

INDIA'S TRANSFORMATION TOWARDS A KNOWLEDGE BASED ECONOMY – IS IT FEASIBLE IN PRESENT SCENARIO?

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Abstract: In 1980's and in post 1991 Indian economy has been experiencing quite a phenomenal economic growth rate. The most significant feature of this growth phenomenon is that it has been service sector led growth and there has been marked changes in employment pattern. More skillful, technically sound, computer literate, vocationally trained human resources are required to achieve faster service led economic growth. India has emerged as one of the most important job markets as many of world's large companies try to reduce costs in the wake of global recession. Thus India has the opportunity to reduce unemployment especially for educated youth. The higher education system in India has undergone massive expansion in the post independence period with a national resolution to establish several universities, technical institutes, research institutions, professional and non-professional colleges across the country. There was also a simultaneous need of expansion of higher education for common man. The higher education attainment is also rising with the increasing enrolment in school. There were various National Educational Policy to increase higher education attainment level. The present study attempts to discuss issues regarding rise in higher educational attainment and change in employment pattern in the post reform era and also tries to address the important initiatives taken by central government to synchronize quality education with changing job requirement to make India a knowledge based economy.

Keywords: Economic growth, Employment pattern, Skillful labour force, Knowledge based economy.

INTRODUCTION

The World Bank in its draft paper (Skill Development In India - The Vocational Education And Training System 2006) apprised that India has great potential to become a knowledge - based economy. A knowledge economy requires to develop workers - knowledge workers and knowledge technologists - who are flexible and analytical and who can be the driving force for innovation and growth. To achieve this India needs rapid increases in educational attainment, as well as sustained economic growth.

India has witnessed rapid economic growth during the last three decades. The growth rate of gross domestic product (GDP) increased at a moderate pace in 1980's

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an after the implementation of domestic and external sector reforms in early 1990's it has been rapidly rising. Since the early 1990's India's GDP has been growing at a rate close to 7 per cent. At the same time India has also witnessing a fall in population growth rate, it was below 2 percent. Rising GDP growth rate and falling population growth rate has resulted in increasing per capita income and decreasing absolute poverty.

Education is always greatly valued in India. In the 21st century, the development of higher education appears to be the topmost national priorities across nations. There were various National Educational Policy to increase higher education attainment level. Allotment of funds in different Five-Year Plans for educational expenditure has risen, especially in 11th Plan which allotted 10 percent of total plan outlay on education (it is highest allotment in education since independence). But Indian higher education system has certain limitations such as inadequate physical infrastructure, lack of quality and excellence, & dearth of quality faculty members etc. All these create hindrance to skill formation among youths.

Employment generation has been a priority since independence. But India has experienced a slow growth in employment since independence. Even in mid 1980's and after initiation of structural reforms employment growth rate has not been satisfactory. It was expected that the New Economic Policy would generate a substantial employment by initiating more labour (skilled) intensive production activities with high GDP growth rate but improvements in employment generation was not achieved it had been expected despite higher GDP growth rate. Thus this higher GDP growth has been considered as jobless growth rate. This higher GDP growth has been a result of service sector led growth which has required skillful labour, But the poor skill base of general labour force has failed to grab the opportunity of getting jobs. This is also a constraint that India is facing towards her transformation to become a knowledge based economy.

The subsequent sections focus on the growth and nature and pattern of employment in India in the reform era (mainly), rising higher educational attainment rate and high level of unemployment of educated youth and lastly considering some issues required for making India a knowledge based economy.

