

# The Situation of Rural Youth Livelihood Diversification and Its Determinants in North Western Ethiopia

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## Abstract

It has been repeatedly reported that Ethiopia has achieved a 'remarkable economic growth' that appears to have put the country on sustained and high growth trajectory since 2003/04. However, improvements in labor market opportunities for youth; most importantly for rural youth lag behind the presumed economic growth. Such kind of paradox between high economic growth and high youth unemployment and underemployment is the combined result of various factors that impede youth livelihood developments. Despite these facts, the issue is usually considered as the only problem of university and college graduates and urban youths. Due to this, most previous studies on livelihood mainly focused on urban youth livelihoods opportunities and related issues and failed to see the issues from school dropout and uneducated rural youth contexts. Hence this study is meant to focus rural youth livelihood impediments in four selected districts of East Gojjam zone, Amhara regional state. Employing cross sectional mixed research approaches, data were gathered through survey and Key informant interview from a total of 388 sample and 6 key informant interviewees recruited from eleven Kebeles of the four districts. Data were analyzed using multinomial logistic regression, Simpson Diversification Index, mean, maximum, minimum standard deviation and other descriptive statics. The finding revealed that youths are engaged in one to three income generating activities and as indicated in the descriptive analysis 75.5 % youths were less diversified, 16 % were moderately diversified and the remaining 8.5 % were found highly diversified. The multinomial logistic regression result found out that the principal determinant factors behind the very limited youth livelihood diversification status include, low educational access and quality, sex based stereotyping culture in the community, age based restriction of information access, market inaccessibility nearby their village, high dependency ratio, lack of road and transport access and shortage of credit access.

**Keywords:** Rural youth, livelihood diversification, livelihood strategy, impediments

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## 1. Introduction

Livelihood diversification refers to the sharing of resources across dissimilar economic sectors to increase the economic spread and reduce overdependence on one or a few sectors. It is an approach for reducing youth unemployment and underemployment which intensifies rural to urban and cross boarder illegal migration and other countless socioeconomic problems (Mackenzie, Mburu, Irungu, 2016), and Yenesew 2015). There are 1.2 billion youths between the ages of 15 and 24 years which accounts for 18% of the world's population. The vast majority of these young people found in developing countries dominantly live rural areas. Even though such huge segment of the population is rural at youth age category, labor market opportunity creations are very slow and incomparable with rapid growth of youth population and their demand for alternative livelihood strategies. The available and nonfarm customary livelihoods strategies left to the youths are also laborious and law promising for upward mobility (World Bank 2007 cited in Nayak 2014, Bezu, Barrett, and Holden 2012).

Though shortage of labor market opportunities touches every corner of the world's society, the situation is rather very worse in developing Asian and African countries which calls for cooperative interventions. It is highest in the Near East and North Africa region; where over one-quarter of all youth are classified as being unemployed and underemployed. It is lowest in East Asia and South Asia with rates of 7.8 percent and 10 percent respectively. Youth unemployment in sub-Saharan Africa is the highest at 18 percent (Nayak 2014).

Politicians and policy makers have taken the crisis of youth unemployment and underemployment as their persistent concern since the 1960s. However rural youth livelihood development has remained at the margins of national development strategies in most countries. More than one-third of the world's youth are currently either seeking but unable to find work, have given up on the job search entirely, or are working in low productive livelihood strategies and earning below the \$2 a day poverty line (Haggblade, Hazell, and Reardan 2007, Gordon and Craig 200). In recent years slowing global employment growth and increasing unemployment, underemployment and disillusionment have hit rural young people hardest. As result members of rural communities express the need of great deal of concern about the problems faced by young people in the labor market in various ways such as peace full appealing to the respective governors, violence, rural to urban and international illegal migration etc (Paul 2007, Proctor 2014, Wyn & White 1997).

In Ethiopia improvements in labor market opportunities for youths appear to lag behind economic growth.

The national economy is dependent on traditional agriculture where land is very fragmented and mainly owned by adults. Consequently, unemployment and underemployment are high and become the leading socio economic problems affecting youths from all walks of life. The growing land fragmentation and landlessness as result of rapid population growth has steadily constrained the involvement of youths in farming and related activities. Inability of farming to absorb that large portion of the population and absence of adequate alternative livelihood strategies produced large number of unemployed and underemployed rural youths (Sosina and Stein 2013, Martha 2012 Start and Johnson 2004). These in turn lead to mass rural to urban and international illegal migration and further complication of urban and rural socio-economic problems in the country. Such kind of paradox between high national economic growth and inability to create job and to diversify livelihood strategies in general is mainly the result of national policies unfair and insufficient financial capitals allocation for public infrastructure across regions and institution investments for the rural community (Hiruy 2012, Sosina and Holden 2013, WIDE 2014).

