

**Policy and Practices of Enrollment in Higher Education: A Comparative Analysis
among Public Higher Education Institutions of Ethiopia**

Asmera Teshome¹

Abstract

Higher education instills relevant knowledge and advanced skills and supplies the human resources required for leadership, management, business and professional positions. This quantitative study aimed at making comparative analysis among higher education institutions in Ethiopia in terms of implementing 70/30 professional and program mix intake policy using cross-sectional survey research design. Both public and private higher education institutions were selected using availability sampling technique. For the purpose of comparison 32 public universities were selected and grouped into 1st, 2nd and 3rd generations on the basis of their years of establishment. The actual mean intake of each generation was manually calculated, processed using SPSS and compared with policy standard. In addition to descriptive statistics like frequency and percentage, inferential statistics such as one sample and paired sample T-tests were used to analyze the data. The findings of the study show that though net entry rate has been increasing, there is a wider gap between policy and practice in implementing 70:30 policy among the three generations of public higher education institutions and their respective bands with high enrollment to Natural Sciences and Technology fields, but with dwindling intake into Humanities and Social Science fields. The study disclosed low share of private enrollment, imbalance of gender, graduation and enrollment rates in higher education institutions. While public higher education institutions give priority to Sciences, Engineering and Technology fields, private higher education institutions mainly focus on Business, Social Sciences and Humanities. To narrow the gap between policy and practices, universities and national students' placement offices need to work closely, and carefully consider the national intake policy and align their intake with the country's future human power requirements. Strong link and collaboration needs to be established between government and non-government institutions to fairly benefit from reforms introduced at different times. Low achieving and female students need to get necessary support so as to minimize imbalance of gender, and to improve enrollment and graduation rates in public higher learning institutions. Since social sciences fields can help in combating contemporary global challenges like corruption, terrorism, problem of good governance and other social disorders, universities need to heighten their priority towards this field.

Key Words: Higher Education, Seventy-thirty, Program Mix Policy

¹ Addis Ababa University

1. Introduction

Higher education is supposed to be responsive to the socio-economic needs of the country through quality education and research (Mulu, 2012; & Woldegiyorgis, 2015). That is why Ethiopia introduced higher education in 1950 by establishing University College of Addis Ababa which is currently known as Addis Ababa University (Hailemeleket, 2013). Though there had been only two universities in the country until the beginning of the 1990s, in 2015 the number of public universities increased to thirty-four and private higher education providers to more than 100 (MOE, 2015). Thus, the late 1990s and beginning of 2000s marked the establishment of different universities such as Jimma University, Hawassa

University, Bahir Dar University, and Gondar University (Abeje, 2014). Next to the establishment of 2nd generation universities like Dire Dawa, Jijiga, Semera, Wellega, Debre Markos, and Debre Tabor in the 2000s; 3rd generation Universities such as Debre Tabor, Mettu, Wachamo, Adigrat, Asossa, Woldia, Wolkite, Addis Ababa Science and Technology, Bule Hora including upgraded Kotebe University colleges came in to being in 2011/12.

The Ethiopian higher education landscape has been showing significant change in terms of program and enrollment expansion, and programs mix (Mulu, 2012). Acute shortage of high-level professionals and researchers in Ethiopia necessitated doubling the number of students that enter universities with opening new programs consistent with the country's development strategy like information technology, law and basic sciences (MoE, 2002). With increasing number of higher education institutions, regular undergraduate enrollment showed significant rise from 190,043 in 2010 to 308,589 in 2014 (MoE, 2015). Parallel to the increase in undergraduate enrollment, postgraduate enrollment at public higher education institutions also increased from 12,621 in 2010 to 26,117 in 2014. Concurrently, the number of Ethiopian academic staff in public higher education institutions increased from 14,729 to 22,404 with low proportion of female academic staff of 11.2% and 11.6 % during the same years, respectively (MoE, 2015). However, different authors argue that Ethiopia's higher education enrolment ratio is one of the lowest in comparison with Sub-Saharan African countries in general and African countries like Sudan and Egypt (Mulu, 2012).

