# ECONOMIC GROWTH AND HIGHER EDUCATION IN INDIA

**S.M. Zuber**
Department of Zoology
Government Degree College (Boys) Anantnag, Kashmir - 192129
Email: zubairhuma@gmail.com

**Abstract**: This paper deals with the effect of the education on economic growth in India. India is a growing economy only second to China and has been growing at around 9% from 2002-07 when it stumbled against a road block of financial crisis in 2008. After this period its growth was below potential of 9%. In the same period the Indian economy witnessed a demographic dividend (increase in the share of labour force). This paper deals with the effect of education on growing labour force and its subsequent impact on economy. Moreover the present studies premeditated on the impact of education on agriculture, industries and service sectors as well as migration. The paper concludes with the view that higher education is boosting the economy of India by alleviating poverty, reducing deprivation and above all ensuring inclusive growth. **(INTERNATIONAL JOURNAL OF HIGHER EDUCATION AND RESEARCH, 5(2), 73-97, 2015)**

**Key words:** Economic Growth, Human Capital, Creative economy, Knowledge Commission & Rconomy, Productivity

**Introduction**: Education is the most important lever for social, economic and political transformation. In the present century, only well educated populace equipped with the relevant knowledge, attitude and skills can cohesively contribute to the socio-economic fabric of a nation. Education is the most potent tool for socioeconomic mobility and a key instrument for building an equitable and just society. Investing in education and skills has

long been considered a key driver for economic growth both in the academic literature and by practitioners. Despite this wide spread belief that the investment in human capital development is a key determinant of economic growth, the empirical estimates especially focusing on low-income countries (LICs) are less than conclusive. Together with the added complication that the measurement of the outcome of the investment in education and skills is not straightforward, causing researchers to use a range of proxies for human capital, it is not surprising that there is uncertainty in the policy arena as to the most effective type of education or skills within the LIC context. However some economists have proved a direct bearing of education on economic growth. Gregory Mankiw et al. (1992) evaluated the empirical implications of Solow model and concluded that it performed well. They then noted that the "fit" of the model could be improved even more by extending the model to include human capital that is, by recognizing that labour in different economies possess different levels of education and different skills. The conclusion was not surprising. It showed that countries are rich because they have high investment in physical capital, spent a large fraction of money and time in accumulating skills and education. It is because of direct effects of education such as increased individual wages follow from the assumption that education results in learning that increases a worker's productivity and also become quick in learning new techniques. The other externalities and indirect effects related to education, health and population growth include higher education attainment and achievement of children better health, lower mortality of children, better individual health, lower number of births, lower population growth and better health of population and labour force. In addition to these effects of education, a number of indirect effects have emerged in the literature. Studies have found a "positive effect of a mother's schooling on her children's health in developing countries." Healthier children may be more productive than unhealthy children and the result

may be higher performance in school. Similarly, better-educated parents tend to make more informed decisions with regard to family planning – the result being smaller family sizes. Smaller family size enables more parental involvement in each child's education (as parents' time is scarce). Increased parental involvement in a child's education may enable the child to perform better in school and encourage him or her to pursue additional years of education. An individual's choice to pursue further education may improve the earnings of his or her neighbours **(Dahlin,)**. Higher education enrolment is the principal indicator of economic growth as per World Bank statistics. When a nation significantly increases the number of university students it educates, that nation is likely to see an increase in economic growth in the decade that follows, reports **William H Avery** for the Economic Times. The same was witnessed in case of Japan and Korea in the early and late 1980s respectively. **Michaelowa** offers the example of an educated farmer who implements new agricultural techniques. Neighbours may observe the new methods used by the educated farmer and imitate them. Learning through observation is a mechanism by which such educational benefits may be spread within a community. Like other ideas, ideas about education policy are closely connected to their historical context and the narratives that inform them. In the 1960s, ideas about the economic value of schooling were expanded upon and they have had considerable impact ever since. The idea of 'human capital' originates from the observation that schooling develops certain qualities in people and that these qualities enhance economic productivity and economic growth, just as an increase in physical capital or investment does. This idea has been particularly compelling in policy circles, as it points to how and why governments should intervene in social policy to connect the social and economic aspirations of individuals, families and nations. Becker (1964) elaborates on the notion of human capital in the context of neoclassical economics. It registers that investment in humans could be viewed

