Determinants of Participation in Entrepreneurial Activities in Arsi Zone, Oromiya, Ethiopia

Beshir Shaku Beriso*[1], Adem Kedir[2] and Belaineh Legesse [3]

[1]College of Computing and Informatics, Haramaya University, Ethiopia, email:beshirshk2@gmail.com

[2]Arsi University, Ethiopia

[3]Haramaya University, Ethiopia

Abstract

The main objective of this paper is to assess determinants of participation in entrepreneurial activities in an urban setting with a case study from Arsi administrative Zone central part of Ethiopia. Primary data were collected from 184 households (84% male and 16% female), selected randomly from four towns. Data were analyzed using descriptive statistics, tests of hypothesis and binary logistic regression model. Results reveal that 28%, 26%, 18%, 13%, 13% and 2% households were engaged in running shops, boutique, wood works, metal works, café and restaurant and others works, respectively. It was also found that participation in entrepreneurial activities is positively influenced by sex of household head, square age of households, educational level and household size but, negatively affected by age of household heads and economic status of parents. The economic status of parents influence household heads directly or indirectly with respect to generating their own income.

Key Words: Household, Business, Unemployment, Chi-Square Test, Binary Logistic model

1. Introduction

Entrepreneurship is the process of creating value by devoting the necessary skills, time and effort, and assuming the accompanying financial and sometimes physical and social risks, to reap the resulting monetary rewards and personal happiness (Hisrich and Peteris, 2006). Entrepreneurship is also defined as the processes of emergence, behavior and performance of entrepreneurs and it is a focus on the processes involved in the initiation of a new organization, the behavior of such organization and its performance in terms of profit made (Ogundele, 2005). It can also be defined as the identification and exploitation of business opportunities to create goods or services (Shane &Venkataraman, 2000). Furthermore, it is believed to be an important mechanism of economic growth and development. The role of entrepreneurship is to promote prosperity by creating new jobs, reducing unemployment and increase economic growth and development of a region. It also increases productivity by bringing new innovation and speeds up structural changes by forcing existing business to reform and increase competition (Baron, 2007).

Entrepreneurship is considered to be an effective means for economic development and poverty alleviation in impoverished and lower income regions of the world (Mead and Liedholm, 1998). Besides this, entrepreneurship has two important pro-social functions relevant for economic development and poverty reduction. First, entrepreneurship highly contributes to the creation of new jobs and to growth in productivity and value added (Carree&Thurik, 2003). Furthermore, it contributes to national gross domestic product growth (Carree&Thurik, 2008). According to Acs et al. (2008), entrepreneurship is an important driving force to alleviate poverty

through the creation of employment and wealth. Second, many technological inventions are converted into innovative products or services by entrepreneurs for the benefit of the wider society. Acs and Varga (2005) also provided that entrepreneurship contributes to knowledge spillover and technological change. Moreover, entrepreneurial firms show a higher efficiency in introducing innovations than established firms and entrepreneurial firms are more innovation intensive (Van and Versloot, 2007).

The jobs created through entrepreneurship, in turn, lead to equitable distribution of income which culminates in higher standards of living for people. Entrepreneurship is recognized as an integral component of economic development and a crucial element in the effort to lift countries out of poverty (Wolfenson, 2001).

Entrepreneurship is a driving force for economic growth, job creation, and poverty reduction in developing countries. They have been the means through which accelerated economic growth and rapid industrialization have been achieved (Harris et al, 2006; Sauser, 2005). Furthermore small scale business has been recognized as a feeder service to large- scale industries (Fabayo, 2009). Individual, social and environmental factors all have a direct bearing on the entrepreneurial process, motivation, continuity and expansion (Bygrave, 2006). Entrepreneurship is the entrepreneurial function which can be conceptualized as the discovery of opportunities and the subsequent creation of new economic activity, often via the creation of a new organization (Reynolds, 2005). Although there are different studies conducted on entrepreneurship, most of them focused on small and micro enterprises, instead of participating in different entrepreneurial activities to

generate their own income. The literature on entrepreneurship is also scanty on Arsi zone in general and its urban areas in particular. This study was, therefore, designed to fill such a research gap.

