

**Efficacy of Higher Education in Shaping Demographic Dividend in
India with Contemporary Education System.**

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Abstract:

The pace of Indian economic growth is expected to be boosted due to the young demographic dividend which will be sustained at least for 30 coming years. With an average age of 29 years, and account for around 28% of the world's workforce India will be the youngest country in the world having 30% of dependency ratio. That's really an advantage over other emerging nations provided India will be able to capitalize this potentials. Education plays very vital role in converting population in human resources.

Indian education system has a long tradition. But in recent times this education is only depicted in quantity without having satisfactory results from quality of education. The system is having layers as primary, secondary, tertiary, professional, vocational education etc. The most important is to have a strong base of basic education to but the tower of best education at higher level. It is observed that increasing literacy ratio is not making population knowledgeable and wise, as expected for boosting cognitive abilities for better socio economic status for one and all.

Higher education is the key for keeping the ball of development rolled. India needs to have best workforce for maintaining the competitive spirit with global players. This paper tries to find the challenges faced by higher education in India, compare the relative structure and look for the strategy to resolve the existing incongruity. Here the comparison is not only across the time but across the globe to have best higher education who wants to acquire excellence in life.

Introduction

Around 64% of India's population is expected to be in the age bracket of 15–59 years by 2026, with only 13% of the total aged above 60 years. India is poised to become the world's youngest country by 2020, with an average age of 29 years, and account for around 28% of the world's workforce. In comparison, during the same period, the average age is expected to be 37 years in China and the US and 45 years in Western Europe. Hence providing skills to these people to maintain the growth rate, is a big challenge. Around 12 million people are expected to join the

workforce every year over the next decade. In contrast, the country has a total training capacity of around 4.3 million thereby depriving around 64% entrants of the opportunity of formal skill development every year. Moreover, net enrolment in vocational courses in India is estimated at around 5.5 million per year, while that in China is 90 million and in the US 11.3 million. Clearly, the country faces a major challenge of imparting “employable skills” to its growing workforce over the next few decades. (FICCI report 2013). The demographic advantage of India is looked as a strong component of competition for emerging economies. However, India can surpass the challenge of global competition provided this demographic quotient is converted as skillful human resources i.e. human capital.

On the other hand, Indian education system also has grown many folds over years. Though Indian higher education system is one of the largest systems in the world but, several recent studies in India have revealed that the overall state of Indian higher education is gloomy. Hence, this paper tries to investigate the constraint on the supply of qualified manpower due to dismal higher education, restricts economic development of a country. At present, India is looked at as a cheap labour country, but it is expected that gradually the quality and skills of labour also should improve, for which qualitatively best higher education is required.

b. Review of related literature

The relationship between population and technological changes with cross sectional relation with research output shows that there is a positive relation between income and population growth to certain limit further which the relationship becomes inverse. Kremer (1993) have shown this relationship and also have formed the relationship between population growth and research output. The relationship shows the effects of population growth on development.

The constraint faced by fast growing Indian economy is the miss-match in demand for and supply of skill-full resources which is a vital requirement of the growth. Nevertheless the baby boom in the beginning of millennium is expected to give a fast rise for large demographic dividend. The dearth of getting skilled resource is a cause of concern in India. According to National skill report 2017(wheelbox) jobs are increasing in core sector along with telecom and

²India has the potential to have a surplus of around 47 million skilled workers through its skill development program, while countries across the world are expected to witness a shortage of around 56.5 million skilled Workers(skill development and training: eleventh 5 year program, Planning commission pg 91)

IT sector at around 10 to 15 % in former and 15 to 20 % in later. But the availability of skilled resources are not up to the mark for these industries. The report speaks only about engineers and none of the filed has employability above 20 % except ITs Operations (Hardware and Networking) and ITs and BPOs in 2017.

High population growth has not led to any significant increase in the number of scientists, researchers, engineers so as to improve technology and ideas to stimulate growth. It is acknowledged that non realization of demographic dividend caused from the increased population in the working age group has led to comparatively low standard of living in India. As far as education is concerned, it needs to have an increased focus on both primary as well as higher/ secondary schools and colleges equally (Varma 2016).