INDIA'S GDP GROWTH IN THE LAST THREE DECADES

India has experienced an impressive GDP growth rate of over 6 per cent since the mid 1980's and the growth rate has been particularly fast since the initiation of structural reform in early 1990's. The change in India's development strategy from import substitution to export promotion in 1980's and the structural reform have quite remarkably contributed in Indian national income growth which has mainly been a service led growth driven by service sector or industries related to service sector. The important component of the service sector in the Information and

Communication Technology (ICT) sector. This ICT sector not only has a significant growth role but also has contributed quite remarkably in India's export. The share of ICT in India's GDP was nearly 8% in 2008-09 and its share in total export in 2008-09 was 19.12%. The other compounds of service sector such as trade, hotels, restaurants, transport, finance, insurance have also significantly grown. India has emerged as one of the most important job markets as many of world's large companies try to reduce costs in the wake of global recession. Thus India has the opportunity to reduce unemployment especially for educated youth. These IT, ITES, aviation, retail, banking and finance, healthcare, insurance require youth who are technically sound having good communication and analytical skill.

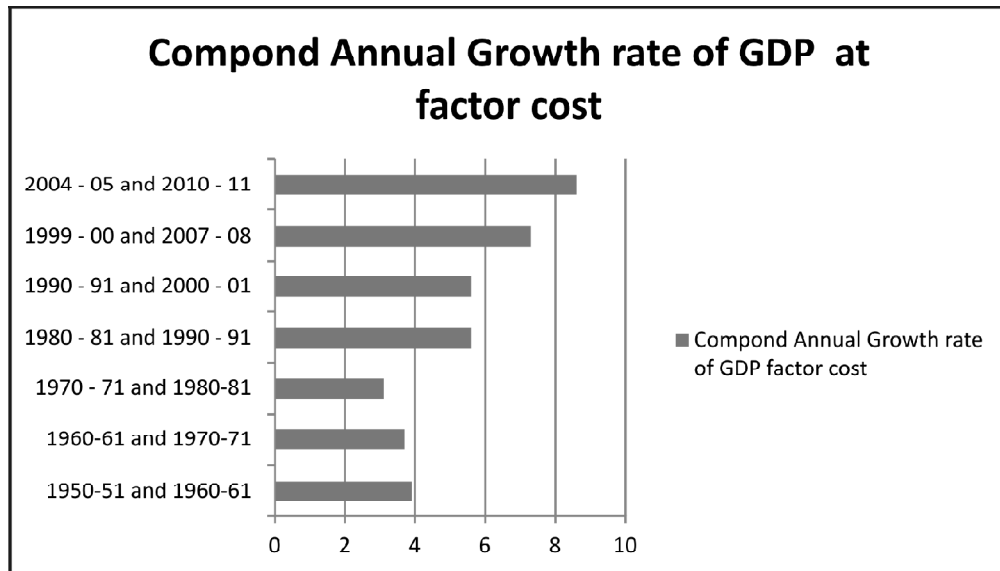


Figure 1: Source: Computed from the data National Accounts Statistics of India, 1950 - 51 to 2010 -11 & Economic Advisory Council Estimates for 2007 - 08 at 1999 - 2000 prices. (1)

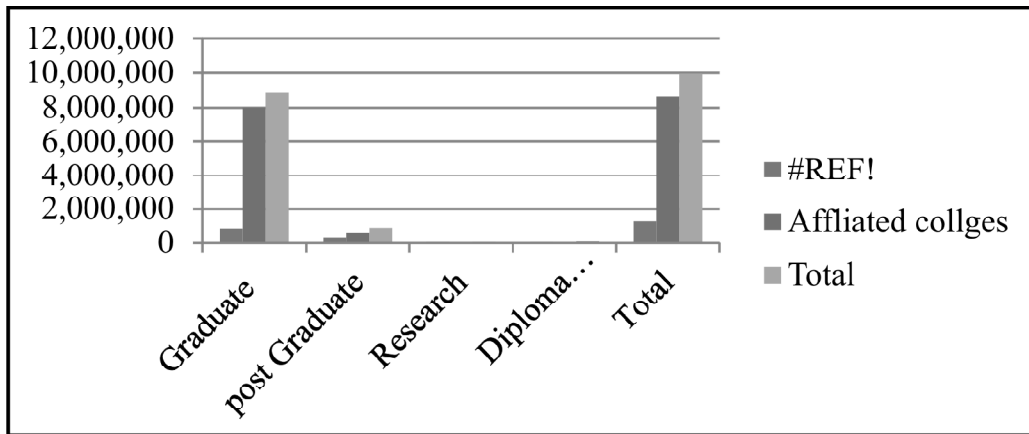
The global financial crisis in 2008-09 has negatively impacted the Indian GDP growth. But this fall in GDP growth rate was worldwide as all emerging economies like Brazil, China, Russia were facing this problem. Indian GDP growth story has shown its resilience to this financial crisis and Indian economy has grown on an average 8.5 percent during 2009 -11 and during 2011-13 the GDP growth rate was on an average 5.5 percent, but that was largely due to lower saving- investment rate and higher fiscal deficit. Economic Survey (2012-13) has shown that per capita income in India during the period 2001-02 to 2011-12 has been growing at a rate 6.3 percent per annum. This increase in per capita income has also contributed quite remarkably to reduce the absolute poverty though there are some other fiscal policies which have also helped to decrease absolute poverty.