With this brief introduction, the next parts of the paper are structured as follows. The methods of data collection and data analysis are given in part two. The third part of the paper summarizes the major findings followed by discussion of the findings in part four. Finally part five presents conclusions and recommendations..

2. Materials and Methods

Method of Data Collection

This study was undertaken in Arsi zone of the Oromiya Regional State, Oromiya, Ethiopia. Arsi zone is found in the central part of Oromia. The zone is divided into 25 districts of which one is Asella town. The study applied multistage sampling procedure. In the first stage, four towns namely Asella, Sagure, Diksisi and Ticho were randomly selected from 25 towns. Then, data were collected from Administration offices of the selected towns on the characteristics of the urban kebelesunder them. On the second stage a total of 9 kebeles were selected randomly. Finally, 184 households were selected for the interview based on simple random sampling.

The sample size of the three towns (Diksisi, Sagure and Ticho) was obtained using the following formula:

$$n = \frac{\sum\left(N_i^{\,2}\,\frac{A_i}{v_i}\right)}{N^2D^2 + \sum N_i A_i} \qquad (1)$$

Where;

$$D = \frac{C}{Z_{\alpha/2}}, \quad (2)$$

$$A_i = P_i(1-P_i) \quad (3)$$

The sample size for Asella town was determined using simple random sampling formula:

$$n = \frac{Z^2{}_{\alpha/2} pq}{C^2} \quad (4)$$

Where C is some margin of error to tolerate in estimation; p is the proportion of participant household; q is the proportion of non participant household; N is total number of households for three towns; n is sample of household for three towns ($n_1+n_2+n_3$) and n of Asella town (capital of the zone); Z is the value of standard normal distribution for a given level of significance (α); and v_i is the proportion of population of town i to the total population of household in the selected towns for three towns. In fixing this sample sizes $C = 0.07$ and $C = 0.086$ for three towns and Asella town respectively at $\alpha = 0.05$, $P = 0.23$ were used. The p value was taken from pilot survey conducted in 2015. According to CSA (2007), the average household size of Arsi zone is 4.87 persons. By dividing the total number of predicted population of towns to the estimated household size (4.87) we can get the approximated numbers of household size. The researchers preferred to use this average household size since there was no detail information about current average household size in Arsi zone.

Primary data were collected (in January-February 2015) through personal interviews of the household head and use of structured questionnaire with experienced and trained enumerators. The enumerators who know English language and with education levels of diploma up to first degree were recruited and trained on how to work in the survey. Data were collected

under direct involvement and close supervision of the first author. Secondary data were also collected from the study kebeles, towns administration offices, and other related offices in order to supplement the primary data.

Method of Data Analysis

The method of data analysis used for this particular study were descriptive statistics for describing

general characteristics of the households, chi-square test of association to test significance difference between business participation status versus the groups of different variables and binary logistic regression model to analyze the determinants of participation in entrepreneurial activities. The dependent variable is business participation status of households for binary logistic model, which is categorized as business participant and non-participant in entrepreneurial activities. According toHarris et al (2006) and Sauser (2005) participating in entrepreneurial activities is one of the components of economic growth and development.

The explanatory variables included in the model are sex of household head, age of household head and its square, educational level of household head; initial condition variables include parental economic background and religion.

Table 1. Sample size detail of selected towns

No	Town	Population (2007)[2]	Population (2015)[1]	Number of Households (Approximate)	Sample Size (households)	Sample Size of Business-Participants	Sample Size of Non- Business Participants
1	Diksisi	6,982	8,776	1,802	29	15	14
2	Sagure	12,017	15,105	3,102	50	22	28
3	Ticho	4,958	6,232	1,280	20	10	10
4	Asella	67,269	84,555	17,362	85	42	43
	Total				184	89	95

Source: Own Computation result except for Population[2] data generated by CSA (2007)

Note: The population forecast for 2015 was obtained using 2.9 percent growth rate (CSA, 2007) for Oromiya and the geometric growth model (Kedir, 2009).