as similar to investment in other means of production like factories or mines. Investment in human capital, just like investment in physical infrastructure, would yield a rate of return, which could be calculated. Becker's study set out to estimate the return to college and schooling per se that was significant for growth, but that it was influential in a range of other educational investments, such as scientific and technological knowledge. Becker's findings found a receptive ear in capitalist, communist and developing countries alike. Economic analysis has no trouble explaining why, throughout history, few countries have experienced very long periods of persistent growth in income per person. For example if per capita income growth is caused by the growth of land and physical capital per worker, diminishing returns from additional capital and land eventually eliminate further growth. The puzzle, therefore, is not the lack of growth, but the fact that the US, Japan and many European countries have had continuing growth in per capita income during the past 100 years or more. Presumably, the answer lies in the expansion of scientific and technical knowledge that raises the productivity of labour and other inputs in production. The systematic application of scientific knowledge to production of goods has greatly increased the value of education, technical schooling and on-the-job training, as the growth of knowledge has become embodied in people – in scientists, scholars, technicians, managers and other contributors to output. Access to higher education is very important for a society as it is from here that countries innovate, results in discoveries and creation of knowledge economy. Higher, post-secondary, tertiary, or third level education is the stage of learning that occurs at universities, academies, colleges, seminaries and institutes of technology. Higher education also includes certain college-level institutions, such as vocational schools, trade schools, and career colleges that award academic degrees or professional certifications. However, even economists know the difference between correlation and causation and have developed rather

straight forward methods for determining how much of income growth is caused by growth in human capital. In an excellent study for the US, **Denison (1985)** finds that the increase in schooling of the average worker between 1929 and 1982 explains about one fourth of the rise in per capita income during this period. He is unable to explain much of the remaining growth because he cannot measure the effects on earnings and improvements over time in health, on-the-job training and other kinds of human capital. Some of Becker's key ideas express the ways in which investment in schooling was associated with levels of growth and the ways in which he distinguished between different forms of investment – i.e. in school, higher education and training – suggesting that these might have different rates of return to people and countries. Developing Becker's work further, another economist, **Theodore Schultz**, set out to map how rates of return from education could be calculated in countries with different levels of income, different variables concerning wage patterns and different human attitudes to forgoing earnings to develop human capital. His argument is that education has an important economic value and that economic thinking has thus far tended to ignore the productive returns that education has had on economies. The simplest framework to look at the effects of education on economic growth is offered by the growth accounting framework. The basic model is that output is a function of factor inputs as described by **Solow (1956)**. For ease of exposition it is assumed that there are two inputs, labour, L, and capital, K, with only one aggregate output, Y. The model extends happily to the case where there are multiple inputs and outputs, provided the production function is homothetic. This has the implication that Divisia quantity indices of the inputs and outputs can be constructed, aggregating the inputs and outputs so as to reduce the problem to the structure below shown as explained by **Samuelsson & Swamy (1974)**. A represents" total factor productivity".

As will become clear, the model is not closed because growth of A is assumed to be exogenous.

Y = AF (K, L)

Differentiating

$\frac{dy}{dx}$/y=FcK+DcL+ t

Whereas Fc is the share of profits in the economy and Dc is the share of labour and "t" is the growth in technology. If the factors of production are rewarded by their marginal products, then Fc is the share of profits in the economy and Fc is the share of labour. With a homothetic production function these shares sum to one, so that, if we denote the shares of capital by @, then the share of labour becomes 1-@, where as K represents growth of capital and L is the growth of labour force and t is growth in technology or acquisition of skills. It should be noted that there is no requirement for α to be time-invariant. If the underlying production function is Cobb-Douglas, that is, however, the case. Suppose there are different types of labour indexed by years of education, so that

Lt is the input of labour with t years of education combined in some form to give an aggregate labour equivalent.

L = L (L0, L2, ...LT)

if each type of labour is paid its marginal product and the labour aggregator is also homothetic. It follows that the contribution of expansion of each type of labour is given as its rate of growth multiplied by the share of earnings of this type of labour in the total product. If a country increases the average number of years of education of its workforce by one and one assumes that educated and uneducated labour are perfect substitutes for each other, so that it

does not matter whether everybody's education has increased by the same amount, or whether some people have expanded their education by more and others less than one year then the effective labour supply is increased by the same amount. The increase in output resulting from this is the increase in effective labour multiplied by the share of labour in the overall product. It is quite likely that countries with high levels of education will also have more capital per worker; indeed if the amount of capital per effective worker is same before and after the increase in educational attainment, then the overall percentage increase in output is likely to be the same as the increase in the effective labour force; using the Mincerian returns for the world, this is 10.1% per extra year of education. But if the share of labour in the product is only 2/3 (e.g. Mankiw *et al*., 1992), then one extra year's education contributes only 6.7% to output growth and the remainder is due the capital stock rising pari passu. There are many practical examples of this calculation. For example **Matthews *et al.*** imply that between 1856 and 1973 an improved level of education contributed 0.3% Labour Contribution Growth of Quality to Output (% p.a.).

