273. Paris School of Economics.

National Bureau of Statistics (2014). *Tanzania Integrated Labour Force Survey*. Dar es Salaam. Tanzania.

Peter, S. (2013). Nature of urban youth unemployment in Tanzania: Challenges and consequences. Dar es Salaam REPOA.

Rahman, A. & Pathak, T. (2013). A study on the career preferences of undergraduate students in relation to sex, rural-urban inhabitation and level of media exposure. *International Journal of Humanities and Social Sciences2(1):*87-96. 10.30845/ijhss

Redecker, M. Wihstutz, A. &Mwinuka, J. (2000). *Vocational education and training by government in Tanzania*: *The example of community oriented vocational training in FDCs.* Dar es Salaam.

Riedel, J. S. (2006). Effects of an *introductory agricultural education course on agricultural literacy and perceptions of agriculture in urban students.* North Carolina: N. Carolina University.

Sangiga, N. Lohento, K. &Mayenga, D. (2015). Youth in Agribusiness within African agricultural transformation agenda. Abdou Diouf International Conference Centre, 21-23 October, 2015. Dakar Senegal.

Sánchez, J. C. (2012). University Training for entrepreneurial competencies: Its impact on intention of venture creation. *Int. Entrep. Mang. J 7*: 239-254.

United Republic of Tanzania and International Institute for Educational Planning (2011). *Tanzania education sector analysis: Beyond primary education, the quest for balanced and efficient policy choices for human development and economic growth*. Dakar Office: UNESCO.

Tshikovhi, N. &Shambare, R. (2015). Entrepreneurial knowledge, personal attitudes, and entrepreneurship intentions among South African Enactus students. *Problems and Perspectives in Management 13 (1):*152-158.

Vesala, K. M. &Pyysiaine, J. (Eds) (2008*). Understanding entrepreneurial skills in farm context*. Frick Switzerland: Research Institute of Organic Agriculture.

Vargas-Lundius, R. (2011). Feeding future generations: Young rural people today-productive farmers tomorrow. Proceedings of the Governing Council Higher Level Panel and Side Events. IFAD. 43pp.

World Bank (2007). *Cultivating knowledge and skills to grow African Agriculture; A synthesis of an institutional, regional, and international review*. Washington: World Bank.

Appendices

Tables and Figures

Table 1: Socio-demographic characteristics of respondents (n=294)

Type of variable	Sub items in the variable	Frequency	Per cents
Sex	Male	130	44.2
	Female	164	55.8
	Total	294	100
Geographical background	Rural	173	58.8
	Urban	121	41.2
	Total	294	100.0
Respondents by college	Mamtukuna	98	33.3
	Monduli	100	34.0
	Chisalu	96	32.7
	Total	294	100.0
Programme pursued	General Agriculture	73	24.8
	Animal husbandry	221	75.2
	Total	294	100.0
Age (Years)	15-19	80	27.2
	20-24	198	67.4
	25-29	15	5.1
	30-34	1	0.3
	Total	294	100

Table 2: Farm entrepreneurial attitude of the respondents

	Farm entrepreneurial attitude items	Frequencies	SD%	D%	U%	A%	SA%	Total%
1	Being a farm entrepreneur implies more advantageous than disadvantageous	294	1.4	5.8	7.8	47.3	37.8	100
2	A career as farm entrepreneur is totally attractive to me	294	1.0	5.1	4.8	37.8	51.4	100
3	If I had opportunity and resources, I would like to start a farm enterprise	294	2.1	2.7	5.4	34.4	55.4	100
4	Amongst various options I would rather be a farm entrepreneur	294	2.0	4.4	6.8	38.1	48.6	100
5	Being a farm entrepreneur would give me great satisfaction	294	0.7	3.4	6.8	35.7	53.4	100
6	My qualification has contributed positively to my attitude toward becoming a farm entrepreneur	294	1.4	3.4	2.7	40.5	52.4	100

Note: SD-Strongly Disagree, D-Disagree, U-Unsure, A-Agree and SA-Strongly Agree

Table 3: Overall farm entrepreneurial attitude of the students

Attitude	Frequency	Percent
Unfavourable Attitude	18	6.1
Undecided	17	5.8
Favourable attitude	259	88.1
Total	294	100

Table 4: Differences in entrepreneurial attitude by socio-demographic variables

Variable		Attitude				
Socio-demographic Characteristics	Category	Observation	Rank Sum	χ^2	Degree of freedom	P-values
Sex	Male	130	17612.0			
	Female	164	25753.0	4.661	1	0.0309*
Age	15-19	80	10794.0			
	20-24	198	29696.0			
	25-29	15	2605.0			
	30-34	1	270.0	22.912	13	0.0415*
Background	Rural	173	26265.5			
	Urban	121	17099.5	1.087	1	0.2971
College	Mamtukuna	98	19152.0			
	Monduli	100	12448.0			
	Chisale	96	11765.0	43.366	2	0.0001*
Programme	General agriculture	73	7793.50			
	Animal Husbandry	221	35571.50	22.301	1	0.0001*

