**SKILLING INDIA : OPPORTINITIES AND CHALLENGES**

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**INTRODUCTION**

The experience of Indian economy is unique as it has witnessed a transformational change from an agrarian economy to service sector dominated economy; and emerged as one of the fastest growing economies of the world. Presently, India accounts for meager 1.8 percent of the world manufacturing output, while its 57pc of GDP comes from the services sector and exports knowledge intensive services of bio-technology, pharmaceuticals, information technology, KPO, BPO etc. India by passed the second stage of Development theory, where industry and manufacturing activity dominate the growth process. Moreover only 10 pc of the labour force is skilled, out of which 2 percent is formally skilled. Make in India, Skill India, Start up India, Digital India programmes of recent years have been launched to give Indian economy global recognition through providing further boost to services sector and its exports; to revive and strengthen manufacturing/industrial sector; and to transform India into a global manufacturing hub. The pre-requisite is aquisition and creation of all types of skills – high end, middle end and low end-skills for sustaining high growth in India.

**OBJECTIVES**

Therefore the paper attempts to study

skills required in the event of non-commensurate sectoral growth and occupational growth in India (section1),skill profile, skill gap, mismatch and opportunities and challenges lying ahead (section ll).

**METHOD OF DATA COLLECTION**

The proposed study is descriptive in nature and is based on secondary data and information from relevant books, documents of various ministries/departments and organizations, articles, papers and web-sites.

**SECTION**- **I**

**GROWTH EXPERIENCE AND SKILLS IN DEMAND**

Indian economy, basically an agricultural economy, traversed a long journey to become one of the ten fastest growing economies of the world. Following the theory of development, it has jumped from the First stage of primary sector-led development path to Third stage of tertiary sector-dominated development, bypassing the Second stage of industrial development, which is tremendously very important to sustain sustainable growth

**Industrial/Manufacturing Sector: Low end and High end Skills**

Since the beginning of economic planning, the industrial and manufacturing sector experienced high growth for till 1966 which slowed down during1966-76 followed by an upward trend reaching an all time high quinquennial average of 8.2 percent during 1986-91 primarily because of liberalization measures under IPRs of 1978 & 1980. After IPR 1991 there was slow progress initially but industrial recovery took place after 1998, followed by slow-down in 2000-01 due to internal and external factors, but picked up soon during 2004-08. The global slow-down in post- 2008 adversely impacted the growth of industry and manufacturing and recovered in 2011.

Indian manufacturing has by and large grown in-tune with overall economic growth rate during 20 years but between 2009 and 2013 the Indian share in global manufacturing GDP declined (from 2.2percent to 2.0 percent) despite increase in India’s share of global GDP (from 2.2 to 2.5 percent) which has been major concern, more so because other nations including China's share in global manufacturing rose by more than six percentage points (i.e. from 17.3 to 24.1 percent). The increase in the share of India in global merchandise exports over the past twenty years from 0.5 to 1.7 percent. Has been modest as compared to China's performance, (from 2.4 to 11.5 percent of global exports).

**Table-3 India's Position in Global Manufacturing GDP and Exports(in percent)**

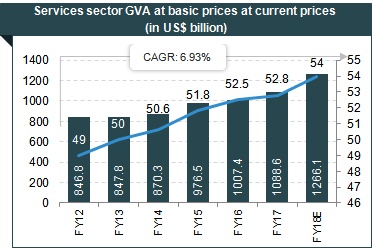
|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Shares** | **Countries** | **1993** | **2009** | **2013** |
| **Share of global GDP (%)** | India | 1.2 | 2.2 | 2.5 |
| China | 2.3 | 6.8 | 8.5 |
| United States | 26.5 | 25.5 | 24.9 |
| Japan | 12.2 | 8.5 | 8.2 |
| **Share of global manufacturing GDP (%)** | India | 0.9 | 2.2 | 2.0 |
| China | 3.1 | 17.3 | 24.1 |
| United States | 24.4 | 19.2 | 17.8 |
| Japan | 20.2 | 9.6 | 7.3 |
| **Share of global merchandising exports (%)** | India | 0.5 | 1.3 | 1.7 |
| China | 2.4 | 9.7 | 11.5 |
| United States | 12.5 | 8.6 | 8.6 |
| Japan | 9.5 | 4.7 | 4.5 |

Source: World Bank(2015) T

The share of industry in national income increased from 15 percent in 1950-51 to 27 percent in 2011-12 (at 2004-05 series), and further to 29.7 percent in recent year of 2014-15 (at 2011-12 series), but services sector has grown much faster. Moreover, the share of industry in employment does not commensurate with its growth. The passing over from 1st stage of development to 3rd stage of development directly highlights the need for pushing up the manufacturing and industrial sector with focused efforts.