| | Labour quality improvement | Contribution to growth | Growth of output per capita |
|---|---|---|---|
| Canada | 0.74 | 0.50 | 2.93 |
| France | 0.73 | 0.49 | 3.04 |
| Germany | 0.41 | 0.28 | 2.91 |
| Italy | 0.19 | 0.12 | 3.74 |

| | | | |
|---|---|---|---|
| United Kingdom | 0.38 | 0.26 | 2.15 |

*Growth of Labour Quality and its Contribution to Overall Economic Growth, 1960-1989 Philip Stevens and Martin Weale, National Institute of Economic and Social Research,, Dean Trench Street ,London SW1P 3HEAugust 2003*

It is concluded from the table that there exists a positive correlation between labour quality improvement that comes because of education and economic growth. With the increase in educational standards of a nation, its growth capabilities increase. It results in diffusion of knowledge, innovation and new ideas. The twentieth century is the century of ideas, new ideas famously known as knowledge economy. The knowledge economy is the use of knowledge technologies (such as knowledge engineering and knowledge management) to produce economic benefits as well as job creation. It asserts continual use of innovation and new strategies to remain competitive and survive. The knowledge economy is also seen as the latest stage of development in global economic restructuring. Thus far, the developed world has transitioned from an agricultural economy (pre-Industrial Age, largely the agrarian sector) to industrial economy (with the Industrial Age, largely the manufacturing sector) to post-industrial/mass production economy (mid-1900s, largely the service sector) to knowledge economy (late 1900s – 2000s, largely the technology/human capital sector). This latest stage has been marked by the upheavals in technological innovations and the globally competitive need for innovation with new products and processes that develop from the research community (i.e., R&D factors, universities, labs, educational institutes).In the knowledge economy, the specialized labor force is characterized as computer literate and well-trained in handling data, developing algorithms and simulated models, and innovating on processes and systems. Harvard Business School Professor, Michael Porter asserts that

today's economy is far more dynamic and that comparative advantage is less relevant than competitive advantage which rests on "making more productive use of inputs, which requires continual innovation. Consequently, the technical careers including computer scientists, engineers, chemists, biologists, mathematicians, and scientific inventors will see continuous demand in years to come. Additionally, well-situated clusters, which Michael Porter argues is vital in global economies, connect locally with linked industries, manufacturers, and other entities that are related by skills, technologies, and other common inputs. Hence, knowledge is the catalyst and connective tissue in modern economies. Also creativity has boosted the economic performance of so many countries. It is now worth billions of dollars. Regardless of how the creative industries are defined and classified, there is no disagreement that they lay at the centre of what can be labelled in broader terms the "creative economy". The term "creative economy" appeared in 2001 in John Howkins' book about the relationship between creativity and economics.12 For Howkins, "creativity is not new and neither is economics, but what is new is the nature and the extent of the relationship between them and how they combine to create extraordinary value and wealth". Howkins' use of the term "creative economy" is broad, covering 15 creative industries extending from arts to the wider fields of science and technology. According to his estimates, in the year 2000, the creative economy was worth $2.2 trillion worldwide, and it was growing at 5 per cent annually. For Howkins, there are two kinds of creativity: the kind that relates to people's fulfilment as individuals and the kind that generates a product. The first one is a universal characteristic of humanity and is found in all societies and cultures. The second is stronger in industrial societies, which put a higher value on novelty, on science and technological innovation, and on intellectual property rights. There is no unique definition of the "creative economy". It is a subjective concept that has been shaped throughout this decade. There is, however, growing convergence on the