Table 2. Proposed determinants of participation in EAs with the directions of their influences

Business participation status	Expected direction of influence
Household sex	Better for male headed households
Household head age	Negative
Square of household head age	Participating in EA decreases with age positive
Educational level of household head	
Household size	Positive
Religion	Not different for different religions
Economic status of parents	Better for wealthy parents

Binary Logistic Regression Model

Logistic regression analysis (LRA) extends the techniques of multiple regression analysis to research situations in which the dependent variable is

categorical like participant/non-participant (success/failure). Logistic regression allows one to predict a discrete outcome, such as group membership, from a set of independent variables that may be continuous, discrete, dichotomous, or a mix of any of these. Generally, the dependent variable for this study is binary like participant and non-participant in business activities. Logistic regression is much more relaxed and flexible in its assumptions than multiple regression analysis. Unlike the multiple regression analysis, the logistic regression does not have the requirements of the dependent variables to be normally distributed, linearly related, nor equal variance with in each group (Tabachnick and Fidell, 1996). Logistic regression has a peculiar property of easiness to estimate logit differences for data collected both retrospectively and prospectively (McCullagh and Nelder, 1983) and this has contributed a lot to its importance in application areas.

There are two main uses of logistic regression: Firstly, to predict the group membership. Since logistic regression calculates the probability of success over the probability of failure, the results of the analysis are in the form of an odds ratio. Secondly, logistic regression also provides knowledge of the relationships and strengths among the variables.

The assumptions of logistic regression are as follows:

Firstly, the dependent variable must be categorical, the groups must be mutually exclusive and exhaustive; a case can only be in one group and every case must be a member of one of the groups.Secondly, the independent variables need not be interval, nor normally distributed, nor linearly related, nor of equal variance within each group. The dependent variable in logistic regression is usually dichotomous, that is, the dependent variable can take the value "1" with probability of being participant'' π_i ''or the value 0 with

probability of being non-participant'' $1-\pi_i$ ''. The model for logistic regression analysis assumes that the outcome variable Y is categorical, for example, binary (dichotomous), but LRA does not model this outcome directly. Rather, LRA is based on probabilities associated with the values of Y . We assume that Y is dichotomous, taking on values of 1 (that is, positive outcome, or success) and 0(that is, negative outcome, or failure).

The probability proportion of $Y_i=1$ is defined as $\pi_i = p(Y_i=1/X_i)$ and $Y_i=0$ is defined as $1-\pi_i = p(Y_i=0)$. Because of the reasons discussed above, the logistic regression model was used in order to address the issues under objectives of this study. The logistic model is defined as; let $Y_{n\times 1}$ be a dichotomous outcome random variable with categories 1 (participant) and 0 non-participant households. Suppose $X_{n\times(p+1)}$ denote the collection of $p-$ predicator variables of $\mathbf{Y}$, where,

$$\begin{bmatrix} 1 & x_{11} & x_{12} & x_{13} & \cdots & x_{1p} \\ 1 & x_{21} & x_{22} & x_{23} & \cdots & x_{2p} \\ \cdot & \cdot & \cdot & \cdot & \cdot & \cdot \\ \cdot & \cdot & \cdot & \cdot & \cdot & \cdot \\ \cdot & \cdot & \cdot & \cdot & \cdot & \cdot \\ 1 & x_{n1} & x_{n2} & x_{n3} & \cdots & x_{np} \end{bmatrix}$$

X is called regression matrix and without the loading column of 1's is termed as predictor data matrix. Then, the conditional probability that a household can be participant given the X set of independent variables is denoted by $p(Y_i=1/X_i)=\pi_i$. The expression π_i has the form:

$$\pi_i = \frac{e^{\beta_o + \beta_1 X_1 + \ldots + \beta_P X_P}}{1 + e^{\beta_o + \beta_1 X_1 + \ldots + \beta_p X_p}} = \frac{e^{X\beta'}}{1 + e^{X\beta'}} \quad (5)$$

Where, π_i is the probability of household i being participant, Y_i is the observed participation status of i household's, $\beta \approx (p+1)\times 1$ is a vector of unknown coefficients. The model given in (5) is logistic regression model. The relationship between the independent and dependent variable is not a linear function in logistic regression; instead, the logit transformation of equation π_i yields the linear relationship between the independent and dependent variables. The logit transformation of π_i is given as follows:

$$\text{logit}[\pi_i] = \log\left[\frac{\pi_i}{1-\pi_i}\right] = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \ldots + \beta_p X_p \quad (6)$$

Where, Y_i is the dependent variable which is dichotomous taking the value of 1 if household is a participant or 0 otherwise. β_0 is the constant term, X_i is an independent variable, i=1,2,…,k; $\beta_1, \beta_{2,\ldots}, \beta_p$ are the coefficients of independent variables.

