Empirical Analysis On Strategic Approach For Building Higher Education System In Ethiopia

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Abstract

Since 1950, the education system has been changing in impressive dimensions in the quality of education in Ethiopia. To build the higher education (HE) system in Ethiopia changes by revising the curriculum and introducing various courses/programs to accelerate enrolment in public and private universities. In the last two decades, the Ministry of Education (HE) has initiated many expansion programs still many hurdles to expanding the HE system in Ethiopia.

The first university was started in 1950 in Addis Ababa as Addis Ababa University. Followed by Haramaya University was established in 1954. By 2022, this had risen to 42 Public and 83 Private universities, including one Civil Service University, one Défense University college, and one Kotebe-teacher education in Ethiopia. The aim of this study is an overview of the HE system in Ethiopia, to determine a strategic approach to enrolment, equity, diversity, teaching and learning inclusive assessment, and institutional commitment to the expansion of the system of H.E to give appropriate recommendations to the policymakers. This study used empirical analysis from the Federal Democratic Republic of the Ethiopian Government, Ministry of Science, and HE and conducted interviews with a prime source of the data. This study has predictions in the past and forecasts enrolment, equity, diversity, and teaching resources for the future. The statistical tools of the Auto Regression Integrated Moving Average model (ARIMA) used the prediction of the said variables. It is an appropriate model to forecast enrolment, equity, diversity, and teaching resources in HES in Ethiopia. The expected outcome of the study is to understand the strategic variable influencing the expansion HE system in Ethiopia, and it will be helpful to policymakers to implement the right decision to rush the HE system in Ethiopia.

Keywords: Higher Education (HE), Quality of Education (QoE), curriculum development, development of an economy, Strategic Approach, ARIMA Algorithm

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I. Introduction:

The higher education system in Ethiopia is not new, and it has initiated in 300 A.D in monastic traditions. Later, the Ministry of Education introduced various policies for modernizing the education system in Ethiopia ***(Abebe 1995)***. This period initiated distinct basic and higher levels as a two-tier Quranic system ***(Asgedom & Hagos, 2016)***. Ethiopian universities are using collegial governance. The higher education governance in Ethiopia consists of three bodies:

(i) The top-level body under the Chairmanship of the President with department heads implement decisions (ii) For the academic matters under the supervision of professors, faculty, and students representatives are responsible (iii) The third body is a supervisory body to assist the executives. The President is the Chief Executive and has been directing the universities. The University board is working independently of the Ministry of Education.

H.E is also playing a predominant role in expanding human capabilities such as active involvement in all activities, removing the obstacles of illiteracy, ill-health, lack of access to resources, lack of civil and political freedoms, searching for their opportunity to shape their destiny, and finally development policies and practices overall development of human resources with the resulting the development of an economy ***(Fukuda-parr, 2003)***.

The development and implementation of quality education are adequate in Ethiopia. It has influenced national success. Rapid institutional and enrolment expansion and need-based changes are required, framing educational policies, infrastructure development, and quality education. Apart from that, access is one of the factors for influencing an individual the real opportunity to make decisions for their individual and community development ***(Sen, 1999)***

In the early 2000s, with the initiative of the World Bank higher education development programs were initiated in Ethiopia ***(Yizengaw, 2003***). The government has initiated different programs. These are National Capacity Building Program in 2001. In 2003, the government of Ethiopia ratified the HE proclamation for policy-based and institutional restructuring in the system. The HE reforms with the extensive systematic expansion of the HE system in Ethiopia. These are existing colleges and universities, merging institutions, increasing the no. of public universities, and increasing enrolment of undergraduates from around 20,000 in 1999 to 2,50,000 in 2012 ***(MoE, 2012)***. Now, Ethiopia is one of the highest enrolments in HE across the globe.

II. The Problem of the Study:

Ethiopia is one of the poorest countries, and the per capita income steadily increased from US$117 to US$198 during 2003-10. About 80% of the population's income is less than $2 per day. The eradication of poverty and economic development is possible with the development of science and technology in any country ***(Molla, 2013).***

The Ministry of Education stated that by 2020 public universities in Ethiopia 44. The number of enrolled students was 319217 in 2007-08 in higher education increased to 800000 by 2017-18 ***(MOE, 2017)***. Expanding the HE system in Ethiopia, the Ethiopian government allocates more than 40% education budget to HE (***UNESCO, 2015).*** The quality of education in teaching and learning required by higher education. It is lagging behind government and private universities. The Ministry of Education has concentrated on increasing the number of institutions, but the enrolment, quality of teaching-learning, and lack of desired output in public and private universities (***Areaya 2010).*** It has been influencing under development of an economy. This study is beneficial for HE institutions for predicting enrolment of HE students, equity, diversity, and teachers based on the optimum utilization of resources for the benefit of the students. This study is also resolving the problems of forecasting student strength according to that providing classroom buildings to meet increased demand.