creative economy has been more recent (creative economy report 2010). It is a known fact that this creativity can only be boosted by providing people with good and quality education. Also given that there is a persistent trend in the increase in world incomes been a significant driver of the creative economy's growth. Several factors lie behind this demand push. First, rising real incomes in industrialized countries have boosted demand for income-elastic products, including creative goods and services. Moreover, the real prices of some of these products, as well as the prices of the means for their mediated consumption, have fallen as technology advances, leading to further upward pressure on demand. Maintaining the demand for video games, for example, requires not only a steady stream of new titles, but also newer and cheaper versions of gaming consoles. Other examples of demand-side interactions between soft and functional innovations include DVD and MP3 players, which in part depend on the quality of films and music. Changing patterns of cultural consumption also drive the growth of the creative economy. Again it is the spread of new communication technologies that lies behind the transformation. New generations of consumers on all continents are using the Internet, mobile telephones and digital media in ways that not only expand their range of cultural experiences but also transform them from passive recipients of cultural messages into co-creators of cultural content. The sense of empowerment brought about by these developments and the process of redefining cultural identities are likely to continue as significant influences on the growth of the creative industries in the future. The emergence of consumers as creators or co-creators of creative products has stimulated an enormous amount of cultural interaction and interchange. Examples of firms that have been able to involve consumers in the co-production of their good or service are those in the fields of open-source software and peer-produced information. Demographics is another element positively influencing the demand for creative goods and services. According to the United Nations,

world population in 2005 was estimated at around 6.5 billion people and is expected to grow to more than 9 billion by 2050.What's more, an increase in life expectancy worldwide has resulted in an aging population, many of whom are retirees with more leisure time and the means to consume cultural activities, creative products and tourism. In summary, the demand profile of consumers of creative goods and services grows each year by assimilating new groups of users, from the youngest to the oldest generations (CREATIVE ECONOMY REPORT 2010). Similarly the information and communication sector requires a lot of talented pool to grow faster and remain competitive. Evidence from both developed and developing countries has shown that effective use of ICTs affects productivity in both large and small enterprises (UNCTAD,2011a). A firm-level study covering 56 developing countries found that "ICT is playing an important role in allowing businesses to grow faster and become more productive – this alone suggests that creating an appropriate environment to exploit ICT is important"(World Bank, 2006: 72). Developing-country enterprises using ICT had better performance compared with enterprises that did not use ICT, with notable improvements in enterprise growth, profitability, investment and productivity. However, benefits from ICT use are not equally distributed across the private sector. ICTs vary in terms of accessibility, functionality and user requirement. The extent to which an enterprise gains from enhanced access to different ICTs depends on its needs for information, storage and communication, which in turn are affected by its size, industrial sector, and location and workforce skills. It also depends on whether its suppliers and customers are frequent users of ICTs. It is furthermore influenced by the business skills of managers, the availability of personnel trained to use and maintain the equipment, and the availability of additional information sources that enable improved decision-making in procurement and other business processes. The degree of ICT use has become a proxy for many business development

strategies that endeavour to identify those enterprises with the greatest potential for growth. For example, the Business Sophistication Modelling (BSM) applied by Fin Scope (2006) in South Africa classifies private businesses into seven levels of "sophistication". Firms classified as "BSM1" make no use of ICTs, while the classification criteria for BSM2 firms include among others ownership of a mobile phone. BSM5 firms are home-based with a fixed telephone line, BSM6 businesses have invested in a computer, and BSM7 business use credit card machines. For micro- and small enterprises (MSEs), the main observed benefits of ICT use are twofold (UNCTAD, 2010): (a) reduction in information search and transactions costs; and (b) improved communications along the supply chain, with possible beneficial effects for individual enterprises as well as in terms of overall improvements in the functioning of markets. Furthermore, there is evidence that ICT use can help strengthen social and human capital through the enhancement of skills, increased self-confidence, participation of women, empowerment and security against income loss. For growth-oriented enterprises equipped with personal computers (PCs), together with their effective use, ICTs can also strengthen internal information systems and facilitate the participation in international value chains. Firms that are either exporters or foreign owned, are typically more frequent ICT users. But it is mostly seen that development and use of ICT so much typically depends on the quality of human resources. Developing a thriving ICT sector depends crucially on the availability of adequately trained human resources. Lack of the necessary skills is often cited as a barrier to the development of a local ICT industry, and serves as an effective barrier to attracting foreign investment. At the same time, in order for government or private-sector initiatives that aim at developing human resources to achieve their goals, it is essential to have a clear understanding of the precise needs of the enterprises in question. Matching supply and demand is necessary in order to ensure that skills developed through education and training

are those that are sought by ICT enterprises. A poor match increases the likelihood of educated people having to look elsewhere for work, possibly contributing to brain drain. In general, people who are ICT-literate have a higher chance of finding employment, as both companies and Governments need their skills in order to better participate in the knowledge-based economy. Governments should therefore seek to enhance digital literacy, by using the basic education system, beginning at primary school level, and by emphasizing lifelong learning through adult training programmes. Ideally, the public and private sectors and academia and training institutions, should work together to develop national policies that focus on imparting appropriate skills that reflect the requirements of the ICT industry. The provision of free Internet access in