The main objective of Ethiopian higher education is to supply knowledgeable, skilled, and attitudinally mature graduates in quantity and quality with demand-based proportional balance of fields and disciplines that make the country competitive in the international markets (Higher Education Proclamation, 2009). To this effect, the Ethiopian Ministry of Education introduced 70:30 professional and program mix policy to raise the intake in engineering, natural science, health, agriculture to 70% and enrollment in business, economics and other social sciences (including law, humanities, languages, education, etc) to be 30% in public higher education institutions (Abeje, 2014; MoE, 2008; Kibrom, 2015; & Mulu, 2012).

Giving priority to human resource requirements in the areas of sciences and technology unquestionably plays tremendous roles in transforming the country from agrarian economy to industrial base economy. Yet, the current public higher education institutions' intake and enrollment has been mounting debates among Ethiopian scholars. One of the most important concerns is how to provide quality education under such circumstances. Because the effectiveness of higher education system and attainment of its objectives is dependent on availability of adequate financial and funding resources, quality of both academic and non-academic staff, adequate facilities, state-of-the-art equipment and motivated students ready to learn, raising enrollment and expansion of higher education requires adequate financial resources (Kibrom, 2015; & Mulatu, 2016). Nevertheless, with increasing enrollment to public higher education institutions in line with the 70:30 higher education professional and program mix intake ratio of science and technology to social sciences, shortage of funding remains a challenge (Mulatu, 2016). Due to quantitative expansion of higher education and programs, overall budget and per student unit cost has been drastically declining in comparison with the average African annual per student expenditure. Low per student unit cost has direct implication to high student/teacher ratio, poor physical learning environments

and inadequate library and other services and these in turn adversely affect the quality and relevance of higher education (Tebeje, n.d.).

More importantly, rapid rise in higher education enrolment has been imposing serious constraints on working due to limited number of qualified teachers and poor education quality provision (Deuren, Tsagazeab, Seid, & Wondimu, 2013). Though GTP 1 report of 2015 reveals qualification of academic staffs of public higher education institutions as 27%, 58%, and 15%, PhD, Master's and Bachelor, there is still acute shortage of instructors well equipped with theoretical and practical knowledge and skills in the areas of sciences and technologies. When coming to the real ground, almost all academic staff members of the third generation Ethiopian public universities and the majority of academic staff in the second generation universities are first degree holders, and even in the oldest universities sometimes students with relatively good grades are assigned to teach his/her classmates and the other classes in the aforementioned fields. In addition, instructors of departments under technology faculties have been suffering with high teaching loads. Beyond under qualification and high teaching loads, instructors directly recruited by Ministry of Education upon graduation or recruited by universities are assigned to teach without any pre-training on teaching methods, assessment techniques or any pedagogical knowledge and skills.

Thus, implementing 70:30 policy requires more resources and finance to construct more classrooms, dormitories, laboratories and workshops to recruit and retain competent and qualified academic staff in technology and engineering fields of studies. Furthermore, it requires more financial resources to supply laboratory equipment, chemicals, adequate library resources, ICT infrastructure (Kibrom, 2015).

The recent rapid increase in enrollment in African countries has been eroding quality and this has been obscured the contribution of tertiary education to economic growth (Deuren, Tsagazeab, Seid, & Wondimu, 2013). Similarly, dramatic expansion of higher education institutions in Ethiopia contributed to the decline of quality in curriculum, instruction, graduates and the overall educational standards (Muchie, 2010). Quality of education is growing inversely proportional to the rapidly expanding higher level private and public education and enrollment means that there has been poor quality of instruction, preparation of the students, examination and management (Muchie, 2010). Writers such as Deuren, Tsagazeab, Seid, & Wondimu, 2013; & Muchie, 2010 underscored some of the current higher education problems that continue to persist in the future. These include poor quality, acute shortage of education materials, equipment, computers and teaching materials, limited broad band limiting internet access, poor academic staff profile, low academic performance and no or unorganized remedial academic support or guidance on the side of the students, declining per student unit cost, poor pedagogic creativity of instructors, poor or weak assessment techniques, feedback procedures to improving learning skills of students, and weak or inadequate institutionalization of quality control systems.

