ISSN: 2347-1557

Available Online: http://ijmaa.in/



### International Journal of Mathematics And its Applications

# Status of Employment in Ethiopia: Bahir Dar University Graduates Tracer Study

Haile Mekonnen Fenta<sup>1,\*</sup>, Petros Kibebew<sup>2</sup>, Sifelig Taye Nigatu<sup>3</sup>, Zeleke Siraye<sup>4</sup> & Aragaw Mulu<sup>5</sup>

- 1 Department of Statistics, Bahir Dar University, Bahir Dar, Ethiopia.
- 2 Department of SANS and Pre-Engineering, Bahir Dar University, Bahir Dar, Ethiopia.
- 3 Department of Educational Planning and Management, Bahir Dar University, Bahir Dar, Ethiopia.
  - 4 Department of Management, Bahir Dar University, Bahir Dar, Ethiopia.
  - 5 Department of Mechanical Engineering, Bahir Dar University, Bahir Dar, Ethiopia.

Abstract:

Background: Both graduates and Higher Education Institutions are increasingly concerned with ensuring that their academic investment results in future employability. The FDRE Ministry of Education has targeted to reach > 80% of graduates with the first degree of the regular program employed with degree-relevant employment within 1 year after their graduation. Therefore, this GTS was carried out to explore the employability rate, the average time it takes a graduate to find employment measured in months and assess if the employed graduates were employed in their field of study of 2015 and 2016 Bahir Dar University graduates with a first degree, in general.

Method: The study was conducted in Bahir Dar University in 2015 and 2016 regular, first-degree graduates and stratified multistage random sampling was used to select respondents. Out of 4208 graduates, 867 graduates with a response rate of 82.5% were selected to participate in the study. To determine the prevalence, the duration and the potential factors of employability graduates' in the labor market, both descriptive and inferential statistics were applied.

**Result:** Seventy-nine percent of surveyed graduates were gainfully employed, of which majority (93%) was landing with degree-relevant jobs. Most of the employment rate was taking place during 1 to 6 months in duration and the overall average duration of unemployment was 5.08 months. Moreover, the graduates from the Institute of textile and fashion technology and College of Business and Economics have a shorter spell of unemployment (3.62 and 4.41 months) respectively.

Keywords: Employability rate, degree-relevant job, Unemployment Duration.

© JS Publication.

#### 1. Introduction

Ethiopia is one of the agrarian countries with per capita income USD 350 but has been achieving a promising economic growth and fastest growing economy during 2001-2010 [1]. The government of Ethiopia gives due attention to employment creation and different policies and strategies have been introduced and implemented including youth revolving fund for job creation. Despite this improvements, the unemployment rate remains high and the economy cannot provide adequate jobs to the graduates [2]. With a land area of 1.1 million square kilometers, which stood 9<sup>th</sup> in Africa and a population of about 73.9 million, the second most populous country next to Nigeria in Africa with 84% of the population resides in rural area's agriculture is the major source of livelihood The county population is predominantly young with about 45% below 15 years of age and the working age (15-64) was estimated to be 52%. The youth and senior citizen dependency being 87% and

<sup>\*</sup> E-mail: hailemekonnen@qmail.com

6 respectively [3]. This high dependency leads to higher pressure on public services, high level of unemployment, low per capita income and low level of domestic saving and asset accumulation with serious implication on poverty incidence. Nowadays, in Ethiopia, enrollment bounced from around 34,000 in 2000 to more than 309,000 in 2010 on which its' establishments principally have the point of delivering skillful and profoundly qualified graduates employable here and abroad. However, the market can only absorb to a limited number of graduates and thousands of young higher learning graduates remaining unemployed [4]. The significance of higher education is assessed on its ability to open ways to the graduates for future business and the foundation of their reasonable vocation way. Even if the national and international agencies efforts to promote sustainable development, unemployment remain extremely high [5, 6]. Mainly in developing nations, the problem of unemployment due an consideration for several reasons [7]. Employability as defined by [8] as the ability of a graduate to get a certain job and hold it for a period of time demands graduates to join the labor market that transcends shifting from the education field to the sector. it is also the combination into companies' culture, utilization of individual' potentials, career growth, new social networks, and independence, which is also a milestone in the young generations' life cycles [9]. A tracer study is a technique which is essentially envisioned to follow alumni of an academic institution, with a specific end goal to give feedback mechanism of the graduates and their place of graduation [10]. Graduate tracer studies can be used to track the whereabouts and performance of previous graduates and the helps to infer higher educations status of performance [11]. Moreover, graduate tracer studies provide the opportunity to assess labor market signals to assist in the development of strategic plans for higher education. However, it is a recognized fact that linking labor market surveys to higher education planning is rarely effective. It is vital to assess what kind of graduates are required in the near and mid-term future as well as what factors are contributing to the employability of graduates. The prevalence of unemployment in Ethiopia is not well identified and most of the graduates from higher learning are left hanging before they secured jobs. Therefore, the major objective of this study was to explore the employability rate of graduates from Bahir Dar University in 2015 and 2016 in their first degree from the regular program with degree-relevant employment.