**Services Sector: High end Skill –intensive**

As growth of industries & services sectors is inter-dependent hence both must move hand in hand and not at the cost of each other. India’s growth accelerated since 1980s (i.e5.6 pc 1981-91) due to impressive performance of the service sector even least affected during crisis times of post-reforms period.. India has emerged as the world leader in giving IT/ITES support to various Multinational Corporations Busines process outsourcing and knowledge process outsourcing. Even the net services exports from India reached US$ 77.89 billion in 2017-18. The contribution of services and industrial sector in GDP has been around 70-75 percent in India but they provide employment to only 50 percent of workforce or so.This non-commensurate growth of employment indicates towards skill mismatch



***Notes:*** E – Estimate, CAGR - Compound Annual Growth Rate, Exchange Rate used is average for the year***Source:*** Indiabudget, MOSPI (Second Advance Estimates of National Income 2017-18 and First Revised Estimates of National Income 2016-17)c.f. India Brand Equity Foundation [*www.ibef.org*](http://www.ibef.org) downloaded on 21.9.18 .

**Employment Opportunities**

Among the top 15 economies, the services sector accounted for more than two thirds of total employment in 2016 in most of them except India and China, with India’s share of 30.6 per cent being the lowest ,as per the ILO’s estimates (Economic Survey,2017-18). Table 2 depicts the change in respective shares of these sectors since 1951.

**Table 2: Share in Employment: Occupational Distribution(%age)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sectors/Decades** | **1950-51** | **1990-91** | **2011-12** | **2017-18** |
| Agriculture | 72.1 | 66.9 | 48.9 | 42.7 |
| Industry | 10.6 | 12.7 | 24.4 | 23.8 |
| Services | 17.3 | 20.4 | 26.7 | 33.45 |

Source: GOI, Economic Survey, various issues, 2017

Agriculture sector continues to provide employment to largest section i.e.48.9 percent of country’s workforce and is the single largest private sector occupation whereas China pulls 1% of its population out of agriculture and puts them in construction & manufacturing. Therefore, for raising employment in manufacturing and services sectors, a strong and large human capital reservoir must be built up in tune with the market-demand. Out of 15 mn youth entering workforce annually more than 75 percent are not jobready while India needs 700 million skilled workers by the year 2022.The glaring imbalance is due to lack of technical and soft skills- highlights the need to augment the employability of educated youth (The Hindu, Aug 7, 2017).As there are huge skill gaps, there is need to identify these gaps.. Skill gap refers to a mismatch between the demand and supply side of the workforce in the market. The Government and its several other partner agencies launched various skill development initiatives to cater to the requirements of all sectors of the economy..Unfortunately, despite the gravity of this situation, various ministries failed to achieve their skilling targets (Table 3).

**Table-3. :Gaps in Achievement by various Ministries/ departments and organization**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **S. No.** | **Ministry/ Department/ Organization** | **Target for**  **2012–13**  **(in 000)** | **Achieved till Jan 2013**  **(in 000)** | **Gaps in Achievement**  **(in 000)** |
| 1 | Labour & Employment | 2,500 | 800 | 1700 |
| 2 | Micro, Small & Medium Enterprises | 600 | 333 | 267 |
| 3 | Agriculture | 1184 | 1000 | 184 |
| 4 | Rural Development | 800 | 422 | 378 |
| 5 | Deptt. of Higher Education | 310 | 143 | 167 |
| 6 | Women & Child Development | 150 | 67 | 83 |
| 7 | Housing & Urban Poverty Alleviation | 500 | 242 | 258 |
| 8 | Tourism | 50 | 35 | 15 |
| 9 | Social Justice & Empowerment | 40 | 28 | 12 |
| 10 | Textiles | 250 | 40 | 210 |
| 11 | Heavy Industries | 20 | 18 | 02 |
| 12 | Department of IT | 440 | 263 | 177 |
| 13 | National Skill Development Corporation | 400 | 204 | 196 |
| 14 | Chemical & Fertilizers | 30 | 18 | 12 |
| 15 | Development of NER | 3 | 0 | 3 |
| 16 | Food Processing Industries | 10 | 0 | 10 |
| 17 | Road Transport and Highways | 100 | 0 | 100 |
| 18 | Tribal Affairs | 10 | 0 | 10 |
| 19 | Commerce and Industry | 30 | 9 | 21 |
|  | Total | 7243 | 3806 | 3437 |

Source: Ministry of Labour & Employment

As evident from the Table-7, Ministries like Labor and Employment and Textiles could not achieve even half of their annual target. Furthermore, all stakeholders cumulatively achieved a meager 53 percent of the overall target in the year 2012-13. Some of the key initiatives are National Skill Development Policy (2009), Modular Employable Skills (MES), Up-gradation of Government ITIs through World Bank, Public Private Partnership and by DGET etc.