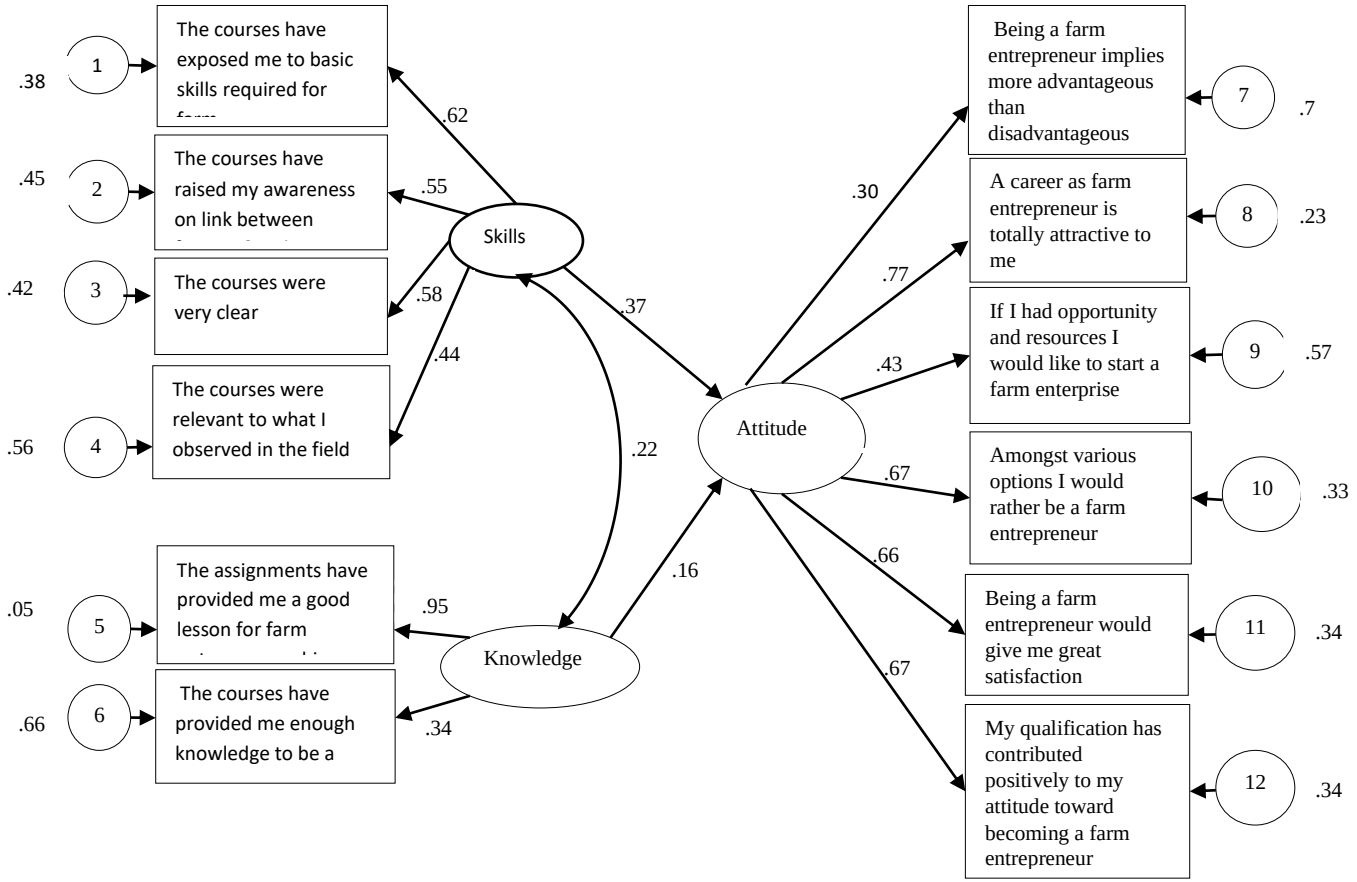
Note * Significant at 5% level of significance

Table 5: Goodness of fit for learning outcomes against attitude

Type of test	Amount of coefficient
Likelihood ratio measured by Chi-square	147.853
P-value	0.000
Root mean squared error of approximation	0.058
Comparative fit index	0.903
Trucker-Lewis index	0.880