Lack of public infrastructure and institutions mainly at rural parts of the country leads to unavailability of alternative livelihood strategies and consequently large number youths become underemployed and underemployed. It impedes youths to allocate their resources in order to diversify their livelihood strategies and to cope up risk and shocks (Porter 2012). According to Hiruy (2012) 80% of youths are rural in Ethiopia. However it gets little attention by government authorities both at national and local levels. As shown from the three national labor force survey results of CSA (2013), unemployment rate at country urban level has continuously declined from 1999 to 2005 and in 2013. On the contrary, significant rate of unemployment raise has been observed in rural areas while underemployment is obviously the manifestation of rural poor households in Ethiopia. As indicated in Sida (2009) such harsh rural youths employment problem is consistently manifested in all administrative zone of Amhara regional state of Ethiopia. Despite these facts, the issue is dominantly considered as problem of university and college graduates and urban youths at the country level in general and in East Gojjam Zone in particular. The problem can be partly attributed to the concentration of livelihood creation and entrepreneur trainings by the government and none governmental organizations only to urban residents. Studies on livelihoods are also mainly focused on urban youth livelihoods opportunities and related issues and ignored to see the issue from the context of school dropout and uneducated rural youth. Studies on the subject by Yenesew (2015) and Tesfaye (2010) in Debre Alias and Sinan respectively focused on the determinants of livelihood strategy choice and on income contributions and opportunities of rural non-farm activities. Their finding didn't indicate livelihood diversity status of youths and its determinant. Furthermore, their studies give emphasis only for few none farm activities and their economic contribution but didn't address the reason behind lack of other alternative livelihood in the area. Beyond this their finding indicates that, most of non farming livelihood activities identified in their studies are exercised by few households in the area. Although they revealed that these activities are not taken as livelihood strategy of the mass, they didn't give clear justification for such minimal number of household's participation in the sector.

Giving disregard for this huge numbers of youths, make them profoundly de-stabilizing force. Specifically, the absence of livelihood development opportunities for youth can impede a nation's development in the form of increased crime, violence, poor health, disease, extremism, and both social and political instability (Tekalign 2016). According to Adser et al. (2013) livelihood diversification opportunities and impediments for diversification of rural livelihood are very diverse and area specific. It requires rigorous examination and understandings instead of adopting the livelihood opportunity of other areas and assumption of the same constraints. Effective youth Livelihood interventions must be built upon a clear conceptual and programmatic framework, which basically based on identification of impediments for youth livelihood diversification and the available livelihood resources, in each local context (Wilson 2008, WIDE 2014, Scoones, 1998).

Hence, scientific evidence based identification of rural youth livelihood diversification status and impediments are crucial part of rural youth livelihood diversity interventions. Having these rationales, the aim of this study was to assess livelihood diversification status and factors which impede the livelihood diversification of rural youths in four selected districts of east Gojjam Zone, Amhara regional state, Ethiopia.

## 2. Methods and materials

### *Study area*

The study was conducted in Sinan, Shebel Berenta, Goncha Siso enese and Enebsie Sar Midre districts and three of which are the most food insecure districted in East Gojjam Zone. East Gojjam zone is located in Amhara regional state of republic of Ethiopia at 300 kilometer from the capital; Addis Ababa. It has four Agro-ecological zones 'kola' (lowlands with relatively low rainfall and high temperature), *Woina-Dega* (middle highlands with moderate amount of rainfall and temperature), *Dega* (highlands with somewhat higher rainfall and cool temperature) and *Wirch* (highland very cold, high amount of rainfall (MoA 2000). According to CSA(2013) house and population projection, of 2016 the zone has a total of 16(sixteen) rural districts and 2,219,100 rural residents. Out of these districts, Enebsie sarmidir, Goncha siso Enese and Shebel Berenta districts are relatively food unsecured and agro-ecologically they all have Dega, Woina-Dega and kola zones. However, Sinan woreda is relatively food secured but with different agro ecology where Wirch and Dega covers most parts of it. According to CSA (2013) projection

and each district's finance and economic development office, these districts have approximately 33, 37, 18 and 16 rural kebeles, 31778, 37301, 26215 and 25106 rural households and 139066, 162346, 114097 and 107929 total rural populations in 2016 respectively.