INCREASE IN HIGHER EDUCATION ATTAINMENT

India has a long tradition in learning. In ancient India the system of 'Gurukul' was the pivot of higher education. In pre - independence period, British also look initiatives to spread education for masses. The modern system of education in India actually started with the establishment of three universities, Calcutta Bombay and Madras in 1857. Later in 1887 Allahabad and Punjab (in Lahore) were set up. Post - independence, one of the various important goals, taken by policy makers to build the nation was to spread education for masses. Needs for expanding elementary education and diversifying secondary education were given special attention. Various necessary steps were also taken to extend technical and vocational educational and to promote and improve higher education. In 1948 The University Education Commission was set up under the chairmanship of Dr. S. Radhakrishnan. It also gave a direction to the developments of higher education in India. Different articles of 'Different Constitution' emphasize the value of education and place it as fundamental right of all Indian citizens.

The 'University Grant Commission' was established in 1954 and it has taken various steps to promote and improve higher education in India till date. The growth of basic as well as higher education have been quite significant. There was just a little over one person per thousand enrolled in higher educational institution in 1951. Between 1950 and 2008, there are 504 universities, 25,951 colleges including almost 2565 women colleges, various university level institutions which include 243 stated universities, 53 state private universities, 130 deemed universities, 33 institutions of national importance. Despite such expanse of higher education was less than ten persons per thousand population, in 2010. This figure was quite low when we consider the enrolment in higher education in countries like, China, Thailand, Malaysia and some other lower middle income countries. Inadequate capacity has been another problem of higher education in India. The demand for higher level of education (beyond 12th standard) mainly comes from smaller section of urban and semi urban students. According to UGC Annual Report 2012-13 the number of universities and university like institutions is 628 (44 central universities, 300 state universities, 151 state private universities, 129 institutions deemed to be university, 4 institutions established through state legislation) and 37204 colleges. According to UGC Annual Report 2012-13 students enrolled in graduate level (considering both college and university enrolment), post graduate level , research level and respectively different diploma and certificate courses had been 85.90%, 12.15%, 0.84%, 1.11% of the total enrolment.

The National Policy on Education, 1986 had recommended to spend 6% of G.N.P on education. Through in India, the expenditure on education has risen over different plan periods, the percentage of G.D.P spent on education never reach to 6%.



University department / University college

Source : University Grants Commission, Annual Report 2003 – 2004.

Figure 2: Shows stage-wise enrolment of students in India in the year 2003-04

**Table 1
Presents the percentage of total plan outlay that has been spent on education**

| Different Five Year Plan Period | Education outlay as a percentage of the total plan outlay |
|---------------------------------|---|
| 1st Five Year Plan 1951-56 | 7.8 |
| 2nd Five Year Plan 1956-61 | 5.9 |
| 3rd Five Year Plan 1961-66 | 6.9 |
| Annual Plans 1966-69 | 4.8 |
| 4th Five Year Plan 1969-74 | 4.9 |
| 5th Five Year Plan 1974-79 | 4.3 |
| 6th Five Year Plan 1980-85 | 2.8 |
| 7th Five Year Plan 1985-90 | 3.3 |
| 8th Five Year Plan 1992-97 | 4.5 |
| 9th Five Year Plan 1997-2002 | 6.12 |
| 10th Five Year Plan 2002-07 | 6.29 |
| 11th Five Year Plan 2007-12 | 9.53 |