In this regard,, Skill India Programme needs a mention under which by theyear2022, 24 key sectors will need an additional 109 mn skilled workers and National Skill Development Mission aims to train 400 mn people across the country (World Bank,2017) .If proper skills are not provided to the prospective workforce then it would result in less employment opportunities and more unemployment rates as the workforce does not possess the requisite skills as demanded by manufacturing and non-manufacturing sectors.

**SECTION II**

**SKILL STATUS,DEFICIT,GAP AND OPPORTUNITIES**

Historically, three modes have contributed towards getting out of under-development: geology, geography, and “jeans” (or low-skilled manufacturing). Earlier Australia and Canada and more recently West Asia, Botswana and Chile improved their standard of living by exploiting their natural resources endowed by geology. Some of the island successes (Barbados, Mauritius, and others in the Caribbean) originated from exploitation of their geography by developing tourism to achieve high rates of growth. Whereas East Asian countries (China, Thailand, Indonesia, and Malaysia etc) relied on relatively low-skilled manufacturing, typically textiles and clothing in the early stages of their success to accelerate their economic growth. Though they shifted to more sophisticated manufacturing sectors gradually, the “low-skilled manufacturing” offered them the vehicle for prosperity in their early stages. No country has grown from underdevelopment using relatively skill-intensive activities as the launching pad for sustained growth as has been the Indian experience..

Put differently, India’s ‘natural’ comparative advantage lies in the ‘agriculture sector and low-skilled manufacturing (jeans)’ activities because of its natural resources and easy availability of unskilled and low-skilled labor. Instead, it has created advantage in relatively high skilled activities such as information technologies, business process outsourcing and knowledge- intensive services like bio-technology, pharmaceuticals while skipping the natural advantage of abundant supplies. India has directly entered the service-led third stage of development too much extent, bypassing the industry-led second stage of development mainly due to historical policy choices and technological accidents (Kochhar et. al., 2007). Globalisation has further intensified the need for highly skilled workforce and knowledge-based resources. India bypassed Japan to emerge as the world's third largest internet user after China and the United States, reported digital measurement and analytics firm ComScore in a study. India had nearly 74 million internet users in 2012, three-fourths of India's population is under 35 years as against half worldwide and it is suggested by many scholars that technology can pave a long way in this direction (Paul,2014).. Hence, India presents a mix picture of- comparative advantage in low skilled and high skilled activities both.

**Table 4: General Education Level of Workforce (in the age group 15-59)**

|  |  |  |
| --- | --- | --- |
| **Levels of Education** | **Numbers**  **(in millions)** | **Share in workforce** |
| Not Literate | 125.7 | 29.1 |
| Literate without formal schooling | 2.1 | 0.5 |
| Below Primary+ Primary | 102.4 | 23.7 |
| Middle | 76.1 | 17.6 |
| Secondary | 52.4 | 12.2 |
| Higher Secondary | 29.2 | 6.8 |
| Diploma/Certificate Courses | 6.0 | 1.4 |
| Graduate | 28.0 | 6.5 |
| Graduate & above | 9.4 | 2.2 |
| Total | 431.2 | 100 |

Source: NSS (66th Round), 2009-10.[ Statement 5.5, NSS Report No. 537: Employment and Unemployment Situation in India, 2009-10}

**SKILL STATUS OF INDIAN WORK FORCE**

A survey of employment rate in terms of usual status employment shows (Table 4) that unemployment is the highest among illiterate people or people having education up to primary level, while it is the lowest among people with higher secondary level of education (both in rural and urban sectors) of the country. This finding clearly indicates the dominance of informal activities and lack of of formal education in workforce.

As regards the status of vocational training of Indian workforce of 431 million ,0.4 percent received formal training and 2.1 percent undertook informal training, see Table-5. While an additional 7.6 percent of workforce received informal vocational training. Thus, the total number of Indian workforce in the age group of 15-59 with vocational training is 43 million or 10.1 percent of the workforce ( NSSO round 2009-10).

**Table 5: Vocational Training Status of Indian Workforce (age group of 15-59years), in percentage**

|  |  |  |
| --- | --- | --- |
| **Level of Education** | **Numbers**  **(in 000)** | **Share in the Workforce**  **(i.e. 431million)** |
| Receiving formal  Vocational training | 1892 | 0.4 |
| Received vocational  training :formal | 9006 | 2.1 |
| Received vocational  training :informal | 32719 | 7.6 |
| **Total** | **43617** | **10.1** |

Source: NSS (66th Round), 2009-10.

Table-6 depicts the share of the workforce with technical education in total of 11.76 mn in the age group of 15-59 years. The share of those with technical degree in agriculture, engineering, technology, medicine etc. comprises 0.5 percent, with under-graduate level diploma and certificate constituties 1.5 percent and at graduate and above level 0.7 percent. Thus it is observed that only about 2.7 percent people in the workforce received technical education.