The principal economic base of the community is agriculture where crop and livestock production are treated side by side. Although average landholding of household was nearly 0.7 hectare for all districts most youth are landless since it is disproportionally owned by adult farmers (Finance and economic development Office of Enebe Sar Midir, Goncha Siso Enese, and Shebel Berenta district 2016).

#### **Data types and data collection methods**

Data for this study were collected both from primary and secondary sources most of which are quantitative in nature supported with few qualitative data gathered from key informant interviewee and related literature. The primary data were gathered mainly from rural youths using structured questionnaire on youth livelihood diversification status and its determinants. Key Informant Interviews (KIs) was also employed to triangulate and support the primary data which were obtained from the sample rural youths interviews. Secondary methods of data collection were reviewing published and unpublished research journals, and thesis; and assessing different records and reports of agriculture and rural development office of each selected districts.

#### **Sample size and sampling technique**

The two stage stratified cluster sampling design was used to select the sample youths from households. In the first stage, Kebeles in each district were stratified according to their agro ecological zones. Then one Kebele from each agro ecological zones of the four districts were selected. Accordingly, two Kebeles from Sinan district and three Kebeles from each of Shebel Berenta ,Goncha Siso Enese , and Enebesie Sar Midir districts were purposively sampled with the help of each districts' administration office employees. In the second stage, depending on the number of total households in each Kebele, proportionate to size technique was applied to determine sample youths size from each Kebele. Ultimately, a total of 388 sample household heads were selected by using simple random sampling technique. The sample size for this study was determined using Yamane's' (1967) formula with a precision level of  $\pm 5$  was used since the population is homogeneous in its nature.

$$n = \frac{N}{1 + N(e)^2} \text{ Where}$$

$N$  = designates total number of youths in eleven selected kebeles.

$n$  = the sample size whom the researcher will use

$e$  = designates maximum variability or margin of error 5% (0.05).

Thus,  $N = 13169$   $e = 0.05$

$$\text{Therefore, } n = \frac{13169}{1 + 13169(0.05)^2} = \frac{13169}{1 + 13169(0.0025)} = \frac{13169}{33.923} = 388.203 \approx 388$$

#### **Data Analysis**

Both descriptive and inferential statistics were used were used to analyze the quantitative data. Livelihood diversification index was also used to measure livelihood diversification level of youths. Simpson index is used among other alternatives because of its wider applicability and computational simplicity. Simpson index is computed using the formula given below.

$$SID = 1 - \sum \frac{1}{N} p_i^2 \quad I=1$$

Where, SDI is Simpson Diversification Index,  $N$  is the total number of income sources and  $P_i$  stands for the proportion of income coming from source. Livelihood diversification levels, the relation between livelihood diversity index level and number of income sources, and the association between the livelihood diversification index level and , agro ecology, marital status, land ownership and the degree of variation of livelihood diversification index level across districts were analyzed through descriptive statistics like maximum, minimum, mean, percentage. To analyze the determinants of livelihood diversification multinomial logit model was applied using Equation (1):  $D = \beta_0 + \beta_i X_i + \mu \dots(1)$  where,  $D$  is the dependent variable representing livelihood diversification index, explained by  $\beta_i$  which represents a vector of parameters, and  $X_i$  is a vector of exogenous explanatory variables. The descriptive and inferential data analyses were conducted using Statistical Package for Social Sciences (SPSS) version 20. The qualitative data obtained from key informant interviews were stated in narrative form concurrently with the quantitative data.

#### **Description of Variables**

**Dependent variable:** As observed in different empirical studies, this variable can be expressed in terms of nominal/categorical, ratio, actual figure and form depending on the purpose of the study. The Multinomial Logistic Regression model uses censored values as dependent variable. In this study the level of livelihood diversification index was used as dependant variable. It was measured using the Simpson diversity index formula

$$SID = 1 - \sum \frac{1}{N} p_i^2 \quad I=1$$

**Independent variables:** The independent variables are hypothesized to influence the level of rural youth livelihood diversification positively and negatively or which may not have significant effect on the livelihood

diversification of rural youths in the study area. This includes both discreet and continuous variables listed and explained below.