The maximum likelihood and non-iterative weighted least squares are the two estimation methods used in fitting logistic regression model (Hosmer-Lemeshow, 1989; Greene, 1991; collet, 1991). When the assumption of normality of the predictors does not hold, the non- iterative weighted least squares method is less efficient (Maddala, 1997).In contrast, the maximum likelihood estimation method is appropriate for estimating the logistic model parameters due to its less restrictive nature of the underlying assumptions (HosmerLemeshow, 1989). Hence, in this study the maximum likelihood estimation technique is applied to estimate parameters of the model. Consider

the logistic model $\pi_i = \frac{e^{X\beta'}}{1+e^{X\beta'}}$. Since observed values of Y say, $Y_i's\ (i=1,2,...,n)$ are independently distributed as Bernoulli with parameter π_i, the maximum likelihood function of Y is given by:

$$L(\beta(Y) = \prod_{i=1}^{n} P\left(Y_i \middle| X_{i1}, X_{i2} .... X_{ip}\right) = \prod_{i=1}^{n} \left[\frac{e^{X_i\beta'}}{1+e^{X_i\beta'}}\right]^{Y_i} \left[\frac{1}{1+e^{X_i\beta'}}\right]^{1-Y_i} \quad (7)$$

Where, $\beta' = (\beta_1, \beta_2, ..., \beta_p)$

The objective of stating likelihood function is to get an estimator $\hat{\beta} = (\hat{\beta}_0, \hat{\beta}_1 ..., \hat{\beta}_p)$ of β which maximizes the likelihood function expressed in equation (7). Since the likelihood equations are non- linear in the parameters, the Newton-Raphson iterative maximum likelihood estimation method that expresses $\hat{\beta}$ at the $(u+1)^{th}$ cycle of the iteration is expressed as $\hat{\beta}_{u+1} = \hat{\beta}_u \left(X' \hat{V}_u X\right)^{-1} X R_u$, where $u = 0,1,2,...$ and $\hat{V}$ is a diagonal matrix,

$$\hat{V} = diag\left[\hat{\pi}_i(1-\hat{\pi}_i)\right] = Cov(Y) \quad (8)$$

with its diagonal elements $X_i = 1$. Finally, $\hat{\beta}$ is the resultant maximum likelihood estimator of β with residual $R = Y - \hat{Y}$ (collet, 1991: Greene, 1991). Newton's method usually converges to the maximum of the log-likelihood in just a few iteration unless the data are especially badly conditioned (Greene, 1991).

Wald Statistic: It is a way of testing the significance of particular independent variables in a statistical model. In logistic regression, we have a

binary outcome variable and one or more independent variables. For each independent variable in the model, there was an associated parameter. The Wald test, described by Polit (1996) and Agresti (1990), is one of a number of ways of testing whether the parameters associated with a group of independent variables are zero. If for a particular independent variable of wald test is significant, then, we would conclude that the parameters associated with these variables are significantly different from zero, so that the variables should be included in the model. If the Wald test is not significant, then these independent variables can be omitted from the model. Wald χ^2 statistics are used to test the significance of individual coefficients in the model and are calculated as follows:

$$Z = \frac{\hat{\beta}_j}{SE(\hat{\beta}_j)} \tag{9}$$

Each Wald statistic is compared with a χ^2 distribution with 1 degree of freedom. Wald statistics are easy to calculate but their reliability is questionable, particularly for small samples. For data that produce large estimates of the coefficient, the standard error is often inflated, resulting in a lower Wald statistic, and therefore the independent variable may be incorrectly assumed to be unimportant in the model (Bewick et al, 2005).

Likelihood-Ratio Test: An alternative and widely used approach for testing the significance of a number of independent variables is to use the likelihood ratio test. This is appropriate for a variety of types of statistical models. Agresti (1990) argues that the likelihood ratio test is better, particularly if the sample size is small or the parameters are large. The likelihood-ratio test uses the ratio of the maximized value of the likelihood function for the full model

(L_1) over the maximized value of the likelihood function for the simpler model (L_0). The likelihood-ratio test statistic equals:

$$-2log(\frac{L_o}{L_1}) = -2[\log(L_o) - \log(L_1)] \quad (10)$$

It is compared with a χ^2 distribution with p-k degree of freedom, where p and k are the parameters of simpler model and full model, respectively. This log transformation of the likelihood functions yields a chi-squared statistic.