In recent history, education was to be the sole responsibility of government. It was considered as public good (Musgrave 1956). Later, when demand and cost of education especially higher education started growing it was treated as merit good to some extent. But, as observed by Tilak (2015), the benefits of education were vast and widespread, and in the long run, government investments made in education could be recovered by society through the increased productivity of the labour force and through consequent higher tax receipts by the government, and hence there was no need for any specific measures directly to re- cover the investments made in education from students or from any non-governmental sources.

It was also argued that the reservation policy in higher education also should be reviewed as it throws light on the issue of vertical movement in education from school to higher education and reservation policy helps the students from the category of SC,ST to overcome the deficit in supply of Higher education, but the consistency in completion of school education mainly influence theses students to pursue higher education while doing so the quality of Higher education is getting diluted and hence acquiring higher education also fails to attract employability (without having reservations in jobs) (Basant, Sen 2010)

Today, our higher education is incompetent with world class universities due to lack of motivation and the stakeholders injected from poor quality leaders and undue interference of politician. (Rushiksha 2005). Institutions have to dispose off the grant of 100 cr. to IITs and IISs which could have been used for innovation and improvement in creativity to use technology for economic and social development of our society which has not happened as per expectations. (Rushiksha 2005)

c. Objectives of study

- i. To explore the challenges faced by higher education in India,
- ii. To compare the relative structure of Indian higher education with universities in other countries
- iii. To look for the strategy to resolve the existing incongruity in Indian higher education if any.
- iv. To compare existing higher education system in India not only over the time but also with best ranked higher education system abroad.

d. Conceptual framework

I Growth of higher education in India.

Indian higher education has grown many folds after independence. Lot of increase is notices in number of universities, colleges, courses, student enrolments etc. the proportionate increase in public expenditure on education is also observed.

Following table shows quantitative expansion of Indian higher education

Years	Numbers of institutions		Total enrolments in lakhs			Expenditure on all depts. on education
	College	University	Male	Female	Total	Expenditure on Education s as % of GDP
1950-51	578	27	4	0	4	0.64
1960-61	1819	45	8	2	10	1.48
1970-71	3277	82	26	7	33	2.11
1980-81	6963	110	35	13	48	2.98
2000-01	10152	254	54	32	86	3.84
2005-06	16982	350	88	55	143	4.14
2006-07	19812	371	96	60	156	3.34
2007-08	23099	406	106	66	172	3.48
2008-09	27882	440	112	73	185	3.40
2009-10	25938	436	124	83	207	3.56
2010-11	32974	621	155	120	275	3.95
2011-12	34852	642	162	130	292	4.05
2012-13*	35525	667	166	135	301	3.82
2013-14*	36634	723	175	148	323	4.10
2014-15*	38498	760	185	157	342	4.13

Source: AIHES 2016-17

The table shows that the volume of Indian higher education has grown at rapid rate. The number of universities has increased 28 times and total enrolment of students has increased by

85.5 times over 65 years of planning. This was impossible without active support of public expenditure on education. In size, Indian higher education is third largest in the world. But this was insufficient to grab a position in qualitative education when compared with global scene. Unfortunately none of Indian educational Institutions are included in the list of top 100 educational institutions of world. (QS ranking as well as THE ranking). Above table also shows the increase in expenditure on education as percentage of GDP has been increasing. The education expenditure is divided as planned and non-planned expenditure. And it is observed that unplanned expenditure on education is increases at much fast pace compared to planned public expenditure on education³.

Countries with the **best education systems** are usually countries with the highest living standards and rights. Education is one of those things that is considered very important throughout the world, but some countries are better at it than others. Development of a country is positively correlated with the best education system. Education at all levels have influence on human development. Different vertical and horizontal spread of education in different countries stimulates economic development of the countries. This is indicated by different living standards and different pattern in educational structures across the countries.

Indian higher education needs to be robust in quality along with volume, which is the need for the day. Unfortunately, none of the Indian universities could acquire position in the best 100 universities.