Source: Five Year Plan Documents

In Eleventh Five Year Plan, out of the total Plan outlay for education, around 50 percent for elementary education and literacy, 20 percent for Secondary education and 30 percent for the development of higher education including technical education was allocated. On the other hand in First Five Year Plan out of total plan expenditure for education, there was 56 percent for the elementary level, 13 for the secondary education and 31 percent for the development of higher education. The share of higher education in total plan outlay has been very small throughout the different plans. Higher education always got less than 1% of total plan outlay

in almost all 10 five year plans. Only in the 11th plan it has got allotment of 2.86% of total plan outlay.

VOCATIONAL TRAINING AND SKILL DEVELOPMENT

Skill Development has been a priority to policy makers for a long period. Vocationalisation of the higher secondary education was initiated in the Sixth Plan. During the Ninth Plan Vocationalisation of the education at the 10+2 level was introduced to make the future labour force vocationally competent and to divert at least 25 percent of students to self employment and wage employment (India Labour And Employment Report 2014). Vocational Training And Skill Development has gained more importance during Eleventh and Twelfth Plan periods. The Eleventh and Twelfth Plans have considered various measures to expand the vocational education and Training infrastructure, modernization of Industrial Training Institutes (ITIs), and initiation of Public Private Partnership (PPP) models to impart relevant skill to labourers. Apart from raising the capacity for vocational education and training in the formal sector the Government has also promoted training programmes for informal sectors to create skilled labourers in informal sector. Different National Policy for skill development have also been introduced. The Prime Minister's National Council On Skill Development has been created to provide and execute strategies required to impart skill to existing future labour force. National Skill Development Policy has been introduced in 2009 for developing skill required for different sectors. National Skill Development Corporation (NSDC) has been created to cater the skill requirement of different industries and to arrange training according industry requirement. In the Twelfth Plan National Skill Development Authority has been set up to co-ordinate different skill development programmes and National Skill Development Mission (NSDM) has been launched to raise the percentage of skilled labourer by giving labour force vocational training.

EMPLOYMENT PATTERN IN THE RISING GDP AND HIGHER EDUCATION ENROLMENT ERA

Today, India is considered as an important emerging economy of the world. In spite of this the employment scenario in India has not been so bright. Though employment has been rising continuously in absolute term but not at a percentage term. The increase in population has also resulted a increase labour force . During the period 1994 to 2012 employment in India has at a rate 1.5 percent and unemployment rate has also shown a rising trend. Between 2004-05 to 2011-12 India's GDP has grown at a rate 8.5 percent but at the same time employment generation has occurred at a merely 0.5 percent.

Economic development in India especially in the post reform era has revealed that share of agriculture in GDP is falling and that of service sector is growing.

The share of employment in agriculture has also been decreasing but the two rates of declining are quite asymmetric. The share of agriculture in GDP has fallen to 14 percent in 2011-12 from 59 percent in 1950, The share of employment in agriculture has reduced to 49 percent from 73 percent in 1950. The share of industry in GDP has risen from 16 percent in 1950 to 27 percent in 2011-12. Industry has absorbed 24 percent of workforce in 2011-12 and it was 12 percent of workforce in 1950. The share of service sector in GDP has quite remarkably risen from 25 percent in 1950 to 58 percent in 2011-12 but its contribution to employment has not been rising at an equal pace. Its share in employment was 21 percent in 1950, and 27 percent in 2011-12. The Economic development experiences across the world reveals that with Economic development the share of agriculture in GDP falls and that of industrial sector and service sector rise and ultimately the share of service sector supersede the industrial sector. But the economic development in India has shown a peculiar picture. In India the structural changes moves toward service sector from agriculture without much more contribution from the intermediate industrial sector. As industrial sector can be able to generate more employment (skilled and unskilled) than service sector thus lack of a strong intermediate industrial phase the employment growth has been quite low in India.