With expansion of higher education and gross entry rates, graduates from universities/colleges have been facing challenges from unemployment (Hailemeleket, 2013). Trend, in graduate unemployment is mounting at fastest rate, shows that it was more than 20% at the end of 2000s; not less than 40% in 2011 and in the future with increasing number of graduates the rate will continue to rise unless effective intervention is made to mitigate the problem in the short, medium and long-term (Hailemeleket, 2013). If the situation does not

change, the effect could be devastating and probably higher education providers will lose their value, significance and influence, and become irrelevant; unemployment and poverty remain wide spreading and cause social and political instability in the country (Hailemeleket, 2013).

Therefore, I was encouraged to conduct quantitative study because of the following reasons. One reason was that no study was conducted so far on comparative analysis of the three generation public universities regarding 70:30 professional and program intake policy. Another reason was to shade light on the future research areas.

The purpose of this quantitative study was to make comparative analysis among the three generation public universities in terms of implementing 70:30 professional and program mix intake policy with special focus on 2014 entrant using cross-sectional survey research design. The study helps to identify the existing gaps among the public universities in implementing 70: 30 policy. Specifically, the current study aimed at achieving the following objectives:

1. To show enrollment trends of public higher education institutions;
2. To indicate implementation trend of 70:30 intake policy in public higher education institutions;
3. To compare the three generation public universities against the intake policy standards;
4. To compare the intake of the three generation public universities in terms of bands against the intake policy standards;
5. To forward possible policy recommendations that can encourage further research in the area.

2. Methods

Participants

Currently, there are 34 public universities and more than 100 private universities in Ethiopia. This study aimed at comparing the three generation public universities in implementing 70:30 professional and program mix intake policy by taking 2014 entrants in to account. The participants of the study were, therefore, 32 of 34 public Ethiopian Public Higher Education selected by convenience sampling because the aggregate intake data of the 32 public universities can be easily obtained from the Education Statistics Annual Abstract. To make the comparison among the three generations and their respective bands easier, the 32 universities were grouped in to 1st, 2nd and 3rd generations depending on their years of establishment.

Design

A cross-sectional survey design that helped to compare the implementation of 70:30 intake policy among the three generation public universities was employed. Accordingly, the study compared the overall intake of public universities and each generation's band against the policy standards (Creswell, 2012). For the purpose of comparison, the 32 public universities were grouped in to 1st, 2nd and 3rd generations. The researcher was interested to see the differences and similarities of the three generations because there is variation among the generations in terms of qualified academic staff, experience and maturity, and access to internal facilities like libraries and laboratories. Thus, it is imperative to know the existing

differences and similarities among the three generations to reach policy decisions or to take remedial actions wherever there is a deviation from the policy standards and to provide important argument that can call up other studies on similar issues.

Procedures

In the journey of conducting this study, the Education Statistics Annual Abstract book published by the Ethiopian Ministry of Education was carefully and thoroughly reviewed. Variations were observed among the three generations and thus existing local literature written on Ethiopian higher Education policy and practices were analyzed. Then, higher education enrollment data was organized, tabulated and graphed, and appropriate statistical tools were selected and used to compare actual practices against national aggregate intake policy. Lastly, discussions were made and conclusions were drawn from which the researcher forwarded some recommendations.