III. Review of Literature:

Many of the studies focused on diversity, culture, and religion, rich and diverse resources, experience, knowledge sharing in the community, and equality for improving the HE system in Ethiopia ***(Northedge, 2003; Warren, 2002 Kebede, 2010; Teferra, 2004; Wagaw, 1979).*** The Ministry of Higher education is also given inspiring direction in the strategic approach of diversity, culture, and equality for improving the quality of higher education in Ethiopia. The quality of HE depends on assessment/appropriate evaluation is very important in any country, and access is also one of the factors of individual and community development ***(Alkire & Deneulin, 2009; Salmi, 2009).***

Organization for Economic Co-operation and Development (OECD, 2009) indicated expansion of HE through improving methodology in teaching, learning, and selection of right instructors based on their knowledge and experience, providing formal training, developing of science and technology, providing online courses, improving teaching aids, etc. Many researchers expressed that monitoring the standards and good governance are required for advancing QOE ***(Coats, 2010; Henard and Mitterle, 2010).***

Prosser and Trigwell (1999) expressed that the relationship between student and teacher will influence student success. The authors conveyed in their research article that relationship is student-centered, and their success depends on their relations. Few studies are published on the prediction of enrolment using the ARIMA model and data mining techniques to forecast student enrolment for future arrangement purposes ***(S.S. Aksenova, D. Shang, and M. Lu, 2006; H. Sabnani, M. More, P. Kudale, and S. Janrao, 2018; Y. Chen, R. Li, and L.S. Hagedorn, 2019).***

Most of the studies concentrated on the relationship between student and teacher, the teacher is empathetic to understand the student's problems, and it helps the students succeed. But no research has been conducted to determine a strategic approach for forecast student enrolment, equity, diversity, teaching and learning inclusive assessment, and institutional commitment to the expansion of the HE system in Ethiopia.

IV. The Objectives of the study:

The following are the objectives of the study for a strategic approach to building expanding higher education in Ethiopia

- To study an overview of the HE system in Ethiopia
- To determine strategic approaches are influencing the expansion of HE in Ethiopia
- To predict the enrolment of students, equity, diversity, and teachers in HE
- To give appropriate suggestions for expanding HE in Ethiopia

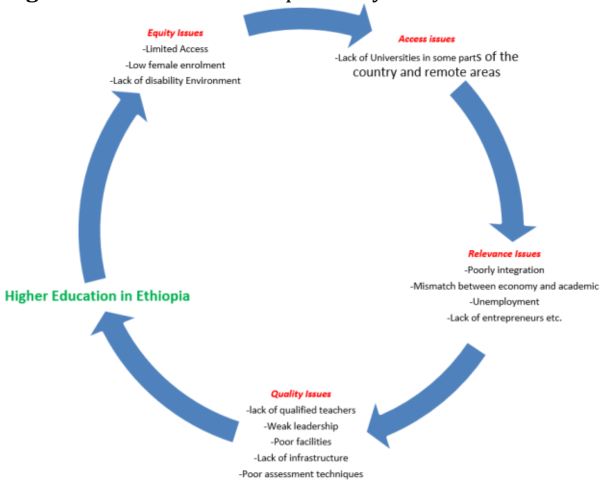
V. Methodology of the Study:

This study focused on empirical analysis to reduce the problem. Private interviews were conducted to collect the information. Data collected from the Federal Democratic Republic of the Ethiopian Government announced public information, Ministry of Science and HE, public and private universities. This paper includes exclusively publicized news information and students' learning/ teaching function at a specific time. This study mainly focused on descriptive analyses related to articles, documents, and information from the Ministry of education, etc. Descriptive technique to determine various strategic approaches for expanding HE in Ethiopia. The historical data used enrolments of the students, diversity, equity, and teachers based on that forecast of the enrolment for the future period. ARIMA Algorithm in time series forecasting the variables of student enrolment, participation of male and female equity and teachers based on that forecasting for future.