Public schools, universities and libraries can serve to broaden the use of technology and the Internet for entrepreneurs. At the same time, care should taken when seeking to leverage ICTs for educational purposes, as many initiatives in this area have failed to generate the results hoped for (see, for example, IADB, 2011a). The development of ICT professionals is a priority in many countries, including Singapore and Egypt. In Cambodia, more than 3,000 software developers graduate every year, and the cost of hiring them is generally much lower than for software developers from China or India. Nevertheless, due to their skill levels being below international standards, they are still not competitive. Here, as in many other developing countries, one of the challenges is to adapt the ICT curriculums taught in universities to reflect new developments in the area of software (INFORMATION ECONOMY REPORT 2011). Thus, information and technology, results in the boost of economy resulting in growth and employment generation. It provides a great opportunity for the developing countries to boost their exports and alleviate problems associated with balance

of payments. To become the hub of information and technology, the population must be literate and skilled enough to take advantage in these areas.

**Indian scenario**:

India has an abundant quality of human resources. This has been a prime contributor of growth in the economy. It has now over a billion of population (118 million, census 2011) and is likely to grow but decadal growth rates have shown a declining trend( census 2011). As per Population Reference Bureau, India's population in 2050 is projected to be 1.692 billion people Indian economy prior to independence was in a shady position due to colonialisation by Britishers. After independence it showed a improvement but could only managed to grow below 5% up to 1990. After the structural adjustment, liberalisation and globalisation adopted in 1991 played it began to rise faster than any period eventually growing at around 9% up to 2002-07. This coincided with the rise in the young and energetic population. It began to experience the population dividend as share of labour force continued to rise and is projected to overtake china in coming years The U.S. Census Bureau predicts that India will surpass China as the world's largest country by 2025, with a large proportion of those in the working age category. This will be a great challenge to India as the young population has to be provided with education to increase their productivity, acumen and talent. It is the literate population that is an asset to a country not simply population. As the economist Clark Kerr observed, "On a global scale, wealth and prosperity have become more dependent on the access to knowledge than the access to natural resources. After independence India has provided a significant amount of money to higher education. It is because of these efforts that now it is emerging as biggest contributor to human resource development. Post-independence India has witnessed an above average growth in the number

of higher educational institutions vis-à-vis its population. While there were just about 20 Universities and 500 Colleges at the time of independence, today these numbers have grown exponentially. Now, India has a total of 610 universities. 43 central universities, 299 state universities, 140 private Universities, 128 deemed universities and 5 institutions established through state legislation, 30 Institutions of National Importance. There are 45 technical institutes, 13 management institutes, 4 information technology institutes, 6 science and research institutes and 3 planning and architecture institutes and the demand for higher education is still rising. . The Eleventh Plan recognised and responded to the rising demand for higher education. Enrolment increased in government as well as private institutions. Enrolment13 in open and distance learning (ODL) programmes also grew rapidly during the Eleventh Plan from 27.41 lakh students in 2006–07 to 42.01 lakh students in 2011–12(. Apart from the Indira Gandhi National Open University, there are 13 State Open Universities and 183 other Distance Education Institutions (DEIs) approved by the Distance Education Council. Enrolment in DEIs that includes at least 44 private institutions grew most rapidly over 10 per cent per year during the Eleventh Plan period. GER is often used to measure the higher education access. GER is the total enrolment in higher education (both degree and diploma programmes) as a percentage of the population in the eligible age cohort of 18–23 years. Using this definition, GER for higher education was 12.3 per cent in 2006–07 and increased to 17.9 per cent in 2011–12. In regular programmes alone, GER has increased from 10.4 per cent in 2006–07 to 15.2 per cent in 2011–12. 21.192. Increased enrolments in the Eleventh Plan enabled Indian higher education to cross the threshold of 15 per cent GER, moving the country from an elite' to a 'mass' higher education system. Despite this, the unmet demand for access to higher education remains significant, indicating that a further expansion is required. However, expansion during the Twelfth Plan must factor that the