Data Analysis

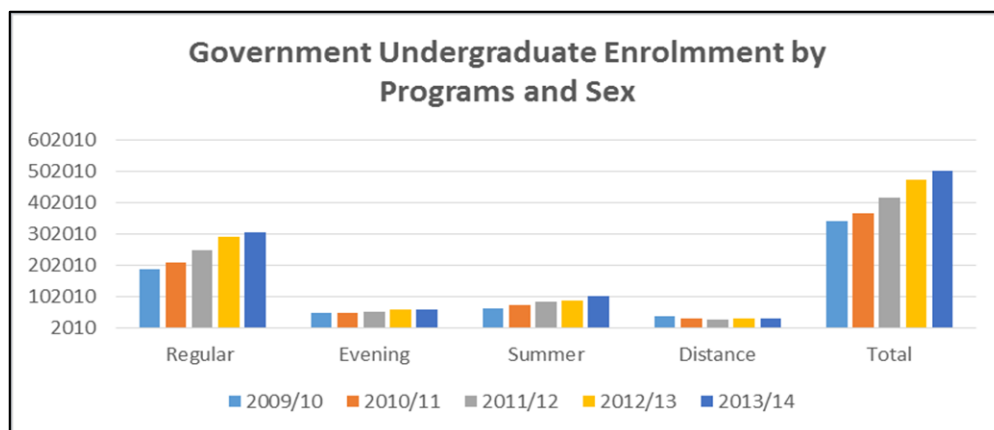
In order to analyze the data obtained from aggregate Education Statistics Annual Abstract, while descriptive statistics like frequency, percentage and mean were used to present enrollment at each generation's band, one sample t-test was used to compare mean intake of each band and the respective band's achievement against the 70:30 professional and program mix policy standards. In addition, paired sample t-test was used to compare the mean intake of each generation.

3. Results

Enrollment Trends of Sciences and Technology, and Social Sciences and Humanities

To meet the country's human power requirement in general and Growth and Transformational Plan in particular, the national aggregate proportion of students to be admitted to Sciences and Technology disciplines was supposed to be 70% and the remaining 30% of the student were proposed to study Social Sciences and Humanities (MoE, 2008). Therefore, Table 1 presents three years' trend of the Ethiopian public higher education in implementing the national aggregate 70:30 professional and program mix intake policy.

Government higher education institutions offer undergraduate degree education in regular, evening, summer and distance programs. As can be seen from Table 1 and Graph 1, the largest proportion 190,043 (55.2%) of the government enrollment admitted to regular program in 2009/10. However, 49,553 (14.4%), 65,575(19.1%), and 11.3% of the students at government institutions were admitted to evening, summer and distance programs, respectively, in the same year. In 2013/14, while enrollment of the regular program increased to 308,589 (61.3%), summer program enrollment rose to 102,642 (20.4%) of the government enrollment. However, enrollment in distance and evening programs at government higher learning institutions declined to 59,079 (11.7%) and 33,259 (6.6%), respectively, by 2013/14 (See the details from the following graph). These sharp rises in higher education enrollment at regular program have been to achieve the 70:30 professional and program mix policy that has been suffering from unbalanced among the three generations public higher education institutions.



Graph 1: Government Undergraduate Enrollment by Programs And Sex

Source: MoE Education Statistics Annual Abstract

Table 1: Trends of Enrollments of 70:30 in Ethiopian Public Higher Education Institutions

Year	2011/12	2012/13	2013/14
Actual intake	75:25	74:26	74:26

Source: Education Statistics Annual Abstract

As shown in Table 1 above, enrollment at regular program in public universities seems uniform in proportion with 74 and above for Sciences and Technologies which is surpassing professional and program mix policy standard. Though enrollment at Social Sciences and Humanities seems uniform throughout 2009/10-2013/14, the performance has been below the policy standard. This indicates that the priority of the government to social sciences that can solve varieties of societal problems has been dwindling.