**Table6: Technical Education Level of Workforce (in the age group 15-59)**

|  |  |  |
| --- | --- | --- |
| **Levels of Technical Education** | **Numbers**  **(in 000)** | **Share in workforce** |
| Technical degree in agriculture, engineering, technology, medicine etc. | 2176 | 0.5 |
| Diploma and certificate (below graduate level) | 6436 | 1.5 |
| Diploma and certificate (Graduate and above level) | 3145 | 0.7 |
| Total | 11758 | 2.7 |

Source: NSS (66th Round), 2009-10.

The above portrayal of skill and training status,formal and informal, of Indian workforce cautions that India’s demographic dividend can rapidly convert into a demographic nightmare if skills are not provided to both upcoming and existing workforce.

This is the opportune time to make best of it as India enjoys a large “demographic dividend” with the distinct advantage of the youngest nation in the world- 65 percent of India’s 1.25 billion population is under the age of 35. The average age of an Indian in 2020 will be 29, as compared with 37 in China and the United States and 45 in Western Europe. In the next decade, India is expected to have the largest available workforce in the world.

By 2020, India will have the largest working age population :325 mn people, by 2020, while USA will be short by 17 mn people ,China short by 10 mn ,and Russia will be short by 7 mn of working age.Such a large scale job creation has not happened in India..

Thus, there is a need for increasing capacity and capability of skill development programs. The Government has identified 25 key sectors in which Indian industries have the potential to compete with the best in the world. These sectors are automobiles, aviation, chemicals, IT, leather, pharmaceuticals, ports, textiles, tourism and hospitality, wellness and railways among others will provide details of growth drivers, investment opportunities, FDI and other policies specific to that sector and details of relevant agencies.

According to the TeamLease Signalling Value of Skill Education and Hands on-job Report (2017) shows non-willingness of workforce or youth to undertake training. It mentions that only 2% of the Indian workforce has opted for formal skill training making it one of the least preferred streams of education while in Austria and Germany more than 40% of the workforce comes through the vocational skilling route.Such a pattern of specialization (in high skilled or low-skilled activities) in turn affectS the skill endowment of the country. Moreover increasing exports of low-skill products tend to lower average levels of human capital attainment. Thus a balance of low-skill and skill-intensive activities is must. Moreover, only 15 percent of the 30 million of annual pass-out graduates are jobready and the challenge lies- how this pool of 85 percent job seekers be made more employable (Paul,2014).

Since the skill deficit of labour-force is high as only 10 percent (formal and informal both) of labour-force of India is skilled, it needs to be adequately addressed . The findings of Wheebox Employability Skill Test (WEST) based on online survey administered to 5,10,000 students across 5,200 institutions in 29 States and 7 universities indicates towards an increase of 5.16 per cent in the employability score from 2014 i.e. 45.6 percent and finds: a) engineers to be the most employable, b) rising employability of BPharma student over the years , c) a drop of three per cent in the employability of MBAs, d) ITI and Polytechnic students not able to meet standards of the industry , and d) efforts being made by the National Council on Vocational Training are yet to show the result. Hence the low end skills, which are expected to cater to m of the youth, have failed to give dividends.

The India Hiring Intent Survey conducted under ISR 2018, assesses the hiring requirements by in next year, 2018, across 15 major sectors namely banking and financial services, BPO, insurance, travel, hospitality and IT. The key skill sets identified by employers are- data analytics, research and development, artificial intelligence, robotics, concept design etc. Also acquiring ‘soft skills/ transferable skills' along with attributes like posiitive attitude and adaptability, have been identified. However, disruptive new technologies, like robotics artificial intelligence, 3D printing, and machine learning may be a potential threat to the existing business models. According to a latest research by McKinsey Global Institute, only 52 per cent of the activities in India can be automated in future times by using currently available technologies. This indicates that the skilling ecosystem must undergo a paradigm shift to cater to the ‘skills of future' i.e. high end skills as well as to ensure that enough jobs exist for that chunk of young population who is below in the skills ladder i.e. low-end skills.

**CONCLUSION**

India has the capability to maintain and accelerate its growth momentum by reaping the fruits of demographic dividend, strong knowledge base, high end and low end skill profile of work force, thus giving adequate push to manufacturing and services sectors. The demographic dividend faces the challenges of low levels of educational, professional and vocational skills of the workforce ,the non availability of jobs matching with the education/skill and experience of youth, and non availability of adequate remuneration to workers. . Therefore, there is need for retuning and refining the education system and strengthening the vocational education training for skill building so as to rectify skill mismatch. . Skill Development strategy should be based on a demand-led education and training system which is flexible and responsive to the economic and social needs of thecountry at the same time as it stimulates new skills demands. Accordingly, Government has to act as the central pivot for bringing together industries, private companies, public sectors and all stakeholders for public-private cooperation.

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