Table 1 Description of variables

Variables name	Nature	Variable value
Livelihood diversification	Categorical	< 0.38 low, 0.38-0.63 medium >0.63 high diversified
Sex	Dummy	1=male, 2= Female
Age	Continues	age of youth in year
Education	Continues	Youths 'years of formal education
Dependency ratio	Continues	the ratio of non labor force category member of the family plus unemployed members per working member of the family members)
Family size	Continues	number of house hold members in which youth belong
Credit service	Dummy	1=youths who get credit,2=youths who do not get credit
Road and transport accessibility	Dummy	youth who have road and transport access =1 , youth who don't have road and transport access =2
Distance to the market center	Continues	Distance of youth residential home to the nearest market center in km
Land ownership	Continues	area of farming land owned by youth in hectare

### 3. Result and Discussion

The study result is summarized into themes mainly with relation to the number of income sources and rural youth livelihood diversification levels, determinants of youth livelihood diversification level and the distribution of livelihood diversification level across of across study districts, land ownership size, agro ecology, and marital status .

#### *Youth Employment Share of Major Livelihood Strategies*

Youths in the study area are engaged in few fingers counted income generating farm, off farm and dominantly nonfarm activities. The survey result indicated that youths are engaged in one or more livelihood strategies among which agriculture, petty trade, social support, salary, migration labor work and construction material production selling are to mention some of them. Out of the total youths surveyed only 73 (18.8%) were reported as being participated in agriculture including farming, livestock rearing fattening and dairy productions. This indicated only few youth are engaging in agriculture because of shortage of farm land in their locality, lack of interest in the sector and other constraints. The most impressing survey result displayed in the table indicated that, in the study site social support either from their families who live with them or in the form of remittance is the dominant youths' livelihood strategy absorbing more than half (51.8 %) of rural youths which further indicated entails that the same number of youth are dependents on their families to make a living.

It is followed by labor work which absorb 116 (29.9 %), petty trade (include shop, livestock and crop trading) which accounts for 102 (26.3) and migration 57 (14.7%), other income sources including, craft works, construction material supply, tailoring, and Areki, production constituted for 48 (12.4%) salary (6.4%) (As indicated in table 2). Therefore Social support in any of its form is one of the most common livelihood strategies of youths in the study area. This finding may indicate the limited options available for youths to diversify their economy.

It is widely recognized that social support is the livelihood strategy of poor youth in areas where livelihood diversification and youth working culture is very low because of various impeding factors (Adser etal 2013). Collecting income from social support or remittance is considered as livelihood strategy, but as Key informant interviewees confirmed that it has a tendency to develop dependency syndrome among youth and in the long run will certainly harm sustainable development of the nation. Such high dependency of youths in the productive age category will further harm the development of communities unless urgent remedy is made to it (Lesko 2001). It also shows that the sum of count of youth involvement in all seven (7) livelihood strategy categories are 522 which is 134 more than total sample youths of the study. This result indicates us only less than 134 out of 388 youth are involved in more than one livelihood strategies.

Table 2 Major Livelihood Strategies in Sampled Districts and Youth involvement Share

Major livelihood activities	F	%
Agriculture	73	18.8
Petty trade	102	26.3
Social support	201	51.8
Others	48	12.4
Salary	25	6.4
Labor work	16	29.9
Migration	57	14.7
Total	522	160.

Source: Own source 2018

#### **Diversity Index and Number of Income Sources**

In this study Simpson index of diversification was mainly used to measure livelihood diversification levels, though counting the number of income sources is also used. According to Simpson, if the diversity index score commuted using his formula is less than 0.38 it is low diversified, if it is between 0.38-0.63 it is medium diversified and if it is above 0.63 it is highly diversified livelihood strategy.

The survey result reveals the sampled youths are engaged in one to three income generating activities among agriculture, petty trade, social support, salary, migration, labor work and construction material production selling and others. The descriptive analysis reveals 293 (more than 75%) of rural youths were less diversified with the minimum one and the maximum of two livelihood strategy while sixty two (62) youths have the minimum of two and the maximum of three livelihood strategies. The remaining thirty three (33) youths only were found highly diversified with the minimum and of two and maximum of three livelihood strategies. As it is shown in the table, the average livelihood diversification index in the study area is found to be 0.22 with maximum and minimum diversification index value of 0.95 and 0 (table 3). The average diversity index level for the highly diversified, moderately diversified and less diversified levels respectively was found to be 0.79, 0.49, and 0.11. The result proved the finding of Ellis (2000) and Bryceson (1999) which explained low level of livelihood diversity for most sub-Saharan African countries.

The result also indicated that youths with the same number of livelihood strategy are found in different livelihood diversification index category. As it is shown in the table 3, youth with two livelihood strategy are belong to all low, medium and high livelihood diversification categories. Youth who have three livelihood strategies are also found in both medium and high livelihood diversification index categories. This is consistent with the study of Hussien, and Nelson, (2004) and tell us that what matters the level of livelihood diversity index and sustainability is not only number of livelihood strategy followed, rather it is the interplay of number of livelihood strategy, with the amount of the total income of youths and the distribution of their total income with their alternative livelihood strategies.