Table 2
The share of GDP by industry of origin (1999 - 00)

| | (Percentage Distribution) | | |
|---------------------------------|---------------------------|-----------|-----------|
| | 1950- 51 | 1980 - 81 | 2011 - 12 |
| Agriculture and Allied Services | 55.4 | 38.0 | 14.0 |
| Industry | 15.0 | 24.0 | 27.1 |
| Services | 29.6 | 38.0 | 58.9 |
| Total | 100 | 100 | 100 |

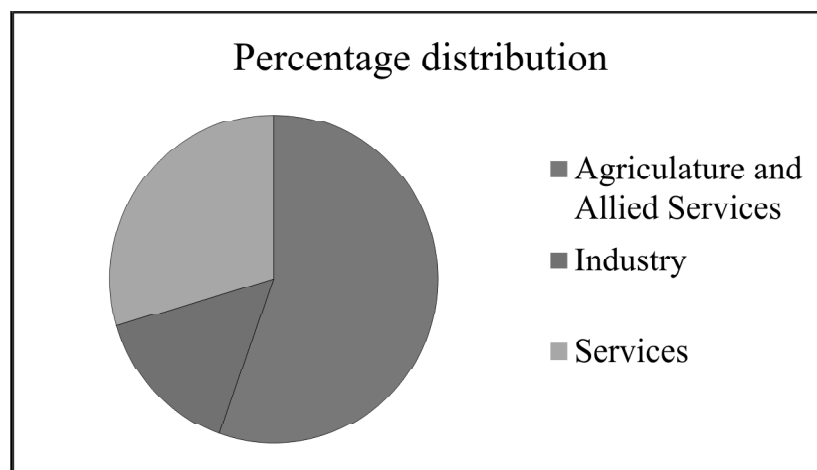


Figure 2: Source: Handbook of Statistics of the Indian Economy (2011 - 12).(2)

Table-2 presents that with the development process the contribution of agriculture sector in GDP is declining and that of service sector is growing. Figure-2 represents Table 1 graphically.

The benefits of higher economic growth in India could not fully converted to similar growth in employment due to lower skill base of labour force. Lower education levels and skill attainments of labour force has been a crucial constraint to access rising employment opportunities in this post reform era. In comparison with other emerging economies in respect of education and skill attainment of labour force, the performance of Indian economy has also been quite unsatisfactory. Indian Labour And Employment Report 2014 shows that less than 30 percent on Indian labour force are having secondary or above levels of education . Tough enrolments in academic institution are increasing significantly in present India the percentage of technically skilled people among educated youth is quite low. One of the reason behind this problem is that quite a large numbers of student, enrolled in higher education, have been choosing such discipline (they may not have other options too) which is unable to give them minimum technical knowledge. According to NSS on employment and unemployment (1993-94) only 10.1% of male workers and 6.3% of female workers possessed specific marketable skills. In India only 5% of the labour force in the age group of 20-24 had been vocationally trained. (Garima Gupta, 2013). The quality of education in India is not at all satisfactory despite the continuous rising trend in higher education enrolment. Lack of requisite skill is one of the main reasons that a larger section of young educated persons remain unemployed. Another important factor which acts as a constraint of skill formation is that the compulsory eighth standard of schooling is not sufficient to impart skill required for industry and service sectors. Though the Eleventh Plan tried to address the problem of quality of education by raising the number of teachers and providing resources required for maintaining proper teaching learning process but different studies and surveys reveal that the quality of education still remains poor. Small scale industries (SSIs) have always been a source of employment generation for skilled and unskilled people in India. From 1997 onwards contribution of SSIs to total production is falling and it was 5.83% in 2005-06. On the other hand the contribution of SSIs in total export has been quite substantial, but products of this sectors such as engineering goods, electronic goods and components , chemical and allied products ,processed goods ,leather goods, and readymade garments dominate the export of the SSI sector. All of these also product need skilled, technically expert, vocationally trained manpower but dearth of suitable manpower also hampers the production of this sector Thus a situation arises where on the one side people having graduation or higher level degree without any sound technical and some extent analytical knowledge remain unemployed and on the another side employers also face the problem of shortage of technically skilled manpower. This situation leads to a real cause of concern in present India. Post 1991 public sectors enterprises have reduced