recent growth has been skewed in favour of certain regions, disciplines and sectors and ensure further expansion has diversity in the provision of higher education including a focused emphasis on improving the quality of institutions, faculty and curricula. Increase in higher education capacity during the Eleventh Plan was largely achieved through the setting up of new institutions by Central and State Governments and the private sector. The number of institutions grew by 58 per cent from 29384 to 46430. By the end of the Plan, the country had 645 degree awarding institutions, 33023 colleges affiliated to 174 universities and over 12748 diploma granting institutions. With the growth rate of institutions matching that of enrolment, the problem of low enrolment per institution evident at the start of the Eleventh Plan remains. Combined with the skewed growth of engineering and technical disciplines, this indicates that further expansion should be undertaken in the context of also achieving disciplinary diversity and increasing capacity within existing institutions rather than creating new institutions. Growth in private institutions was significant during the Eleventh Plan period. Ninety-eight private State universities, 17 private deemed universities, 7818 private colleges, and 3581 private diploma institutions were set up during the Plan period. While a majority of them offer professional or vocational programmes almost exclusively, it's worth noting that a number of arts, commerce and science colleges and a few comprehensive multidisciplinary universities have also been established in the private sector in recent years. The expansion of Central institutions during the Eleventh Plan was historic. The Central Government has never established so many institutions in a single Plan period. The Central Government established 51 new institutions during the Eleventh Plan period Each State now has at least one Central university except Goa, where the State Government did not want one. Special financial assistance was provided by the Central Government to existing Central institutions to raise their intake capacity in order to provide 27 per cent reservation to OBCs

without affecting the number of general seats. The Central Government also supported the States to set up 45 model degree colleges (as against the 374 proposed in low enrolment districts) and 279 government polytechnics (as against the 300 proposed) during the Plan period India's aspirations to establish a knowledge society in the context of increasing globalization, is based on the assumption that higher and technical education essentially empowers people with the requisite competitive skills and knowledge. It has been realized that it is the quality of education that prepares one for all pursuits of life and in the absence of an acceptable level of quality, higher education becomes a mere formalism devoid of any purpose or substance. As a result, from around the turn of the century, increasing attention has also been paid to quality and excellence in higher education. In the near future India will be the largest individual contributor to the global demographic transition. .. A 2011 International Monetary Fund Working Paper found that substantial portion of the growth experienced by India since the 1980s is attributable to the country's age structure and changing demographics.. Over the next two decades the continuing demographic dividend in India could add about two percentage points per annum to India's per capita GDP growth. Extreme actions are needed to take care of future basic minimum living standards including food, water, energy and education. In the 1990s, though, economic liberalizers evoked the experiences of East Asia and the demographic dividend it benefited from when previously high fertility rates began to decline. Working-age populations rose at the same time as the ratio of dependants to workers fell. An associated rise in the rate of saving allowed more investment, helping pay for the vast expansion in manufacturing that employed those workers and lifted hundreds of millions of people out of poverty. In the mid 2000s the prospect of a similar dividend in India, where the fertility rate had dropped a lot in the 1980s and 1990s, was a key reason for investors' optimism. The timing was particularly encouraging: India's

labour force was due to soar as China's began to decline. In spite of this optimism there is pessimism as well. Many are worried that India is squandering this demographic opportunity. This is partly because the economy is in a funk. Growth is at 4.5%, half the rate at the peak in the mid-2000s. Industry is 27% of output, compared with 40-47% in other big developing Asian economies. The economic growth during the current phase of globalisation has attracted considerable attention. Given a demographic dividend and changing character of Indian economy as seen from the declining income from agriculture and rising share of industry and service sectors, this has led to significant demand for the skilled people. In order to take advantage of this pool of human resources, Indian must build some mechanism to provide higher education to millions of people left. While india has showed improvement in access to higher education, it is still far behind the developed nations. India has made significant progress in ensuring access to primary education, the proportion of students who remain in the education system until higher Education is considerably less. It has been found that only 4% of population had education above graduate level. Ensuring equitable access to higher education is also a challenge with disparities seen across gender, regions and socio-economic groups. In terms of GER in higher education, India with a GER of about 15% lags behind to a great extent as compared to the developed world, as well as, other developing countries. It is 89% in USA, 24% in China and only 155 in India. With the rising levels of enrolments in school education, the supply of higher education institutes is insufficient to meet the growing demand in the country. Not only India is behind other countries in terms of GER but there is a lot of discrimination too. According to data for 2009-101, while the GER in higher education in India was 17.1 for males, it was only 12.7 for females. Additionally, while the overall GER for the population was 15%, the corresponding figures for SCs and STs were 11.1 and 10.3, respectively. There are regional variations too with Uttar Pradesh