Table 3. Diversity index and number of income sources

	N	Minimum	Maximum	Mean	Std. Deviation	F	P value
<b><u>Diversification index</u></b>							
high	33	.64	.95	.7861	.15199	2.6341	0.006**
medium	62	.39	.62	.4787	.04010		
low	293	.00	.37	.1055	.14938		
<b><u>Number of income sources</u></b>							
high diversified	33	2	3	2.47	.507		
medium diversified	62	2	3	2.32	.471		
low diversified	293	1	2	1.34	.476		

Source: own survey 2018

\*\*Significant at less than 5% probability level

#### **Youth Livelihood Diversification Levels across Districts**

Comparative analysis of livelihood diversity status levels of youths across districts were made to see if there is significant variation among districts and the reason for variation which can be taken as the best experience for relative low diversified districts. However as it is shown in the table 4 diversification index of livelihood of youths have minor variation across districts. Despite this slight variations, livelihood diversification index of most youths of all districts belong to the list diversification index category. This is similar with Sosina and Stein (2013) Start and Johnson 2004) which proved as rural youths are uniformly pushed out from agricultural sector because of land scarcity and fragmentation while there is no more alternative livelihood strategies left to them. The finding of Tekalign (20116) is also in line with this result. In Sinan 6,18,73, in Shebel Berenta 9,15,73 in Goncha siso



Enebsie 10,13,74, whereas in Enebsie Sar milder 8,17 and 71 youths are found in high ,moderate and low livelihood diversification category respectively.

Table3. Livelihood diversification level of youths by district

Districts		Sinan	Shebel	Goncha	Enebsie	Total
Level of Diversification	High >.63	6(1.55%)	9 (2.32%)	10.(2.56%)	8(2.06%)	33(8.49%)
	Med medium .38-. 38-.63	18(4.64%)	15(3.86%)	13(3.35%)	17(4.38%)	62(16.23%)
	Low <.38	73(18.8%)	73(18.8)	74(19.075)	71(18.3%)	293(74.98%)
Total		97(25%)	97(25%)	97(25%)	97(25%)	388(100%)

Source: Own survey data computation 2018

#### ***The role of Agro- Ecology for Livelihood Diversification***

Keeping other factors constant agro- climatic condition of an area has a strong influence on the rural livelihood diversification. Youths who are living in areas which have better agro ecology for production have better probability to increase diversification level of livelihood than those who live in un conducive agro ecological environment (Ibrahim et.al 2009). Results from key informant interviewee and the study by Khatun and Roy (2012) validate Ibrahim et.al (2009) findings. Participants argue that youth in better agro ecological area especially in Dega and Woina Dega agro ecological zone have better chance to diversify their livelihood. Such agro ecological zone are better in water resource and orientation for using the resource for multi crop and vegetable cultivation. Moreover they prove that information access and interventions on infrastructure and awareness creation by both the governmental and nongovernmental organizations are restricted only to conducive environments of Dega and Woina Dega regions and left Kola and Choke regions untouched. So that youths in such un conducive areas remain conservative on traditional livelihoods instead of diversifying into new and technology intensive livelihoods activities. The descriptive statistical result presented in the following table is also in line with the (Khatun and Roy 2012) and results from key informant interviewees. It shows that among 33 (8.49%) high diversification index categories 26 (6.7%) youths and 42 (12.31%) youths from 62 (16.23%) medium diversification index categories are belong to Dega and woyina Dega regions and the remaining 4 and 16 are under the category of Choke and Kola agro ecology zone respectively. On the other hand the remaining 43, 85, 75, 90 of youths belong to the list livelihood diversification categories in Choke, Dega Woyina Dega and Kola zones of the study area respectively..

Table.4 youth livelihood distribution by agro-ecology

Agro ecology	Choke	Dega	W/Dega	Kola	Total
High >.63	1(0.26%)	13(3.35)%	13(3.35%)	6(1.55%)	33(8.49%)
Medium .38-63	4(0.03%)	18(4.64%)	24(6.19%)	16(4.12%)	62(16.23%)
Low >.63	43(11.08%)	85(21.91%)	75(13.33%)	90(23.2%)	293(74.98%)
Total	48	116	112	112	388(100%)

Source: own Survey2018

#### ***Access to farm land for livelihood diversification***

Studies revealed that, the area of farming land owned by household has a significant negative correlation with the likelihood of choosing none agricultural livelihood strategies over agriculture. This suggests that rural households with more land tend to follow agricultural extension than to diversifying. This implies that the probability of to nonfarm activities decrease when the farm land and activity is promising (Adugna &Wagayehu 2012, Yenesew 2015).