R^2 - **Statistics**: A number of measures have been proposed in logistic regression as an analogy to $R^2 - Statistics$ in multiple linear regressions. The Cox and Snell measure is based on log-likelihoods and considers sample size. The maximum value that the Cox & Snell R^2 attains is less than 1. The Nagelkerke R^2 is an adjusted version of the Cox & Snell R^2 and covers the full range from 0 to 1, and therefore it is often preferred (Bewick et al, 2005).

$$R_{CS}{}^2 = 1 - \exp\left[-\frac{2}{n}[\text{D(model without variables)} - \text{D(model with variables)}]\right] \quad (11)$$

The Nagelkerke measure isas follows:

$$R_N{}^2 = \frac{R_{CS}{}^2}{R_{MAX}{}^2} \quad (12)$$

Where:

$$R_{MAX^2} = 1 - \exp\left[2(n)^{-1}\text{D(modelwith the variable)}\right] \quad (13)$$

3. Results

Demographic Characteristics of the sampled Households

Results of the study show that out of the 184 sampled households, 84% are male headed and 16% are female headed. The distribution of the households by marital status shows that 55% of them were married, 24% were single, while 21% were either widowed or divorced. The average household size in the study area is 2.89 with standard deviation of 1.17. The mean age of the household head is 34 years with standard deviation of 8.59. The ages of the household heads range between 23 and 65 years.

The ethnic composition of the sample households includes 46% Oromo, 42% Amhara and 12% belongs to other ethnic group. On the other hand, distribution of religion sample households shows that 56% are Orthodox, 23% are Muslim, 20% are Christian Protestant and 1% belongs to other religion groups.

Determinants of Participation Decision in Entrepreneurial Activities

The business participation status indicators considered were sex of household head, age of household head, age square of household heads, educational level household heads, household size, religion, economic status of parents and the influence of parental economic status on current economic status of household heads. Finally, the model outputs of determinants of participation status are given.

The survey results show that sex of household head, economic status of parents, educational status of parents, marital status and ethnicity of household head has significant association among participation in entrepreneurial activities. But, participation in entrepreneurial activities was not significantly different between religions of household head groups. These

results, therefore, justify the argument of significance of different factors improving the participation status of households in the study area (Table 4).

Results of binary logistic regression show that among proposed explanatory variables for affecting participation in entrepreneurial activities, sex of household head (male), age of household head, age square of household head, educational level of household head, household size and economic status of parents were found to be statistically significant in this study (Table 5). Accordingly, sex of household head, square age of households, educational level and household size determines participation in entrepreneurial activities positively, whereas age of household heads and economic status of parents determines participation in entrepreneurial activities negatively.

The determinant variable sex of household head shows that male headed households are 6.47 times more likely to participate in business activities as compared to female headed households, keeping the effects of the other variables are constant. In addition, the results show that for an additional year in age, the odds of participating in business activities is lower by a factor of 0.691, which implies that the probability of participating in business activities is lower for an older person.

Table 3. Households 'demographic characteristics

Demographic characteristic	Category/measure	Value
Household sex	Male	84%
	Female	16%
Age of household head in years	Mean Standard deviation	34 8.59
Household size	Mean Standard deviation	2.89 1.17
Ethnicity	Oromo	46%
	Amhara	42%

	Others	12%
Religion	Muslim	23%
	Orthodox	56%
	Protestant	20%
Marital status	Married	55%
	Single	24%
	Divorced and Widowed	21%

Source: Survey Data

Table 4: Test of association among participation in EA and different variable groups

.