Table 2: Ratio of Sciences and Technology to Social Sciences and Humanities

University generation	by	Enrollment by Band						70:30
		Band 1	Band 2	Band 3	Band 4	Band 5	Band 6	
1 st		38.3	13.3	9.9	11.8	12.9	13.7	74:26
2 nd		40.51	18.5	6.2	7	15.6	10.7	
3 rd		51.4	16.7	4	7.1	12.2	8.6	

As shown in Table 2, the average enrollment ratio of Sciences and Technology to Social Sciences of the three generations during 2013/14 was 74:26 with wide variation among the Bands of each generation. Similarly, wide variation was observed between intake policy standard and actual intake to each band of the three generations. For example, the actual aggregate intake ratios were 73:27, 87:13 and 79:21 for 1st, 2nd and 3rd generations, respectively. While 3rd generation universities enrolled 51.4% of their new entrants of 2013/14 to Band 1, 38.3% of 1st generation universities new entrants were enrolled to the same band. It was the actual intake of Band 1 of the 2nd generation universities (40.5%) that relatively met the target set by the intake policy. Even though Ethiopian Higher Education Professional and Program Mix Policy says 20% of the entrants need to join Band 2, the actual intake of the three generation were below the standard, 13.3%, 18.5%, 16.7% for 1st, 2nd and

3rd generations, respectively. In contrast, with the exception of Band 3 of 3rd generation (4%), the actual intake to Bands 3 and 4 were above professional and program mix policy target, which is supposed to be 5%. Likewise, there was wide gap between policy and practice with regard to enrollment at both Bands 5 and 6 of the three generations whereby all actual intake of Band 5 was below the policy standard 20%. With the exception of the 3rd generation intake (8.6%), the actual proportion of the students enrolled in the same Band was above the policy standard (10%). These all imply that the largest proportion of students joined public higher education institutions in 2013/14 were admitted to Natural Sciences and Technology with surpassing the standard set in professional and program mix policy. Contrarily, the proportion of newly enrolled students to Social Sciences and Humanities were below the national aggregate intake policy. This implies that there was great variation between policy and practices among the Bands of the three generations.

Table 3. Comparison of Mean Intake of Natural Sciences and Technologies, and Social Sciences and Humanities against Policy Standard

Comparison Groups	University By Generation	Test Value = 70			
		t	Df	sig	Mean Difference
Natural Sciences and Technology vs. policy standard	1 st	-.112	2	.921	-3.667
	2 nd	-.103	2	.927	-3.333
	3 rd	-.094	2	.934	-3.000
Social Sciences and Humanities vs. policy standard	1 st	1.112	2	.382	36.333
	2 nd	1.134	2	.374	36.667
	3 rd	1.156	2	.367	37.000

As can be seen from the above table, the actual natural sciences and technology intake of 1st generation universities was significantly different from the intake policy standard of MoE at 95% confidence interval (t-value -0.112; sig. 0.921). Similarly, there was statistically significant difference between the actual intake in natural sciences and technology of 2nd and 3rd generations and intake policy standard at the same confidence interval (t-value of 0.103, 0.094 and sig. value 0.927 and 0.934). On the other hand, there is statistically significant difference between actual enrollment in Social Sciences and Humanities of 1st, 2nd and 3rd generations and the intake policy standard at 95% confidence interval with t- values of 1.112, 1.134, 1.156; sig. value 0.382, 0.374 and 0.367, respectively.

These imply that there is a gap between policy and practices due to the fact that the proportion of students enrolled in Natural Sciences and Technologies across the three generations was larger than the proportion set in the professional and program mix intake of public higher education institutions. In contrast to the actual enrollment in Natural Sciences and Technology, enrollment in Social Sciences and Humanities was below the policy standard i.e. there was a wide gap between policy and practices in implementing enrolment in Social Sciences and Humanities.