having a GER of 10.9 while Delhi has a GER of 47.9. These figures reflect some of the significant imbalances within the higher education system. Also there is a lot of under spending of expenditure on higher education only up to 1.5% of GNP where as it needs around 2.5% of GNP. Also from the above discussion it became clear that there is a lot of work to be done in India. Work force has to be given higher education to enable them to increase their productivity and make them in tune with the changing market conditions inside and outside India. In the light of this situation, skill development has gained an impetus in India's policy-making circles headquartered in New Delhi. The central government's concern with this shortage of skilled workers is best described in the words of the Indian Prime Minister, Manmohan Singh, 'As our economy booms and as our industry grows, I hear a pressing complaint about an imminent shortage of skilled employees. As a country endowed with huge human resources, we cannot let this be a constraint '(Government of India 2011a). Towards this end, the government of India has set for itself a task of creating a skilled workforce of 500 million by 2022. A National Skill Development Council has been created under the Prime Minister's auspices. Of the500 million, over two-thirds of the target has to be met by existing vocational training initiatives offered by 17 central government ministries. For the remaining one-third, a private-public partnership based National Skill Development Corporation (NSDC) has been set up.

**Challenges:**

Our university system is, in many parts, in a state of disrepair...In almost half the districts in the country, higher education enrolments are abysmally low, almost two-third of our universities and 90 per cent of our colleges are rated as below average on quality parameters... I am concerned that in many states university appointments, including that of

vice-chancellors, have been politicised and have become subject to caste and communal considerations, there are complaints of favouritism and corruption **(Prime Minister Man Mohan Singh in 2007).** The overall scenario of higher education in India does not match with the global Quality standards. Hence, there is enough justification for an increased assessment of the Quality of the country's educational institutions. Traditionally, these institutions assumed that Quality could be determined by their internal resources, viz., faculty with an impressive set of degrees and experience detailed at the end of the institute's admission brochure, number of books and journals in the library, an ultra-modern campus, and size of the endowment, etc., or by its definable and assessable outputs, viz., efficient use of resources, producing uniquely educated, highly satisfied and employable graduates. Critical appraisals undertaken by the governmental committees and independent academicians have highlighted the crisis confronting the system: 'increasing educated unemployment; weakening of student motivation; increasing unrest and indiscipline on the campuses; frequent collapse of administration; deterioration of standards; and above all, the demoralizing effect of the irrelevance and purposelessness of most of what is being done.' While the politicians and policy makers have often spoken about the need for radical reconstruction of the system, what has been achieved in reality is only moderate reformism. At present, the world-class institutions in India are mainly limited. Most of the Indian colleges and universities lack in high-end research facilities. Under-investment in libraries, information technology, laboratories and classrooms makes it very difficult to provide top quality instruction or engage in cutting-edge research. This gap has to be bridged if we want to speed up our path to development. The current state of higher education is not in tune to with the market conditions. The fact that Indian manufacturing has provided slow employment growth — called "jobless growth" during the 1990s — or that the IT-enabled

sector provides less than 0.5 per cent of total employment, indicates that at least two sectors commonly linked with skills and the so-called knowledge economy, respectively, are not in a position to provide massive additional employment, or at least not immediately. No doubt the economy might evolve, and these or other sectors change in ways that provide additional employment, but the push for vocational skills, whether or not at the cost of higher education, cannot ignore a detailed plan of how industry-training linkages will also be simultaneously developed. According to a study only 25% of engineering graduates are directly employable (Infosys, an IT giant, last year sorted through 1.3 million applicants only to find that around two percent were qualified for jobs.) Quality of education delivered in most institutions is very poor. While India has some institutions of global repute delivering quality education, such as (Indian Institute of Management) IIMs and (Indian Institute of Technology) IITs, we do not have enough of them. It has very narrow range of course options that are offered and education is a seller's market, where is no scope of incentive to provide quality education. There is clearly a lack of educated educators and teaching is not an attractive profession. It's a last choice in terms of career. Number of Ph.D.s produced each year is very low and those required by academia is far higher. In fact, at many institutions fresh graduates are employed to teach, leading to poor quality of classroom instruction. Most of the education institutions esp. in states such as Maharashtra and states in South India are owned by politicians. This Education system which is highly regulated by the government has been set up to benefit politicians. There is also a dire shortage of capable leaders is precipitating a crisis in our higher education sector, a situation not likely to be remedied until 2020, according to a global survey conducted by the Education Promotion Society for India (EPSI). Still there is a lack of reforms at the highest stage. Good quality research is low and the population does not have enough skills to find employment in the market. Also there is a lack of foreign direct

investment in higher education. Also it is seen that there is a lack of concern at the highest level for reforms in higher education. It has remained as it is right from the colonial period. Instead of incentivising students to innovate, it encourages students only for the completion of their studies without regard to quality. That is why we have a lot of educated unemployment. In fact, the dichotomisation of knowledge and skills is perhaps one of the most problematic aspects in the current parlance of education.