Variables	*Category*	*Participation Status (Entrepreneurial Activities)*		
		Not participate	*Participate*	*P-value*
		Percent (%)	Percent (%)	
Sex	Male	39.2	60.8	0.000
	Female	74.1	25.9	
Educational status of parents	Educated	34.42	65.57	0.003
	Non-educated	58.41	41.60	
Economic status of parents	Rich	50	50.00	0.000
	Medium	33.71	66.29	
	Poor	67.47	32.53	
Marital Status	Married	39.4	60.6	0.000
	Single	31.8	68.2	
	Divorced	100	-	
	Widowed	100	-	
Ethnicity	Oromo	46.2	53.8	0.033
	Amhara	61.6	38.4	
	Others	23.81	76.19	
Religion	Orthodox	54.1	45.9	0.337
	Muslim	40.5	59.5	
	Protestant	50.0	50.0	

Source: Survey data.

Table 5: Determinants of participation decision in entrepreneurial activities

Variables	Coef.	St.err	Z	P/z/	Exp(B)
Sex of household head: 1=male	1.867	0.521	3.58	0.000	6.470
Age of household head	-0.368	0.122	-3.02	0.003	0.691
Age square of household head	0.003	0.001	2.60	0.009	1.003
Educational level of household head	0.203	0.068	2.98	0.003	1.223
Household size	0.485	0.207	2.35	0.019	1.624
Religion of household head:					
2=Orthodox	-0.763	0.495	-1.54	0.123	0.466
3=Protestant	-0.438	0.608	-0.72	0.470	0.345
Economic status of parents:					
2=Medium	-0.409	1.581	-0.26	0.796	0.664
3=Poor	-1.065	1.562	-0.68	0.45	0.345
Can economic status of parents affect your current economic status? 1=Affected	-1.229	0.512	-2.40	0.016	0.293
Constant	5.961	2.930	2.04	0.042	388.00

Log likelihood = -79.75 LR chi2 (10) = 81.70 Prob> chi2 = 0.000

Source: Survey Data

Results express that one year increase in educational level of household head, the odds of participating in business activities increases by 1.223, when other variables remain constant. This may imply that the higher education facilitate entry in the business activities, can enhance the managerial ability of the individual and hence increase the propensity to undertake participating in entrepreneurial activity. In addition, the probability of being a participant in different business activities increases with the size of household and household heads those affected by their economic status of parents are 0.293 times less likely to participate in business activities as compared to those do not affected, while the effects of other variables adjusted.

Discussion

These findings are in agreement with result reported by Thurik (2003): as he argued that educational level and age are the most important determinants of female participation in entrepreneurial activities. But, the current study contradicts with Thurik (2003) with regards to other significant determinant variables (sex of household head, age square, household size, the influence of parents economic background) and participation in entrepreneurial activities not only for female ,but also important for male households to generate their own income. The current study is also in agreement with Simon and Mokonnen (2008) which states that sex of household head, educational level of household heads and family background have significant influence on enterprise formation of young people. But,this contradicts with others significant variables and participation in different entrepreneurial activities.

In addition, this study is in agreement with Haris (2012), Abdel and Yasin (2013) and Paul (2006) which pointed out that the small and micro enterprises have been recognized as one of the most important contributors for the economic developments of many countries by creating employment and generate more income. Similarly, these findings are in agreement with the idea of Bavaiah, Philipos and Ageze (2012) which expressed thatmicro and small enterprises are the main income generating activities operating in Ethiopian cities and towns. In line with this, they stated that contribution of small enterprises to local economic developments is most important and it is the basic means of survival, particularly in urban areas, and contribute to employment generation and unemployment reduction. But, somewhat contradict the idea of Bavaiah, Philipos and Ageze, since this study claims that not only small and micro enterprises but also participating in different

entrepreneurial activities plays an important role to generate more income and economic development of countries.

4. Conclusions and Recommendations

Based on the findings of this study, the following conclusions are made: Firstly, the number of female participants was less as compared to male participants in business activities and younger household heads participate in business activities more than old household heads which implies that as age of households increase the interest/ability to engage in business activities may decreases. Secondly, educational level of household heads is the important component for participation in entrepreneurial activities which implies that higher education may facilitate entry into business activities, can enhance the managerial ability of the individual and hence increase the propensity to undertake participating in entrepreneurial activity. Household size is also an important variable to engage in business activities. This may imply that increasing number of entrepreneurs in different business activities from family helps households to generate more income and develop their economies. Thirdly, the economic background of parents is the essential component to participate in different entrepreneurial activities which imply that the economy of parents influence household heads directly or indirectly to generate their own income.