Table 4 Comparison of Mean Intake of the Three Generations**Paired Sample t-test**

Comparison of universities	Paired Differences		t	df	Sig.
	Mean	Std. Deviation			
1 st vs. 2 nd	-.333	97.500	-.006	2	.996
2 nd vs. 3 rd	-.333	96.500	-.006	2	.996
1 st vs. 3 rd	-.667	97.002	-.012	2	.992

Table 4 shows that there is statistically significant difference between mean intakes of 1st vs. 2nd, and 2nd vs. 3rd generations at 95% confidence interval with t-value -0.006, sig value 0.996. However, there is no statistically significant difference in terms of mean intake between 1st and 3rd generation universities. This means that there is great variation among the three generation public universities in terms of aggregate intake. This difference in mean intake may be attributed to variation maturity among the generations.

Table 5. Summary of Actual Enrollment to Each Band against Intake Policy**One Sample T-Test**

Bands against policy standard	University by Generation	Test Value	T	df	Sig.	Mean Differences
1	1 st	40	0.806	2	.505	26.333
	2 nd		0.825	2	.496	26.667
	3 rd		0.844	2	.488	27.000
2	1 st	20	1.418	2	.292	46.333
	2 nd		1.443	2	.286	46.667
	3 rd		1.469	2	.280	47.000
3	1 st	5	1.878	2	.201	61.333
	2 nd		1.907	2	.197	61.667
	3 rd		1.938	2	.192	62.000
4	1 st	5	1.878	2	.201	61.333
	2 nd		1.907	2	.197	61.667
	3 rd		1.938	2	.192	62.000
5	1 st	20	1.418	2	.292	46.333
	2 nd		1.443	2	.286	46.667
	3 rd		1.469	2	.280	47.000
6	1 st	10	1.724	2	.227	56.333
	2 nd		1.753	2	.222	56.667
	3 rd		1.781	2	.217	57.000

Table 5 compares actual enrollment from Bands one to six and policy standard using one sample t-test. According to the professional and program mix of higher education intake policy, Band 1 refers to Engineering and Technology which is supposed to absorb 40% of the 70% of students from Sciences and Technology disciplines. The t-test results show that there was no statistically significant difference between mean intake in Band 1 of 1st generation universities and the supposed policy standard at 95% confidence interval (t-value 0.806, significant level of 0.505). However, there was statistically significant difference between mean intake in Band 1 of both 1st and 2nd generations and the intake standard to the Band set

in the policy document at 95% confidence interval with t-values of 0.825, 0.844 and sig. values 0.496 and 0.488, respectively.

Band 2 represents Natural and Computational Sciences which comprises of Mathematics, Chemistry, Physics, Biology, Sport Sciences, and Statistics which are supposed to absorb 20% of the new entrants to higher education. The results of one sample t-test reveal that there is statistically significant difference between policy standard and mean enrollment in the same Band at 95% confidence interval with t-values of 1.418, 1.443, 1.469; and significance levels of 0.292, 0.286 and 0.280 of 1st, 2nd and 3rd generation universities. This indicates that there was a gap between policy and practice in implementing 70:30 professional and program mix in terms of Band.

On the other hand, Band 3 includes Health and Medical Sciences and it is supposed to absorb 5% of new yearly entrants to higher education. In order to compare the actual mean intake in the Band with policy standard, one sample t-test was used. The test result shows that there was statistically significant difference between actual enrollments in Band 3 of 1st, 2nd and 3rd generation universities at 95% confidence interval with t-values of 1.878, 1.907, and 1.938; and significant level of 0.201, 0.197 and 0.192. Actual enrollment in Band 3 was greater than the policy standard that created a gap between policy and practices in implementing the enrollment policy.

Band 4 is supposed to absorb 5% of the 70% of students from Sciences and Technology background. As seen from the table, there was statistically significant difference between mean intake of 1st, 2nd and 3rd generations and the policy standard at 95% confidence level and t-values of 1.878, 1.907, and 1.938 and sig.-value of 0.201, 0.197, and 0.192, respectively.