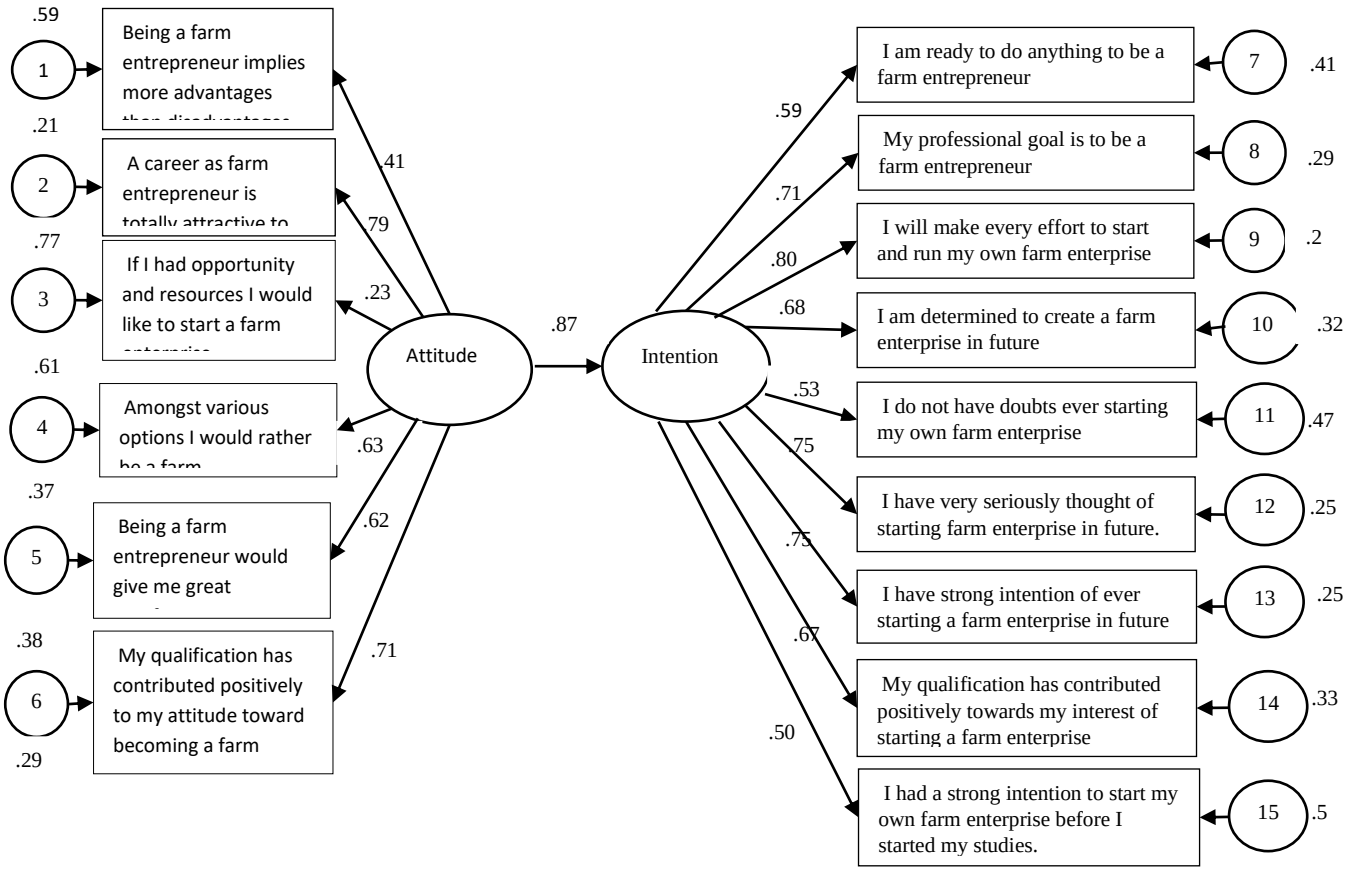
Table 6: Goodness of fit for attitude against intention

Type of test	Amount of coefficient
Likelihood ratio measured by Chi-square	202.341
P-value	0.000
Root mean squared error of approximation	0.066
Comparative fit index	0.933
Trucker-Lewis index	0.921



Key: 1. Rectangle- Observable Variable, 2. Inner circle- Latent variable, 3. Small outer circle- error term, 4. Single headed arrow- Direct relation and 5. Double-headed arrow-Covariance

Figure 1: The relationship between expected learning outcomes and attitude



Key: 1. Rectangle- Observable Variable, 2. Inner circle- Latent variable, 3. Small outer circle- error term, 4. Single headed arrow- Direct relation and 5. Double-headed arrow-Covariance

Figure 2: The relationship between farm entrepreneurial attitude and intention