VI. The Strategic Approach for Promoting HE in Ethiopia:

The strategic approach is significant for expanding the system of H.E in Ethiopia in the form of infrastructure, qualified human resources, and the enrolment rate in the last 15 years. But there is a big gap in enrolment, course material, reference books, laboratory, equipment, and ICT facilities. By 2015-17 the enrolment rate was 10.2% in the middle-income category, but it was estimated to reach 22% by 2025.

Figure:01 OverviewofEthiopianHESystem



Enrolment: The enrolment in HE has been increasing over the last five decades. In the first decades limited growth of 0.6%, and it was more than 8% since the 21st century. About 8, 00,000 undergraduate students were enrolled in regular, evening, summer, and distance learning at Ethiopian university. More than 80% of students enrolled in state universities, but private universities provided only 15% of the intake during 2015-16 (MoE, 2017). Masters male students have been increasing more than 100% growth rate during 2010-2016 female students are five times increased during half-decade in public universities whereas in private universities male students were four times and female students ten times increased during the period. The growth rate of Ph. D scholars was three times male and female students during 2010-2016. Half-decade, there was an abnormal growth rate, and it has influenced the sustainable development of an economy.

Table: 1 Graduate student enrolment in Ethiopian universities (2010-2016)

Year	Male Public	Female Public	Total Public	Male Private	Female Private	Total Private	Ph. D Male	Ph. D Female	Total
2010-11	15996	2490	18486	682	193	875	690	99	789
2011-12	18169	4635	22804	779	228	1007	1530	319	1849
2012-13	20060	5043	25103	2339	679	3018	2809	356	3165
2013-14	20871	5246	26117	2433	725	3158	2922	370	3292
2014-15	23129	7337	30466	4820	1866	6686	2755	380	3135
2015-16	34398	9706	44104	2779	1913	4692	2444	281	2725

Source: Ethiopian Ministry of Education (2017)

The ARIMA model, enrolment in higher education, and the number of graduates will forecast for the next five years. The researcher used the Autoregressive integrated moving average (ARIMA) based on fifteen years of data to estimate the next five years of enrolment in graduates and total enrolment in Higher education in Ethiopia. ARIMA model for analyzing the forecasting time series data it's a powerful technique to forecast the future. This model helps to measure strategic enrolment in graduation and total enrolment, including masters and doctorates for the future based on time series. The researcher used ARIMA rather than ARMA model because it is not stationarity by taking a series of differences. This model has to predict future values based on the past. ARIMA is a standard notation would be ARIMA with p,d, and q where the parameters can define as p: lag observations in the model; d: the no. of times that the raw observation is differenced; q: the size of the moving average window or the order of the moving average. ARIMA models are based on assumptions that the values are uncorrelated and normally distributed.

Table: 02 Higher education Enrolment in Ethiopia

Year	Total Enrolment
2004	98404
2005	104501
2006	173901
2007	203399
2008	214199
2009	254192
2010	265050
2011	290005
2012	316432
2013	412752
2014	396725
2015	368314
2016	379389
2017	392788
2018	388186

SUMMARY OUTPUT

Regression Statistics	
Mult. R	0.936326
R^2	0.876706
Adj. R^2	0.830471
Standard Err	31211.17
Observe	12

ARIMA	One case			
	Coefficients	*Standard Error*	*t Stat*	*P-value*
Intercept	82381.14	39870.98	2.066193	0.072658
X Variable 1	0.720918	0.331778	2.172895	0.06154
X Variable 2	-0.18045	0.380622	-0.47409	0.648108
X Variable 3	0.27724	0.278916	0.993991	0.349337

SUMMARY OUTPUT

Regression Statistics	
Mult. R	0.945362711
R^2	0.893710656
Adj. R^2	0.872452787
Standard Err	29854.08498
Observe	13

ARIMA	Case two			(0,1,0)
	Coefficients	*Standard Error*	*t Stat*	*P-value*
Intercept	80879.77734	28091.51488	2.879153285	0.016409315
X Variable 1	0.705714298	0.285909323	2.468315096	0.033200496
X Variable 2	0.098407765	0.264302076	0.372330654	0.717416031
Alpha				0.05
p-value				0.717416

SUMMARY OUTPUT

Regression Statistics	
Mult. R	0.954432505
R^2	0.910941406
Adj. R^2	0.903519856
Standard Err	30313.1614
Observe	14