Likewise, Band 5 represents Faculty of Business and Economics and it is supposed to absorb 20% of Social Sciences students. The results of statistical test show significant difference at 95% confidence level with t-values of 1.418, 1.443 and 1.469 and significant levels of 0.292, 0.286, and 0.280, respectively.

Band 6 includes other Social Sciences and is supposed to absorb 10% of the 30% of students joining Social Sciences and Humanities. The one sample t-test result shows that there is statistically significant difference between the means of actual enrollment in Band 6 of 1st, 2nd and 3rd generations and the policy standard at 95% confidence interval and t-values of 1.724, 1.753 and 1.781 and sig. levels of 0.227, 0.222 and 0.217, respectively. This obviously shows that there was gap between policy and practice in implementing the intake policy.

4. Discussion

The study investigated policy and practices of the 70:30 professional and program mix of public higher education policy of Ethiopia. To achieve the objectives of the study, public higher education institutions were grouped in to 1st, 2nd and 3rd generations on the basis of their establishment. The mean intake of each generation was manually calculated and entered into SPSS and was compared against the policy standard using one sample t-test. In addition, the mean intake of 1st, 2nd and 3rd generations were compared with each other using paired sample t-test so as to test if there is statistically significant difference between mean actual intake of each paired generations.

Supporting the study by Mulu (2012), it was found that with expansion of higher education institutions in Ethiopia, undergraduate enrollment showed significant progress. This rapid rise in undergraduate enrollment requires qualified teachers and well equipped libraries, laboratories, classrooms, dining rooms, clinics, recreational areas that can either directly or indirectly contribute to the prevalence of health and safety learning environment. However, corroborating the findings of Woldegiyorgis (2015) the situation in most current public universities, especially 3rd generation universities is characterized by lack of well-trained instructors, especially in the area of technology, lack of educational inputs like reference materials, lack of technicians to operate laboratory equipment, suffocated dormitory services, poor daily dietary intake for students, poor recreational areas, poor water supply, poor waste management, poor latrine, and poor classroom facilities. These poor institutional facilities contribute to poor teaching learning processes which can in turn adversely affect the quality of graduates.

The mean enrollment at the three generation public universities show deviation from national aggregate standard of 70:30 professional and program mix policy with mean enrollment above the national aggregate standard for Natural Sciences and Technology and below the standard for the Social Sciences. The one sample t-test results confirmed that there is statistically significant difference between mean enrollments of each of the three generations and the policy standard. The third generation public universities with acute shortage of well-trained man power and other educational inputs were found to absorb their highest proportion of intake in Sciences and Technology disciplines. Such conditions can obviously blur the issue of quality graduates and over saturation of unemployed graduates in the fields of sciences and technologies. This finding is similar to the findings of Hailemelekot (2013).

In addition, the paired sample t-test results indicated that there is statistically significant difference between mean intake of 1st vs. 2nd, and 2nd vs. 3rd generation public universities. However, there is no statistically significant difference between mean intake of 1st and 3rd generation public universities. More importantly, there is a statistically significant difference among the actual mean intake in each Band of the three generations and the aggregate national standard assigned to each Band. The finding shows that nearly half of the 3st generation entrants of 2013/14 joined Band 1 i.e. Engineering and Technology, and enrollment of new students in Bands 3, 4 and 6 of the three generations were above the national aggregate policy standard with some exceptions. However, the actual intake in Bands 2 and 6 were below the aggregate policy standard.

Overall, findings of the study showed that there was gap between policy and practices among the three generation public universities in implementing 70:30 and its respective intake by Bands with dwindling intake of Social Sciences and Humanities from national aggregate policy standard. This gap and unbalanced intake to higher education leads to varieties of problems. One of the most important and sever problem that coincides the findings of scholars such as Kibrom (2015 and Mulatu (2016) is the difficulty to supply universities with important facilities like educational inputs so as to produce competent graduates in market-driven fields. The second problem that might come as a result of enrollment of higher proportion of students to science and technology is rise in rate of unemployment due to saturation of graduates in these fields of studies. The third future challenge will be disrupted national human resource requirement planning due to the fact that current public universities

are not in line with the national human resources requirements and are guided by prioritizing technology without considering market demand and supply, and current economic status of the nation.