The study by Adser et al. (2013) Sosina, and Holden 2013) also shows the same findings. Youths who have sufficient farm land and those who have chance for inheriting their parents farming land do not want to diversify their livelihood into non agricultural activates while those who do not have land access are very eager to engage in nonfarm wage works and urban salaried jobs. The descriptive statistics result in the following table shows similar result on the influence of land access for livelihood diversification into none farm activates. Out of thirty three (33) youths in highly livelihood categories all are found land less, only 13 among 73 youth who have farming land belongs to moderately livelihood diversification categories. Surprisingly all these thirteen (13) youths have very small land size i.e. 0.1 hectare while the remaining 60 youths who have 0.25 and above hectare farming land belongs to less livelihood diversification categories. Multinomial logistic regression result in table also shows this negative correlation though it has insignificant indicator.

Table.6 Land ownership in hectare and livelihood diversification status of youths

Youth land ownership in hectare	livelihood diversification status			Total
	highly diversified	moderately diversified	less diversified	
.00	33	49	233	315
.10	0	13	0	13
.25	0	0	39	39
.50	0	0	21	21
Total	33	62	293	388

Source: own survey data computation 2018

### **The Role Marital status for rural youth Livelihood Diversity**

Data on the relation between asset possession right and livelihood choice from key informant interviewees indicate that marital status is the determinant factor for livelihood choice, asset ownership right and private property accumulation especially for rural communities. The descriptive statistical result also signifies this result. Luigi (2013) is also in line with this statement. It elaborates the magnified role of culture for asset possession and over all socio economic development of society. The statistical result also consolidated the key informant interviewees idea and Luigi (2013) findings. The sampled youths for the survey belong to three marital status. The majority (204) of them are single followed by 150 married and 34 divorced statuses. As indicated in the table 7, all 33 youths who belongs to highly diversified livelihood categories and 52 youths out of 62 youths who belongs to medium diversified categories belong to single marital status. Only ten (10) youths among one hundred eighty four (184) who belongs to married and divorced youth have medium diversified livelihood strategies. This may be due to relative farming land and livestock access of married and divorced youths and their extension on agriculture and disinclination to non agricultural sector compared to single youths. Culturally youths have the right for having farming land and livestock from their parents after they got married and form their own family which determines their future livelihood strategies. As maintained above results from in-depth interviewee signify these cultural roads for having farming land and livestock possession right of youth. According to them most unmarried youths don't have the right for having farming land and livestock. They do agricultural work for their families and fulfill their needs with the aid of their parents and income from non agricultural sector. Another explanation for this correlation between livelihood diversification and marital status is being single may have relative better freedom for choosing any alternative livelihood activities than married youths. Because culturally marriage puts some form of restrictions on choice of youths' livelihood activities, movement, friendship and other aspects of their life.

Table. 6 Livelihood diversity distributions by marital status

Marital status of youth	Livelihood diversification status			Total
	highly diversified	moderately diversified	less diversified	
Married	0	10	140	150
Single	33	52	119	204
Divorced	0	0	34	34
Total	33	62	293	388

Source: own survey 2018

### **Multinomial Logistic Regression Result**

The results of regression estimates are presented in Table 8. The adjusted R2 model chi-square and likelihood ratio test results are found reasonable. The explanatory variables were chosen based on the theoretical assumption and a total of nine independent variables were entered into the model and statistically significant variables were identified in order to measure their relative importance on, rural youth livelihood diversification levels. Less diversified livelihood category was used as base category. This indicates that the discussion of the results focused on the impacts of the explanatory variables on having highly and moderately diversified livelihood level levels compared to being to less diversified livelihood youths.

**Educational level:** The educational level of rural youths was found to have positive correlation with highly diversified livelihood and moderately diversity categories, so that it was found to be one of the important determinants of livelihood diversification. A one grade increase in educational level of youths positively affects high and medium livelihood diversification of youths at P<5% and at p<10% respectively. Therefore, the finding confirms that an increase in education level of youths increased the likelihood of being in highly and moderately diversified as compared to being in less diversified category. This is due to education enables youths to get better skill, information access, culture of flexibility and openness to new livelihood strategies, knowledge, so that, these help them to engage in diversified livelihood strategies. This finding is similar with that of Khatun and Roy (2012) which substantiates the essentiality of education for the engagement of rural households in multi none agricultural livelihood strategies.