Based on the findings of this study, the following recommendations or policy implications are made: Firstly, In order to increase the number of female participants, concerned body should create awareness that motivate them to run their own business and give special attention or initiate the youth to participate in different entrepreneurial activities. This may be through

awareness creation, giving training, financial provisions or others methods that may initiate them to generate the necessary income. Secondly, households' educational improvements should be emphasized and encouraged before running their own business. Therefore, government or the concerned body should develop programme that give awareness on education of household heads before engaged to business activities. Thirdly, there is need to give special attention to households that have interest to participate in business activities, but who come from poor (low economic status) parents.

Finally, further study is recommended further study has to be undertaken in order to find out more determinants of entrepreneur participation and the opportunities and challenges of urban entrepreneurship in Arsi Zone towns.

5. References

A.Yassin& Abdel, H.A. (2013). Entrepreneurship Development and Poverty Reduction: Empirical Survey from Somalia. *American International Journal of Social Science, 2(3).*

Acs, Z.J., &Varga, A. (2005). Entrepreneurship, Agglomeration and Technological change. *Journal of Business Economics, 24(3)*: 323-334.

Acs, Z.J., Desai. &Hessels, J. (2008). Entrepreneurship, economic development and institutions. *Small Business Economics, 31(3),* 219-234.

Kedir A, (2009). Introduction to Statistics and Its Applications, second edition, Khalef Printing Press, Dire Dawa, Ethiopia.

Baron, R.A. (2007). Behavioral and cognitive factors in entrepreneurship: Entrepreneurs as the active element in new venture creation. *Strategic Entrepreneurship Journal, 1(1-2),* 167-182.

Bewick, V.; Cheek, L. and Ball, J. (2005). Statistics review 14: Logistic regression. Critical care, Landon, England, 9(1): 112-118.

Carree, M. A., &Thurik, A.R. (2008). The lag structure of the impact of business ownership on economic performance in OECD countries. *Small Business Economics, 30(1),* 101-110.

Central Statistical Agency. (2007). Ethiopian Population and Housing Census, provisional Result for 2007 by Urban and Rural, CSA, Addis Ababa.

G.S. Maddala. 1997. Introduction to Econometrics 2nd edition.

Haris, M. (2012). Entrepreneurial Intention and Small Business Growth in Indonesia. *International Journal of Business and Social Research (IJBSR),* 2 (4).

Hisrichi and Peteris. (1995). Entrepreneurship. Starting, Developing and Managing a New Enterprise, Homewood.

Hosmer, D.W. and Lemeshaw. 1989. Applied Logistic Regression, Wiley, Delhi.

M.D.Bavaiah, Philipos&Ageze. (2012). Business Development Services for Micro and Small Enterprises: Performance and Sustainability of Selected Programs in Addis Ababa.

Mead, D.C., &Liedholm, C. (1998). The dynamics of micro and small enterprises in developing countries. World Development, *26(1)*, 61-74.

Paul, V. (2006). Poverty reduction Through Small enterprises: Emerging Consensus, Unresolved issues and ILO activities.

Reynolds, P. D. 2005. Exploring start-up event sequences. *Journal of Business Verturing,* 11(3):151-166.

Shane, S &Venkatarman, S. (2000). The promise of entrepreneurship as a field of research. *Academy of Management Economics*, *33(2)*: 141-149.

Simon &Mokonnen. (2008). Youth Entrepreneurship in Ethiopia: The case of Manufacturing Micro and Small Enterprises in Addis Ababa.

Tabachnik, B. G and Fidell, L.S. 2001. Using Multivariate Statistics, Boston: Allyn and Bacon.

Thurik, A.R. (2008). Impact of Entrepreneurship on Economic performance in OECD countries. *Journal of Business Economics*, *30(1):* 101-110.

Van Praag, C. M., &Versloot, P.H. (2007). What is the value of entrepreneurship? A review of recent research. *Small Business Economics, 29(4),* 351-382.

Van Stel, A., &Audretsch, D. B. (2008). Does self-employment reduce unemployment? *Journal of Business Venturing, 23(6),* 673-686.

W. Bygrave. (2006). Global Entrepreneurship Monitor, 2005 Executive Report: *Global Entrepreneurship Monitor Publication.*