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Year	2006-07(Actual)		2007-08(RE)		2008-09-13(BE)		2010-11(Actual)		2011-12(RE)		2012-13(BE)	
	Centre	State	Centre	State	Centre	State	Centre	State	Centre	State	Centre	State
	20380.	10334.4	254	127	344	168	435	265	517	380	614	481
plan	48	3	35	15	00	32	42	32	2	06	07	98
	3492.9	76132.4	413	882	430	988	836	155	958	126	201	
Non plan	9	6	6	93	7	16	6	.4	2	444	84	.2
	23873.	86466.8	295	100	387	115	519	181	613	221	740	249
Total	47	9	88.	969	09.	700	05.	604	49.	503	39.	810
Share of Plan												
Exp. to total												
exp. On			86.	12.	88.	14.	83.	14.	84.	17.	82.	19.
education (%)	85.37	11.95	02	59	87	57	88	63	38	18	94	26

Share of Plan

Exp. to total

exp. On 86. 12. 88. 14. 83. 14. 84. 17. 82. 19.

education (%) 85.37 11.95 02 59 87 57 88 63 38 18 94 26

Following table gives comparison of education ranked on the basis of various criteria of quality in selected countries

Countries	Number of edu. Institution in top 500 by QS ranking ⁴ for the year 2016	webonomics	Number of edu. Institution in top 400 by THE ranking ⁵ for the year 2016	Edu. expenditure % of GDP(figures in bracket shows % of primary and secondary education) for the year 2016
USA	125	167	102	3.4(8.2)
UK	48	42	46	3.1(9)
Australia	23	22	21	3.8(10)
China	18	7	11	NA
Russia	10	1	-	3.86*
Brazil	7	7	-	3.3(12.8)
India	6	-	4	3.84*
Source compiled –QS, webometrics and THE sites				
*Data of the year 2013				

The above table shows the ranking of aggregate education in the selected countries shows that very few universities from above mentioned (fast growing) countries are included in the table shows that though countries are having almost similar public expenditure on tertiary education as percentage of GDP in the range of 3-4%, but the existence of world class education is lacking in so called fastest growing countries. It was also observed that the countries having many top class universities have incurred comparatively high public expenditure on primary to tertiary education. E.g. Norway incurs 7.37 % of expenditure on higher education as percentage of

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Criteria of QS ranking –

1. Academic Reputation 40%
2. Employer Reputation 10%
3. Faculty/Student Ratio 20%
4. Citations per faculty 20%
5. International Faculty Ratio 5%
6. International Student Ratio 5%

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- times higher education considers
1. Teaching (the learning environment): 30% - includes -Reputation survey: 15%, Staff-to-student ratio: 4.5%, Doctorate-to-bachelor's ratio: 2.25%, Doctorates-awarded- to-academic-staff ratio: 6%, Institutional income: 2.25%
 2. Research (volume, income and reputation): 30% includes -Reputation survey: 18%, Research income: 6%, Research productivity: 6%
 3. Citations (research influence): 30% for spreading ideas
 4. International outlook (staff, students, research): 7.5% -includes -International-to-domestic-student ratio: 2.5%, International-to-domestic-staff ratio: 2.5%, International collaboration: 2.5%

GDP in the year 2015 has shown growth from 6.58% in 2009. Countries like US, Canada, Finland are spending overage of 10 % public education expenditure to their GDP, making the base strong.

I Issues faced by Indian higher education:

Development of technology and emerging of new areas in modern jobs have increased the urge for specialization in respective fields provided by higher education. On the other hand the supply side of higher education has also undergone vital changes in quantity, quality and variety. The number of universities, colleges, student's enrollment and number of courses offered have increased enormously. Consequently, education industry in India has been growing at a fast phase.

Many efforts have been taken to improve the quality of higher education in India. But the system is constrained due to ever increase in demand and limitations of funds to fulfil this demand.

The education system can be better off with effective connectivity to the practical world leading to limited employability of graduates. This indicates that there is a need for bringing broad based curriculum. It is also observed that the poor quality of early education keeps the base weak for higher education restricting the quality of higher education. The higher education system should be able form a linkages between research and industry so that there is a balance between the think tank and vocational courses along with soft skill training. The skills required 20 years back are not relevant now, but very new sets of jobs are evolving. There is a risk of automation faced. Hence now not only skilling but even reskilling is required. The specialisation in a particular area complemented by other skills may not only boost the choice of employment and quality but also sustainability of the job. In cognitive theory also it is supported for promoting satisfaction from work (avoid repetition) which makes employee more competent.