Some of the specific objectives of the study were:

- ✓ Enumerating employed and unemployed graduates,
- ✓ Identifying professionally employed (either in public or private companies) and self-employed graduates,
- ✓ Identifying whether graduates that are employed with a degree relevant job and those employed with jobs unrelated to their degree
- ✓ Identify the graduate employment duration rate after their graduation.

## 2. Method and Source of Population

In order to amplify the response rate as well as to improve the richness of the data., the team decided to conduct this study on two consecutive graduates (2015 and 2016) and collected the important background information from the Bahir Dar University (BDU) student information management system (SIMS) database. Representative samples were determined using the formula developed by [12] from the two batch graduates and the sampled graduates were allocated by multistage stratified random sampling technique for each department. For data quality assurance issues, forty-five instructors from each department were nominated and selected to carry out the telephone interviews to know the current location of the graduates and these addresses were centrally collected by the team. The university instructors were purposely selected as data collectors, other than outsourcing and hiring data collectors since we believe that our university instructors are much more responsible to collect reliable data from the field. Finally, graduates were clustered by all geographical regions of

Ethiopia and the 45 instructors were assigned by considering the distance, the number of graduates and the like to collect the necessary information from graduates and their employers. Three sections of the structured questionnaire were distributed. The first section asked for demographic details and other information about the graduates' qualifications. The second section dealt with the general working status (including periods of unemployment) of the graduates, while the third section delved into the graduates' type of occupation and sector of employment, together with their attitude towards their job.

The data were analyzed using the Statistical package for social science (SPSS) and descriptive statistics with Chi-square tests were used to test the association between the dependent variable and independent variables. Multi-covariate logistic regression modeling was done by entering all variables with P value less than 0.25 in the bivariate analysis. Finally, logistic regression with forward likelihood selection method with P value less than 0.05 was undertaken to see the net effects of predictor variables over the current employment status of graduates. Table 1 shows the nine colleges/institutions with respective departments in each college included in the study.

Colleges	Departments		
College of Business and Economics	Accounting and finance, Economics, Logistics and supply mana		
	ment, management, Marketing and Turism management		
College of Educational and Behavioral Science	Special needs, Teacher education, curriculum and adult education		
Faculty of Humanities	Amharic language, Folklore, Journalism and communicatio		
	English language and literature and Educational planning		
	management		
Ethiopian Institute of Textile and Fashion Technology	Fashion design, Garment, Textile engineering		
Sport Sciences	Sport Science		
College of Agriculture and Environmental Sciences	Fisher and wetland and wildlife, Agricultural Economics, Natural		
	Resource, Plant Science, Rural Development, Agricultural Exten-		
	tion, Veternery Medicine and Animal Production		
School of Law	Law and Goverance & development study		
Faculty of Social Science	History and Heritage, Civics and Ethical education, Social Anthro-		
	pology and Geography		
Scholl of Geology	Geology		
Institute of Land Administration	Land Administration		

Table 1. Colleges and different field of Classification

#### 3. Result and Discussion

**Result:** The total population of the study was 4208 graduates (1899 for 2015 and 2309 for 2016) and from the above mentioned sample size technique in the methodology section; a total 867 graduates were selected. Seven hundred fifteen (??) questionnaires were returned from this sample gradates, yielding a response rate of 82.5% and out of the returned questionnaire responses, 100% of the data were usable.