their existing employment level and new recruitment of employees has also been remarkably low. This government sector was one of the main employer of educated persons having degree in nontechnical discipline. But in present competitive scenario they recruit a small number of technically sound, skilled person, having educated but unskilled youths unemployed. UGC in its Annual Report 2012-13 also suggested that there has been a need for policy change which must focus on education with vocational and technical knowledge because, during the academic year 2012-13 out of all enrolled students (215.07 lacs) 37,94% was in Arts faculty, followed by Science faculty 18.56% and Commerce and Management 17.50% and remaining 26% was enrolled in professional faculties. Thus the ratio of professional to non-professional enrolment has been 1:3.

Table 3
Unemployment Rates among Educated Youth (%)

| <i>Year</i> | <i>Secondary education and above</i> | <i>All types of Technical Education</i> |
|-------------|--------------------------------------|---|
| 1983 | 20.7 | 24.4 |
| 1987 - 88 | 16.2 | 22.1 |
| 1993 - 94 | 18.5 | 27.3 |
| 1999 - 2000 | 14.8 | 23.7 |
| 2004 - 05 | 17.5 | 22.5 |
| 2011-12 | 25.5 | 22.4 |

Source: Different NSS surveys (3)

CONCLUSION

About 12 million persons are expected to join the workforce every year. This huge workforce needs to be adequately skilled. According to Eleventh Five Year Plan the following sectors are expected to drive the growth of the economy as well as play a significant role in employment. 1. Auto and Auto Components 2. Building and Construction Materials, 3. Building and Construction, 4. Real Estate Services , 5. Electronics and IT Hardware , 6. Education and Skill Development Services, 7. Food Processing, 8. Gems and Jewellery, 9. Healthcare, 10. Textiles, 11. Leather and Leather Goods, 12. Organised Retail, 13. Tourism and Hospitality , 14. Transportation and Logistics, 15. Media , 16. BFSI, 17. Chemicals and Pharmaceuticals, 18. Furniture and Furnishings, 19. IT, 20. ITES.

India is expected to create a skilled workforce of 500 million by 2022. The manufacturing and services sector would create 250 million jobs.

The demand for higher education has moved upward due to following factors

- 1) number of students completing secondary education are increasing.
- 2) Indian middle class is growing.
- 3) agriculture based economic system is declining.

- 4) higher education is considered as path of earning higher incomes.
- 5) changes in economic structure and rise in service-led economic growth also encourage higher education.

But quality of higher education has been unsatisfactory and failed to supply suitable labour force what is required in changing economic scenario. Employment generation in service sector and industry related to service sector and falling government jobs make it necessary that labour force must have quality higher education as well as technical training. The current skill capacity of the country is about four million. Hence, skilling and technical education capacity needs to be enhanced to about 15 million. The ideal way to enable India to become a knowledge based economy requires a synergy between the government sector and the private sector to strengthen the skill development process and to wipe off the skill gap and to boost the economic growth.

Notes

1. Computation of the data has also been made with the help of EPW Research Foundation (2002) and CSO Press Note 30th May 2011.
2. Calculation has also been made from the data provided by Research Bank of India and CSO Press Note 2011 - 12 and Central Statistical Organisation (CSO).
3. Figure relate to usual status. Basic Technical Education comprises of additional Diplomas or certificates in Agriculture, Engineering / Technology, Medicine, Crafts and other subjects.

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