Unquestionably, educated man power in the areas of sciences and technology is important to make a strong bridge to transform the economy of the country from agriculture base to small scale based industrial, and then to modern technology based economy. However, before all, it seems imperative to undertake preliminary assessment in selecting the kind of technology that goes with the existing socio-economic and political situations in the country so as to meet the required future educated man-power needs. Before raising the intake in sciences and technology disciplines, it seems mandatory to equip higher education institutions with both needed human and material resources so as to offer quality education to produce quality graduates that can solve real socio-economic problems of the country from the grassroots. In order to ensure proper implementation of the national aggregate intake policy, universities need to adjust their annual intake with the national future human power requirement plan, market demand and socio-cultural aspects of the hosting community. Moreover, in order to narrow the gap between policy and practices, universities and national students' placement offices need to work closely and carefully consider and consult the national intake policy. Since social sciences play tremendous roles in tackling contemporary global challenges like corruption, terrorism, problem of good governance and other social disorders, universities need to heighten their priority towards these fields. As the overall effects of rise in intake in science and technology may uplift the rate of unemployment in the country, in addition to expanding industries that can absorb graduates in the areas of technology fields, universities need to divert graduates' attitudes towards self-employment through strengthening entrepreneurship training during their university life.

Reference

- Abeje, B. (2015). The Social Sciences at the Crossroads: Challenges and Opportunities at Addis Ababa University. *JHEA/RESA* 12 (1), 93-110.
- Berger, F. (2006). Research and Higher Education in Austro-Ethiopian Relations, KEF Fact Sheet 3/06. Available at <http://www.oeaw.ac.at/kef>
- Creswell, J. (2012). *Educational Research: Planning, conducting, and evaluating quantitative and qualitative research* (4th Ed). Pearson Education, Inc.
- Deuren, R., Tsagazeab Kahsu, Seid Mohamed, and Wondimu Woldie (2013). *Capacity Development in Higher Education: New Public Universities in Ethiopia*. Working Paper No. 2013/24.
- Gay, L.R., Mills, G.E, & Airasian, P. (2012). *Educational research: competencies for analysis and applications* (10th Ed.). Upper Saddle River, NJ: Merrill/Prentice Hall.
- Hailemeleket, T. (2013). Education in poverty reduction: A gap analysis study with particular reference to private providers operating in Ethiopia. *JBAS*, 5 (1), 64-88.
- Kibrom Mengistu (2015). Revenue diversification strategies in Ethiopian higher education System: A Brief Reflection. *BJE* 15 (1), 11-23.

- MoE (2015). Education Sector First Growth and Transformation Plan Performance Report. Addis Ababa, Ethiopia.
- Muchie, M. (2010). Review: Quality of Higher Education in Public Institutions. Ethiopian Electronic Journal for Research, Innovation Foresight, 2 (2), 150-156.
- Mulatu, D. (2016). The Economics and Financing of Higher Education in Ethiopia, Analysis of Financial Policies and Current Trends at the State and Wolaita Sodo University: Qualitative Inquiry. International Journal of Innovative Education Research 4 (1):1-16
- Mulu, N. (2012). Quality and quality assurance in Ethiopian Higher education: critical issues and practical implications. Doctoral Dissertation. University of Twente, the Netherlands.
- Tebeje M. (n.d.). Neoliberal Policy Agenda and the Problem of Inequality in Higher Education: The Ethiopian Case.
- Woldegiyorgis, A. (2015). A Glance at the Ethiopian Higher Education from the Developmental State Perspective. BJE, 15 (2), 1-37.