ARIMA-Case three				(0,0,1)
	Coefficients	*Standard Error*	*t Stat*	*P-value*
Intercept	56639.10353	23169.68488	2.444534909	0.030900538
X Variable 1	0.869984801	0.078526048	11.07893277	1.171E-07
Alpha				0.05
p-value				0.0000

The predicted values of Enrolment in Ethiopia as per the ARIMA Model

Year	**2019**	**2020**	**2021**	**2022**	**2023**
Enrolment	394355	399722	404391.2	408453.3	411987.2

Table: 02 Higher education Enrolment in Ethiopia

Year	Graduation
2004	7600
2005	11535
2006	24458
2007	29845
2008	39304
2009	55770
2010	50672
2011	58953
2012	64469
2013	69137
2014	79231
2015	65897
2016	73689
2017	89754
2018	62199

SUMMARY OUTPUT

Regression Statistics	
Mult. R	0.921335
R^2	0.848859
Adj. R^2	0.784084
Standard Err	6406.639
Observe	11

ARIMA (1,0,0)

	Coefficients	*Standard Error*	*t Stat*	*P-value*
Intercept	48201.51	8586.514	5.61363	0.000804
X Variable 1	-0.37227	0.26582	-1.40046	0.20411
X Variable 2	-0.18313	0.315137	-0.58112	0.579381
X Variable 3	0.988133	0.268065	3.686175	0.007796

Alpha- 0.05
'p' value-0.007

SUMMARY OUTPUT

Regression Statistics	
Mult. R	0.837517
R^2	0.701435
Adj. R^2	0.635087
Standard Err	9975.066
Observe	12

ARIMA (0,1,0)

	Coefficients	*Standard Error*	*t Stat*	*P-value*
Intercept	27855.41	9618.499	2.896024	0.01771
X Variable 1	-0.00466	0.382886	-0.01218	0.990549
X Variable 2	0.654817	0.354532	1.84699	0.097818

Alpha- 0.05
'p' value-0.0978

SUMMARY OUTPUT

Regression Statistics	
Mult. R	0.83895
R^2	0.703837
Adj. R^2	0.676913
Standard Err	10723.71
Observe	13

ARIMA (0,0,1)

	Coefficients	*Standard Error*	*t Stat*	*P-value*
Intercept	20814.38	7988.336	2.605596	0.024449
X Variable 1	0.691429	0.135232	5.112891	0.000337

Alpha- 0.05
'p' value-0.0003

The predicted values of Enrolment in Ethiopia as per the ARIMA Model

Year	**2019**	**2020**	**2021**	**2022**	**2023**
Enrolment	63820.5667	64941.7649	65716.9937	66253.0094	66623.6261

Equity in Higher Education:

This strategy should concern access, diversity, curriculum, learning outcomes, and choice-based approach, current and future aspirations. The low representation of women in Ethiopia is the reason for less economic background, political interference, and peripheral regions and rural areas. As per the World Economic Forum-2017, Ethiopia ranks 136th in the global gender parity index. 70% of the students represent the top-level income and are from urban areas. Equity is one of the strategic approaches for accelerating HE education and achieving desired goals. For promoting HE programs in Ethiopia, there is a necessity for equity for disadvantaged students, training for instructors, and poorer and disabled students.

In 1994 the Ethiopian government took policies that supported affirmative action for women. Women are admitted to higher education comparatively lower than men. By 2007-08 only 37% of female students were taught by female teachers. The main reason women's enrolment has been decreasing different types of violence such as rape, physical harassment, verbal harassment, and forced sexual initiation. Some public universities conducted orientation programs to empower female students and provided the required training to reduce the attrition rate. This way, the attrition rate decreased from 24% to 3.5% by 2014. Further plans to reduce sexual harassment and misconduct policy issues create awareness among women students and staff.

The HE sector in Ethiopia has been witnessing an expansion rate since 2000. University education has a significant level of quality. But there is a lack of systems that ascertained inequality in Ethiopian universities. Wagaw (1990) indicated that motivation and academic standards are relevant to current professional requirements, and post-academics are determined by various factors irrespective of department or the number of students.