Unemployment Spell (Months)	Employment	Unemployment	Employment (%)	Cumulative Employment (%)	Average duration	
0	0	715	0	0	5.08	
1	146	569	0.204	0.204		
2	3	566	0.004	0.208		
3	105	461	0.147	0.355		
4	1	460	0.001	0.357		
5	64	396	0.090	0.446		
6	1	395	0.001	0.448		
7	44	351	0.062	0.509		
8	1	350	0.001	0.510		
9	37	313	0.052	0.562		
10	61	252	0.085	0.648		
11	23	229	0.032	0.680		
12	18	211	0.025	0.705		
13	4	207	0.006	0.710		
14	13	194	0.018	0.729		
15	4	190	0.006	0.734		

Unemployment Spell (Months)	Employment	Unemployment	Employment (%)	Cumulative Employment (%)	Average duration
16	21	169	0.029	0.764	
17	3	166	0.004	0.768	
18	3	163	0.004	0.772	
19	2	161	0.003	0.003 0.775	
20	4	157	0.006	0.780	
20	3	154	0.004	0.785	
21	7	147	0.010	0.010 0.794	
22	2	145	0.003	0.797	
23	1	144	0.001	0.001 0.799	
24	1	143	0.001	0.800	
Total	591	142			

Table 2. Frequency Distribution of graduate employment status with discrete time intervals

Variables	Category	n	%
Present employment status	Professionally employed		73
	Self employed		6.9
	Unemployed	144	20.1
Types of Job	Related to the course completed	522	93
	Not related to the course completed	39	7
Length of Job Search	← one month	146	20.4
	2 to 6 months	306	42.7
	7 to 11 months	62	8.7
	1 year to 2 years	58	8.1
	Unemployed	144	20.1
Preferred work place	Yes	627	87.7
	No	88	12.3

The result in Table 2 showed that the number and percentage of employed, unemployed, the average unemployment duration and the employment related to their profession of BDU graduates for two consecutive years (2015 and 2016) during the discrete unemployment duration and almost 80% of graduates obtained their first job within two years among these 73% was found to be employed in degree-relevant jobs, but more than 20% still searching for jobs. Particularly, the prevalence of the employment status of graduate within a year was 70%. Most of the employment rate was taking place during 1 to 6 months in duration and the average durability of unemployment in this study was 5.08 months. Most of the respondents were able to take advantage of their university degree in landing their first job and 93% of the graduates disclosed that their first job was related to their university degree. In addition, the result indicated the prevalence of employment within a discrete time interval after graduation. In terms of length of job search, it can be noted that the majority 306 (42.7%) of the employed respondents obtained their first jobs in 2-6 months, followed by less than one month with 146 (20.4%). There is 8.7 percent who found their first job in a span of 7-11 months and 8% of the graduates 1 to 2 years of job hunting (Table 2).

Types of College	Employment	status (%)	Unemployment duration	Worl	k related (for employed only)
	Unemployed	Employed		No	Yes
College of Business and Economics	16.4	83.6	4.41	1.2	98.8
College of Educational and Behavioral Science	37.3	62.7	6.11	11.4	88.6
Faculty of Humanities	26.8	73.2	5.45	14.3	85.7
Ethiopian Institute of Textile and Fashion	16.0	84.0	3.62	3.2	96.8
Technology					
Sport Sciences	31.6	68.4	6.15	18.2	81.8
College of Agriculture and Environmental	21.0	79.0	6.98	10.7	89.3
Sciences					
School of Law	13.3	86.7	4.47	4.0	96.0
Faculty of Social Science	13.5	86.5	4.28	26.7	73.3
Geology	36.4	63.6	5.50	11.1	88.9
Institute of Land Administration	12.5	87.5	8.25		100.0

Table 3. Percentage on employment status and average duration of unemployment based on colleges

The result provided in Table 3 is the descriptive statistics on college type, employment status and unemployment duration of graduates. Regarding the type of college, the employment level of Institute of land administration and college of educational and behavioral science graduates respectively reach 87.5% and 62.7% of the total figure of their graduates. Moreover, the graduates from the Institute of textile and fashion technology and college of business and economics have a shorter spell of unemployment, which are 3.62 and 4.41 months respectively. However, graduates from the College of Agriculture and Environmental Sciences and Institute of Land Administration have a longer duration of unemployment, which are 6.98 and 8.25 months respectively. All graduates from Institute of Land Administration were employed with, related to their field of study, but 73.3% of graduates from the Faculty of Social Science were able to take advantage of their university degree in landing their first job (Table 3).