**Opportunities:**

Higher education sector in India is still at infancy. There are reports that growth in this sector will be more than 10%. Still there is a lot of untapped market as GER in India is still at 15%. It provides a lot of scope for the private sector to come in and tap the market. The government intends to achieve enrolment of 35.9 million students in higher education institutions, with a GER of 25.2 per cent, by the end of the 12th Plan period through the co-existence of multiple types of institutions including research-centric, teaching and vocation-focused ones. This provides a lot of scope for the private sector to come in. Also with the growth in higher educational institutes, the labour productivity will rise which will provide a boost to economy. Also labour force will be available to new industries at a low wages as the supply of labour is very huge in India. This will give a competitive advantage to Indian industries to compete in international market. Exports will rise and balance of payment will be more favourable. Higher remittances will be expected as demand for quality labour is huge outside India. India can also attract the foreign investment to boost the quality of education. It will make India comparable to international standards. More higher education will cause more innovations and creative economy will lift millions out of poverty. Particularly the impact will be more on rural sector. Going through quality higher education will improve the

standards of rural youth and cause prosperity all round. For students it provides the opportunity to Participate in high-level masters / doctoral courses, Receive double / multiple / joint degree from consortium of excellent universities, Improve linguistic skills, intercultural experience, Improve employability of students through recognition of qualifications and study periods abroad, Academic exchange of knowledge, ideas, contacts, Revision of textbooks and representation of courses which correspond to the content of global community knowledge and international problems, Development of humanistic resources for the realization of social, economic, cultural consequences of universities internationalization, Scientific and cultural cooperation by the students unions and scientific boards of universities, Use of the comparative studies to present the content of existing educational programs, Emphasis on inter-cultural skills for planning ,Acquaint students with abilities and skills in the International arena.

**Recommendations:**

The NKC recommendations on higher education were submitted to the Prime Minister on 29th November 2006. The report focused on the need for excellence in the system, expansion of the higher education sector in the country, and providing access to higher education for larger numbers of students. Some of the issues that have been highlighted by the National Knowledge Commission in its report to the Prime Minister are: Systemic issues like quantity and quality of higher education, Regulatory framework, Access to higher education, financing of higher education Institutional architecture of universities, Governance and administration, Content in terms of curriculum and examinations and Faculty and Research. In order to achieve these goals, there must be increase in share of expenditure of government on higher education from ROUNG 1.5% TO 3% OF GNP. Also private sector should be

given opportunities to open new institutions as it will reduce the dependency on the government sector. Private sector is usually known to respond positively to market condition. Foreign direct investment should be allowed as it will bring quality education to India. Furthermore higher education institutions must be provided more autonomy to devise their own rules and regulations. Political interference has always resulted in degradation of quality standards. Curriculum and research should be made comparable to international standards by learning from these institutions i.e. their regulatory framework, policies and strategies.

**References:**

(1) Babatunde, M.A. & Adefabi, R.A. (2005): Nigeria Long Run Relationship between Education and Economic Growth in Nigeria: Evidence from the Johansen's Cointegration Approach. Paper presented at the Regional Conference on "Education in West Africa: Constraints and Opportunities Dakar, Senegal" November 1st - 2nd, 2005. Cornell University/CREA/Ministèrede l'Education du Sénégal.

(2) Dahlin, B.G. (2008): The Impact of Education on Economic Growth Theory, Findings, and Policy Implications. Duke University, pp. 1-30.

(3) Sarsare, S.M. (2012): Indian Higher Education: Challenges and Opportunities. *Intl. Index. & Ref. Res. Jour.*, III (34): 55-56.

(4) United Nations (2011): Information Economy Report.

(5) United Nations (2012): Information Report.

(6) Singh, J.D. (2003): Higher Education in India – Issues, Challenges and Suggestions.

(7) Stevens, P. and Weale, M. (2003): Education and Economic Growth. Published by National Institute of Economic and Social Research"

(8) Krueger, A.B. & Lindahl, M. (2001): Education for Growth: Why and For Whom? *Journal of Economic Literature*, XXXIX: 1101-1136.

(9) Hajela, R. (2012): Shortage of Skilled Workers: A Paradox of the Indian Economy. Research Paper No. 111.

10) Mankiw, G., Romer, D. & Weil, D. (1992): A contribution to the empirics of economic growth. *Quarterly Journal of Economics*, 107: 407-437.

11) Becker, G. (1993): Human Capital. University of Chicago Press, 3rd edition, pp. 23–24.