One of the biggest limitation of present education system in India, is the disparities in access and provision of higher education (and earlier education) for females, minority groups and different regions. Hence to overcome this the possibility of Exploring financing models, including more public-private partnerships and alumni funding (although the documents are somewhat vague about the perennially vexed issue of private provision in India and its role), as well as support to help all students get greater access to loans.

There is a need to accelerate deployment of new technology for pedagogy and online delivery of courses. Internalisations of education is also beneficial which can be capitalised by having collaboration with world class universities and by promoting idea of students/teachers exchange program.

iii. Stream wise Employability in India in Percent (Wheebox)

India skill report (2016) has submitted the facts that aggregate employability of higher education in India is not more than 38.38% in 2017 irrespective of the selection of stream. Though, stream like engineering is more lucrative in providing job opportunities, it is also constrained to give jobs for 50 % of engineer. However, other streams which are less expensive are also less efficient in providing jobs. The national skill report shows that following skills are required in absorbing graduates.

Following table shows the employability of different streams in India

Courses	2014	2015	2016
Engineering	54.00	52.5	50.69
MBA	43.99	44.56	42.28
BA	29.82	27.11	35.66
B.Com	29.45	20.58	37.98
BSc	38.41	35.24	31.76
ITI	44.00	40.9	42.22
Polytechnic	10.14	15.89	25.77
B. Pharm.	56.00	40.62	42.30
Average	31.54	34.67	38.38
Source : India skill report (ISR) 2017			

As mentioned above, an average employability of higher education is not more than 38.38% in 2017 irrespective of the selection of stream. Though, stream like engineering is more lucrative in providing job opportunities, it is also constrained to give jobs for 50 % of engineer. However, other streams which are less expensive are also less efficient in providing jobs.

The national skill report shows that following skills are required in absorbing graduates

Sr. no.	Type of skill	Required for getting employed
1	Learning agility	13%
2	result orientation	9%
3	adaptability	6%
4	Domain expertise	19%
5	Integrity and values	15
6	Interpersonal skill	4%
7	Numerical and logical ability	10%
8	Cultural fitment	10%
9	Others	14%

Source: National skill report 2016

Unfortunately the above mentioned skills are not included directly in Indian higher education system. Hence there exists an educated unemployment and underemployment leading to underutilisation of capacity.

e. Conclusion

Indian higher education system has been changing and will continue to change in future as it is a need of the day, but it is subject to many constraints. Being a developing country the funds are limited, where the decision of mass or class education creates dilemma. As primary education is a collective good purely, higher education has not remained collective good but is transferred to merit good. Privatisation, to large extent leads to pure commercialisation and hence may results in dilution of the quality.

It is observed that the need of the day in India is a good reach of qualitative education, easily to all those who are in need of it. But unfortunately with limitation on availability of monetary and physical resources, the dilemma is, class or mass education. Spread of technology like virtual classes, online courses, mobile educational apps can serve a good solutions for affordable education. There is still long way to go on this path. Conservative beliefs, gender issues and social restriction add to the slow spread of higher education. This limits the quality of Indian higher education and thus limiting good demographic dividend for sustainable economic development in India.