#### 4. Conclusion and Discussion

The employment circumstances in Ethiopia have not been improved much in spite of better economic growth performance and improved infrastructure in the last decades. Of the returned questionnaire responses, 100% of the data were usable. 77% and 79% of surveyed graduates were gainfully employed from 2015 and 2016 graduates, respectively; only 23% and 20.1% of the graduates are unemployed with various reasons. Out of the employed graduates of the two consecutive years, 73% were employed either in the public or private sectors. The rest 6.9% were self employed. Out of the overall employed 93% are with (related to the course they are completed), whereas only 7% are employed with non degree-relevant jobs or other than their profession. Regarding unemployment duration most of the employment rate was taking place during 1 to 6 months of duration and the overall average durability of unemployment was 5.08 months. The result shows the percentage of unemployment and employment of graduates for two consecutive years (2015 and 2016) during the discrete unemployment duration and almost 80% of graduates obtained their first job within two years among these 73% was found to be employed in degree-relevant jobs, but more than 20% still searching for jobs. Particularly, the prevalence of the employment status of graduate within a year was 70%. Most of the employment rate was taking place during 1 to 6 months of duration and the average durability of unemployment in this study was 5.08 months. This study showed that graduates' employment status was 79% and the average length of job search was 5.08 months. This study is almost in line with a study in South Africa indicated that the average time it took graduates in the sample to find employment after graduation was 7 months [13]. Our study revealed that out of the graduates that were employed, more than 90% were employed with, related to their field of study, but the study [13] indicated that only 70% were employed in their field of study. This difference might be due to the fact that in South Africa job opportunities were better than in Ethiopia so that the graduates in Ethiopia were unemployed till searching for jobs.

## Future research implications

Further study is needed to identify the major factors affecting the overall employability rate of graduates among others, Job search mechanisms, Criteria the employers used to select candidates, and various variables on the status of graduates, the level of university-industry linkage and the like will be analyzed.

### **Declarations**

• Consent for Publication: Participants were made aware in the consent form that the results of the study would be published, but that no data would be presented to allow the identification of individuals.

- Competing Interests: The authors declare that they have no conflict of interests.
- Funding: The fund is supported by Bahir Dar University.
- Authors' Contributions: HM wrote the proposal, participated in data collection, and analyzed the data and manuscript writing. PK, ST, ZS and AM approved the proposal with some revisions, participated in data collection, analysis and manuscript writing. All authors read and approved the final manuscript.

## Acknowledgements

The authors are indebted to Bahir Dar University for financial support and the data collectors.

#### References

- [1] W. B. Group, World development indicators 2014, World Bank Publications, (2014).
- [2] M. Kibru, Employment challenges in Ethiopia, Addis Ababa University, Ethiopia, (2012).
- [3] C. Ethiopia, Summary and statistical report of the 2007 population and housing census, Addis Ababa, Ethiopia: Federal democratic republic of Ethiopia population census commission, (2008), 1-10.
- [4] T. Semela, Breakneck expansion and quality assurance in Ethiopian higher education: Ideological rationales and economic impediments, Higher Education Policy, 24(3)(2011), 399-425.
- [5] A. Galal, The road not traveled: Education reform in the MENA region, World Bank Washington, DC, (2007).
- [6] N. E. Nikusekela and E. M. Pallangyo, Analysis of Supply Side Factors Influencing Employability of Fresh Higher Learning Graduates in Tanzania, Global Journal of Human-Social Science Research, (2016).
- [7] C. E. Okojie, Employment creation for youth in Africa: the gender dimension, Jobs for Youth: National Strategies for Employment Promotion, (2003), 15-16.
- [8] P. Brown, A. Hesketh and S. Williams, *The mismanagement of talent: Employability and jobs in the knowledge economy*, Oxford University Press on Demand, (2004).
- [9] M. Rok, Tourism and hospitality graduate employability, in The 2nd Electronic International Interdisciplinary Conference Proceedings, (2013).
- [10] T. T. Rojas and R. C. Rojas, College of Education Graduate Tracer Study (GTS): Boon or Bane?, European Scientific Journal, 12(16)(2016).
- [11] S. McGrath and S. Akoojee, Education and skills for development in South Africa: Reflections on the accelerated and shared growth initiative for South Africa, International Journal of Educational Development, 27(4)(2007), 421-434.
- [12] W. G. Cochran, Sampling Techniques, 3rd Edition, Wiley New York, (1977).
- [13] N. P. Mncayi, The determinants of employment status of young graduates from a South African University, (2016).