The pace of HE has been increasing over the years. Now, it is accommodating hundreds of thousands of students. It is an exponential growth no. of students enrolled in HE. In 2001-02 the total enrolment in the undergraduate programs of the public was only 34,589. It's rose to 4, 20,387 in public and private institutions in Ethiopia. The enrolment increased for regular, evening, summer, and distance programs for public and private universities from 2008-2013 from 310702 to 553484. The first-year graduate rose by 79073 from 56109, and masters' enrolment increased from 9800 to 28139 for the above period. Regarding Doctorate, enrolment increased from 325 to 3165, and academic staff increased to 23905 from 11028.

Table:03 HE growth position in Ethiopia from 2009-10 to 2013-14

Year	Undergraduate				Postgraduate					
	Enrolment	%Female	Graduated	%Female	Enrolment	% Female	Graduated	% Female	Teachers	% Female
2009-10	420387	27	66999	23.4	14272	11.9	4873	13.9	15707	11.4
2010-11	444553	26.8	75348	27.3	20150	13.8	6250	14.4	17402	9.2
2011-12	494110	28.2	78144	25.3	25660	20.2	6162	14	20668	9.6
2012-13	553848	30	79786	28.7	31304	20.6	6424	14.9	23905	10.6
2013-14	593571	30.3	96980	25.6	33882	19.5	8021	15	24252	11.7
AAGR	7.1	2.3	7.7	1.8	18.9	17.2	10.5	1.5	9.1	0.5

Sources: MOE, 2015

From the analysis, the enrolment of undergraduates increased to 593,571 from 420,387 the accumulated average growth rate (AAGR) was 7.1% from 2009-14. The female percentage has increased from 27% to 30.3% and 2.3% AAGR. During this, the total number of graduates increased to 96,980 from 66,999. It is about 7.7% of AAGR, whereas the female percentage increased to 1.8% only. The postgraduate students are enrolled from 14,272 to 33,882, with an 18.9% AAGR. The female students' participation increased from 11.9% to 19.5% and 17.2% AAGR. During this, the no.of graduates increased from 4,873 to 8,021 with 10.5 AAGR, whereas female participation slightly increased AAGR by 1.5%. Regarding teachers increased from 15,707 to 24,252 with 9.1 AAGR. In total, the female teacher's percentage increased from 11.4% to 11.7% i.e, about 0.5% of AAGR.

Table:04 The number of male and female graduates during 2011-21

Year	Male	Female	Total
2011-12	19561	13671	33232
2012-13	24962	18928	43890
2013-14	27126	18440	45566
2014-15	25868	17173	43041
2015-16	27865	17850	45714
2016-17	29862	18708	48570
2017-18	34933	24995	59928
2018-19	50033	36330	86363
2019-20	37967	26044	64011
2020-21	24442	18950	43392

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.486783
R Square	0.236958
Adjusted R Square	0.127952
Standard Error	5844.944
Observations	9

ARIMA (0,0,1)

	Coefficients	*Standard Error*	*t Stat*	*P-value*
Intercept	12366.92	6775.918	1.825128	0.110733
X Variable 1	0.448195	0.303988	1.474384	0.183876

'p' value 0.18
Alpha value 0.05

The predicted values of Female Graduate in Ethiopia as per the ARIMA Model For 2022-26

Year	2022	2023	2024	2025	2026
Enrolment	20860.21	21716.36	22100.08	22272.06	22349.15

Table:5 Total Enrolment, the ratio of Science and Technology students, no. of institutions and share of HE in Budget

Year	HE enrolment total	Ratio of Science and Technology Students	Higher educational institutions (Both Public and private)	Share of HE in Budget %
2009-10	190043	61:39	70	31.7
2010-11			74	
2011-12			91	
2012-13			99	
2013-14	593049	69:31	124	21.2%

Sources: MOE, 2015

The table indicated that the total enrolment in HE increased from 190,043 to 593,049 during the last half-decade. The ratio of science and technology students was 61:39 in 2009-10, and this proportion increased to 69:31. The number of Institutions increased 70-99 during the above period. The share of the budget in HE was 31.7% in 2009-10 and decreased to 21.2% by the end of 2013-14.

i. Diversity in Higher Education: For promoting HE, need for diversity in one or more of the following reforms.

i) Promoting diverse culture by introducing new courses such as geography and Anthropology will be a helpful focus on unity within diversity.

ii) To expand community associations in educational institutions. It helps to reduce psychological problems and separation from their family.

iii) To encourage co-curricular and extra-curricular activities in the universities. For that allocation of budget for these activities, as a result, the gross enrolment has to be accelerated.
iv) Revise student internship service and provide financial aid as scholarships for meritorious students.