f. Suggestions for improvement

- Improvement in base of education like primary(as in south Korea where 8% of GDP is spent on primary education) and secondary education
- Incorporate skill enhancing subjects in curriculum which will further enhance the efficiency in job market.
- Increase in the public expenditure as percentage of GDP to make education as a collective good
- Distribution of public expenditure proportionate to the development expenditure should take care of share of planned expenditure to unplanned expenditure
- Improvement in implementation of the courses by bridging the practical life with theory taught in higher education.
- Technology incorporated in education at all levels right from primary level so that students are conversant with it and do not carry any fear of technology.
- Collect information from corporate requirements so that the curriculum will be developed as per the corporate requirements.
- Education system should move instruction further away from the rote memorization and repetitive tasks on which it had originally focused to deeper conceptual understanding and problem-based learning.(japan, Hongkong, Singapore)
- Teach less, learn more' is the slogan used for enhancing learning abilities. This reduces the tendency of rote education.(Singapore education system)
- Ranking in PISA which can be used to have international comparison of how competitive is Indian higher education. (program for international student assessment in reading, maths and science -toper is south korea with japan , US and finland in first five).
- The system should be flexible enough to permit students to make changes in their selection of course at any level. This is possible only when lot of choice is available in subject /elective selection and should develop individual subject wise depth in framing the syllabus.(prevails in US)(Gundala 2016)
- Quality control by experienced members of high committee monitoring higher education in India. The incentive based appropriate remuneration can attract best people to the career in education.

g. References

- AISHE (2016) *Report of Higher education survey*. <http://aishe.nic.in/aishe/reports>
- Altbach Philip G (2009) The Giants Awake: Higher Education Systems in China and India: *Economic and Political Weekly*, Vol. 44, No. 23 (Jun. 6 - 12, 2009), pp. 39-51 Stable URL: <http://www.jstor.org/stable/40279085> Accessed: 15-07-2017 11:21 UTC
- Bagchi Amiya Kumar (2010) Towards Democratization of Education in India, *Social Scientist*, Vol. 38, No. 9/12 (September-December 2010), pp. 5-16, Stable URL: <http://www.jstor.org/stable/27896287> Accessed: 15-07-2017 11:23 UTC
- Basant R and SEN Gitanjali (2010) Who Participates in Higher Education in India? Rethinking the Role of Affirmative Action. *Economic and Political Weekly*, Vol. 45, No. 39 (September 25-October 1, 2010), pp. 62-70
- Bibek Debroy (2008) Adjusting to a Knowledge Economy, *India International Centre Quarterly*, Vol. 34, No. 3/4, Beyond Degrees (Winter 2007 Spring 2008), pp. 30-37, URL: <http://www.jstor.org/stable/23006325> Accessed: 01-08-2017 09:13 UTC
- Swail Watson Scott (2002) Higher Education and the New Demographics: Questions for Policy, *Change*, Vol. 34, No. 4 (Jul.-Aug., 2002), pp. 14-23, URL: <http://www.jstor.org/stable/40177907> Accessed: 01-08-2017 09:11 UTC
- Government of India (2012) **Educational Statistics at a Glance** Ministry Of Human Resource Development Bureau Of Planning, Monitoring & Statistics New Delhi
- Varma arushi (2016) Demographic Dividend in India: A Conundrum, *IOSR Journal Of Humanities And Social Science* (IOSR-JHSS) Volume 21, Issue 6, Ver. 4 (June. 2016) PP 55-64 e-ISSN: 2279-0837
- Kremer M (1993) Population growth and technological change: One million BC to 1990, *The Quarterly journal of economics*, Vol 108, No. 3 pp 687-716
- FICCI report (2013) Reaping India's Promised Demographic Dividend: Industry in driving seats. At Global Skill Summit
- Government of India (2016) National Policy on Education 2016, *Report of the Committee for Evolution of the New Education Policy*, Ministry of Human Resource Development

Rishikesha T. Krishnan(2005) Building World Class Universities, *Economic and Political Weekly*, Vol. 40, No. 17 (Apr. 23-29, 2005), pp. 1681-1683

Musgrave R.A. (1959) Theory of Public Finance, McGraw Hill, New York.

Bhushan S.(2004) Trade in Education Services under GATS: Implications for Higher Education in India, *Economic and Political Weekly*, Vol. 39, No. 23 (Jun. 5-11, 2004), pp. 2395-2402

TilakJandhyala B.G (2015) Higher Education in South Asia: Crisis and Challenges Social Scientist, Vol. 43, No. 1/2 (January–February 2015), pp. 43-59.

UNESCO (2016) Education for people and Planet, creating sustainable future for all ; *Global Education Monitoring Report*

Wheebox(2017) *India skill report 2017*, Source :
https://wheebox.com/static/wheebox_pdf/india-skills-report-2017.pdf

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