The finding from in-depth interviewee and focus group discussants on the impacts of education and training on youths' motivation for engaging on available livelihood is similar with results from logistic regression results. According to them, most rural youths are school dropouts with the maximum schooling up to grade ten (10). Only few youths are college and university graduates though they lack quality education/skill upgrading training. Even a very few opportunities for skill upgrading and vocational trainings are often not connected to emerging labor market demand, nor built in the assumption that youth have to create their own businesses. Work marginalization tendency of rural youths and lack of vocational and skill upgrading trainings makes them to be unfit as well as unwilling to develop entrepreneurship habits as well as to keep them in accessible jobs. Because of this extreme marginalization in terms of education and training and accessing for information, most of youth still are excited for traditionally preferred but inaccessible sector of work. Public work on governmental and nongovernmental organizations regardless of income amounts are preferred than having their own jobs.

Therefore, investing in education and increasing access to education will help rural youths in getting alternative income as it increases the probability of engagement in all available rural livelihood diversification activities.

**Age:** The multinomial regression result for diversification levels indicate that age and livelihood diversification are positively correlated. The probability of having high and medium diversified livelihood category is affected positively and significantly at less than 5% and 10% probability level. This indicates that multiplicity of livelihood strategies increases with advancing age. This is because, experience, freedom of livelihood choice and asset access increases as age increased and as a result, youths with such opportunities have more prospects of diversifying livelihood strategies. This is similar with (Khatun and Roy 2012) which proved an increase in age is the main driving force towards livelihood diversification. Contrary to this, immaturity in age directly goes to low information access, motivation and creative capacity and resulted in low livelihood diversity in the area.

**Sex:** It was found that the probability of having highly diversified livelihood category is affected significantly by sex of the respondents. The multinomial Logit regression result indicates being male positively and significantly affects the likelihood of highly and moderately diversified livelihood categories at 10% and 5% probability levels respectively. It shows being female has high probability to have less diversified livelihoods than males. This is due to culturally defined gender roles; social mobility limitations and ownership of/access to assets give that favor for male give better opportunity for male to diversify their livelihood than female. The result similar content with Luigi (2013) which state culture as the determining factor for asset distribution and livelihood diversification in favor of male.

**Distance from the Market:** distance to the market center has negative correlation with probability of being both highly and medium livelihood diversification of youths. Both high and medium level livelihood diversification were found to be negatively and significantly affected at  $(P < 0.01)$ . This negative relationship tells us that the larger the distance the lesser the tendency of households to diversify and vice versa. This indicates that youths who are far from market centers have less livelihood diversity than to those near to the market center. The possible justification could be youths who are closer to the market centers have more chance for interaction with others and information and experience sharing. They also have better infrastructure and transportation access than those at remote areas. Furthermore, they do not have much cost to access market incentive for diversification of livelihoods so that they can easily involve in market based livelihood activities. The study by Kanji, MacGregor, Tacoli (2005) strengthens this finding. According to them access for market has incredible impact for rural youths livelihood diversification in petty trade and other market center livelihood sectors.

**Dependency Ratio:** dependency ratio was found to be negatively related with the level of diversification. It was found that highly diversified and moderately diversified categories were affected at less than 5 and 10 percent probability level respectively than those who belong to the less diversified categories. It indicates that high dependency ratio is one of determinants of youth's livelihood diversification. The possible explanation could be that an increase in dependency ratio increases the number of household members below 18 years and above 60 years who are unable to engage themselves in income generating activities. This may forced youths to spend their working time for giving care and support for and children aged member of the family. Furthermore, youths in a family with high dependency ratio have insufficient income even for survival; hence they faced shortage of financial capital to engage in diversified livelihood strategies.

**Family Size:** family size was found to be negatively related with the level of livelihood diversification though the co-efficient was not statistically significant for medium diversified livelihood categories. But it negatively affects highly diversified livelihood groups at less than 10 % probability level. The result indicates that youths in large family size have less livelihood diversification than youths in small family size. This may be due to the shortage financial capital for education and initial capital for starting business or job for large family size than smaller family size.

**Land Ownership (LO):** Although we expected the relationship between the land-man ratio and diversification level was found to be negative, the model result indicates that land-man ratio tuned out to be statistically



insignificant determinant of livelihood diversification.