i. Quality in Higher Education:
The quality of HE is considered vital for the sustainable economy and social development of a nation. For the last one and half decades, there was a positive impact on curricula, modular teaching, continuous assessment, peer learning, and operating quality assurance mechanisms in HE. It is not a total positive impact of HE in Ethiopia. In the recent past, the students were cheating and mass copying, at the time of examination, and instructors were also properly evaluating student performance. All the causes have declined the quality of HE in private, continuing, and distance education programs more than the regular and public education programs. To meet the academic requirements, the number of academic staff has increased from 2012-to 16, 47% for four years 20822-30496. The statistics of qualifications of academic staff showed master's degree holder was 53% first-degree qualifications are 35% and Ph. D holders are 11%. The number of Ph. D holders has increased from 356-1,577 from 2003-to 2012.

***Table: 6** The determinant factor of the Higher Education There are ten key factors for the quality of* HE

Sl. No.	Key Elements
1	Instructing and learning
2	Structural policies and procedures
3	Services by the management
4	Instructors attributes
5	Students attributes
6	Leadership qualities
7	Resources
8	Faculty
9	Non-teaching staff
10	Infrastructure Facilities

ii. Teaching and learning: This approach has to influence effective and efficient delivery for getting desired output for sustainable development of an economy. The World Bank Group indicates that teaching and learning are very weak in HE in Ethiopia. Teaching and learning HE in Ethiopia is facing the considerable challenge and bringing qualified faculty from other countries, and their role, pedagogical practices, and learning experiences are poor. Teaching and learning practices in Ethiopia HE are week related to Teachers' Pedagogical practice, interpersonal relationships, Student learning motivation, student participation in active and collaborative learning activities, student-teacher interaction, and attaining learning and effective outcomes. In 2010, all the academic staff received poor payments, and Indian teachers played a predominant role rather than Ethiopian professors. During this, teaching and learning standards were poor, and there were no research activities in public and private universities. Resources were also in shortage no laboratory work, field study, practical work essays, and projects were not there. Hence, policymakers are to take initiatives to improve teaching and learning in HE, such as selecting instructors, upgrading their knowledge and competencies, developing technological platforms, introducing open and online courses, and accelerating learning environments.

iii**. Inclusive assessment**: Fair and effective assessments method helps improve the confidence of the student. Attaining the morale of the student's needs, effective mechanisms, and standard practices to build the country into a knowledge hub. Grading students based on the target practices produce objectivity. Many studies indicated that most underdeveloped countries followed traditional methods than using sophisticated tools. Assessment of the students is not only an individual assessment, and an assessment of the student in soft skills, analytical skills, decision-making skills, interpersonal skills, and group dynamics also to observe.

iv**. Institution's commitment**: Expansion of the HE system in Ethiopia management commitment should reflect in designing policies, procedures, structure, and systems. According to Ethiopia, Education Strategy Centre stated that the total number of public universities increasing up to 44 by the end of 2020. The enrolled students also increased to 800000 from 319217 by 2007-2008. The institution's commitment and quality of education are constrained by a few factors. The faculty and student ratio was from 1:8 in 1995, 1:15 in 2011 to 1:16 in 2014. Insufficient faculty, infrastructure deficit, and limited classrooms, laboratories, and libraries showed institution commitment. These are all very poor in an underdeveloped country, Ethiopia.

Experienced faculty will justify effective delivery, and it is the responsibility of the management to recruit qualified and senior faculty to give quality education to the students' community. Management and leadership are diverse. Managers are always thinking about providing quality delivery, whereas leaders are diversifying as institutional development. Hence, both group their ideology, suggestions, and advise successful implementation of strategies for the benefit of the students. It is significant to take a strategic approach to inequality and diversity within policy and practice, from design to delivery, as part of the ongoing enhancement process.

Table: 7 Higher Education system in Public and Private Institutions, Ethiopia

Description	Public Institution	Private Institution
Regulations	Established by the Ministry of Education	HERQA
Admission	Ministry of Education assigns students	Demand absorbing
Funding	Government funds	No Funding from the Government
Profit	Not for profit-making	Profit and non-profit-Survival depends on student tuition fees

v. Community Development:

HE is one of the tools used to resolve individual issues, and it will be helpful for the development of communities and country improvement. As per the directions of the World Bank Group, there are twin goals of eliminating poverty and promoting shared prosperity. Promoting shared prosperity through HE includes developing solutions, exchanging knowledge, optimum utilization of resources, beneficial outcomes, and community development. There is growing recognition through generating knowledge and translating it into related sustainable community change and the development of an economy. In many cases, community members will elect staff from NGOs, rather than professionally trained community developers. Knowledge plays a vital role in overall development and economic growth. There is a positive relationship between education and the development of an economy. Particularly quality of education directly influences national prosperity as a skilled labor force, greater productivity, and increased capacity to adopt technology and innovate.

Table: 8 Expansion Program of Higher Education 2018-30: The following reforms proposed in the HE implication for national prosperity.

Sl. No.	Expansion Program of Higher Education 2018-30
1	To propose new and satellite campuses in private and public universities.
2	Through online, continuing distance education and inclusive H.E for expanding the education system.
3	Need-based training for teacher
4	Enhancement of female enrolment in private and public universities
5	To develop the research activities
6	Promote research activities for that to start local journals.
7	Need-based funding for research, technology, and community services
8	To promote industry institution interaction for getting real work experience.

VII. Suggestions of the study

It may suggest that to obtain an effective education system through gender equality, more access to rural areas, and curriculum development for increasing enrolments in secondary and HE. It also suggested that the government of Ethiopia will concentrate on increasing research activities in private and public universities and colleges for the inclusive development of an economy. The developed universities are for HE students to strengthen infrastructure facilities, qualified faculty to teach choice-based courses, and facilitate current market employability. In Ethiopia at the international level rank placed 401-500 as per the Times Higher Education Addis Ababa university. As a result, the enrolment ratio has been increasing, community development, and sustainable development of the economy. Concerning the following suggestion is:

- Both private and public universities continuously follow up to assess the level of satisfaction. (parents, employers, alumni, etc,.)
- There is a need for professional responsibility and commitment toward balancing both resources and stakeholder demands.
- Upgrading the quality assurance and improving academic culture will enhance the institutional brand name.

- To enhance the role of HE in the development of an economy and to avoid unnecessary regulation.
- In good faith to work with the government, Ministry of Education, and HERQA to engage the issues related to public and private HE institutions in teaching and learning.
- HERQAs have recommended guidelines for university staff i.e., 30%, 50%, and 20% Ph.Ds., Masters, and first-degree holders that should have to be followed by the university staff.

VIII. Future Research

This study will be helpful to the policymakers to understand the expansion of the Ethiopian education system and for future researchers to extend their research on survey-based research from the respondents. This study also conveys the required message to policymakers to obtain policy decisions for the operational education system and the development of an economy.

IX. Conclusion

For the growth and development of an Ethiopian economy, HE is considered an essential element. It depends on all the participants constructing a knowledge society. In promoting higher education there is a need for educational strategies such as access, equity in gender, social mobility, relevancy, and rationale for investing in HE. As a result, strengthen institution capacity, enhancing research activities, community engagement, and training for the development of a nation. In this study, during 2004-2018 the enrolment in higher education increased three times i.e., 294.48%. It is estimated that by the end of 2023, it accelerates to four times i.e., 4,11,987. It is not a sufficient reason that the limited intake and duration period for completion of the course is also one of the drawbacks of reducing the enrollment in H.E. Regarding the number of graduates during 2004-18 was 8.18 times increased. By 2023, it is estimated that 66,623 graduates in Ethiopia. Participation of females in graduate was 25%-30%, and post-graduation was between 13% and 15% only. The overall participation of female students, graduates, and postgraduates is less than 50%. It says no equity between male and female students in higher education. But, gradually increasing their participation is estimated that by the end of 2026, about 22349 from 20860 in 2022. The participation of female teachers was also low. It was between 9%-12% during 2010-15.

It concludes that the country's strength has given more access to expanding HE. In the last decade, the Ethiopian government Ministry of Education has taken many dynamics for accelerating H.E in the country. The enrolment figures showed an abnormally increase in undergraduate, master's, and Ph. D programs. The government has been giving more priority to budget allocation for strengthening the HE system in Ethiopia. It is about 40% of the education budget. Correspondingly, the number of academic staff is unable to meet the needs of expanding the system so the existing staff increasing their workload. The research function in the universities funded is about 1% allocated for research activities. It is not sufficient at all to meet the research activities.

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