**Road and Transport Access:** rural youth access for road and transport is found to have positive correlation with both highly diversified and moderately diversified livelihood diversification categories. The regression result indicates road and transport access from their nearby residential areas to the marketed centers have positive and significant influence on highly diversified and moderately diversified categories at less than 10% and 5% probability level than youths in areas where road and transport is not accessible. This indicates us that access road and transport enables youth to early engage in petty trades, and other urban livelihoods strategies and to have a chance for information and orientation towards easily accessible alternative jobs in the area. This is in line with (Start, and Johnson, 2004) in which they proved the deterministic role of asset access especially road and transport for livelihood diversification and livelihood option opportunities.

**Credit Access:** Formal credit access is found to have a positive effect on the level of livelihood diversification. It affects at 10 per cent level of significance for both highly diversified and medium diversified income categories. This indicates since rural youths are poor in resource base to start their business, providing credit to youths improves their livelihood diversification.

Generally, the study identified several factors that hinder successful livelihood diversification of rural youths which may be used as base for rural development interventions in the areas. These include, lack of, better education, lack of credit facilities, market and marketing facility, road and transport and other rural youth livelihood diversification determinants which are summarized in the following multinomial logistic regression table.

Table 8. Multinomial logistic regression result

Independent variable	Highly diversified		Moderately diversified	
	Coefficients	Standard error	Coefficients	Standard error
Intercepts	-4.302*	.786	2.209	5.446
Age	2.399*	.684	.124**	.129
Education	2.563**	.619	2.060*	.144
Family size	-.024*	.521	-.032	.283
Dependency ratio	-1.435**	.094	-.664*	.082
Land ownership	-1.296	.012	-.892	.756
Distance to the market	-3.131***	.406	-.787**	.141
Sex	.230*	.091	.0431**	.078
Access to credit	1.456*	.081	.867*	.001
Road and transport	2.631*	.144	.776**	.148
Work culture	-1.32	.180	-.121	.756
Laziness	-2.21	.231	-.133	.354
Fear of risk	-1.44	.321	-.233	.231
Margate linkage	2.10	.145	.346	.113
Urban linkage	1.05	.212	.432	.423

Prob> chi2 = 0.000 , Pseudo R2 = 0.322 LR chi2(18) = 1.52 , Number of obs = 388

\*\*\*, \*\* and \* indicates level of significance at 1%, 5% and 10% respectively

Source: Owen survey computation (2018)

## Conclusion

The study findings revealed youth in the study area have low livelihood diversification except few finger counted youth. In an attempt made to identify factors determining livelihood diversification strategies, the result of the multinomial logistic regression model revealed that the probability of diversifying in to highly and moderately diversified livelihood category is affected positively and significantly by age, sex, education level and access to credit facilities of the youth and access to road and transport service. On the other hand, probability of being in moderately and highly diversified livelihood category is affected negatively and significantly by dependency ratio and distance from the nearest market center. Therefore, the study has concluded that the rural youths in the study area are likely to have a diversified livelihood when they have more experience (age), higher educational level and access to credit facilities, level of access to road and transport. Low dependency ratio in the family, proximity to urban market can also improved youth livelihood diversification.

Policy intentions at paper work level should, be translated to policy actions by mainstreaming the non-farm sector in other policy areas. Rural policies which aim at integrating farm and non-farm activities should go down to the earth and practicable and the conventional livelihood strategy of the community should be broadened through adoption and implementation both farm and non-farm local development strategies.

The government drive of investing in rural infrastructure, particularly electrification, road an should go beyond for officials' vertical report and media consumption and should bring real change in creating contact between market center of different kebeles. Maintaining sustainable rural livelihood, especially road accessibility play vital role in facilitating access to markets, Hence, need to provide more rural roads and rehabilitate eroded

ones in order to reduce the high transaction cost of buying from or selling to markets, as transaction cost reduces the returns from market sales. It must also intensify its role in the country's educational system, in particular in basic and vocational education provided in rural areas. In this regard, the findings of the study, revealed that more educated farmers are more likely to diversify their livelihood which, suggests that education could be an effective instrument in achieving the aim of integrating farm and non-farm activity at local level.

Credit and finance should be access problems has to be overcome resolved by learning from the lessons of micro-finance, As non-farm diversification requires both individual and group-based activities to mobilize know-how, capital, experience and other benefits that derive from being organized. Therefore, this avenue of capital sourcing needs also to be accorded policy attention.

#### **Conflict of interest**

Authors declare no conflict of interest and both authors contributed in the research and manuscript development process.

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