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PUBLIC PRIVATE PARTNERSHIP IN EDUCATION AN IMPACTFUL MEANS OF PROMOTING SKILL DEVELOPMENT AND INCLUSIVE GROWTH IN INDIA

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ABSTRACT

"The country needs a large number of centers of higher learning which are world class," said Arun Jaitley, the Indian Union Minister of Finance of the Bhartiya Janata Party led government, in his maiden budget presentation for 2014, where he committed increased funds for higher education. This view conflicts with the 12th Five-Year Plan -- proposed by the earlier government -- that had advocated a halt to government-funded higher education. The new government proposed to add to the existing elite institutions of management and technology, medical colleges, new Humanities centers as well as programs for training teachers. Despite this increased outlay and commitment to the cause of education, K.R. Sekar, who oversees the education practice at Deloitte Haskins & Sells Llp, a consulting company, was concerned about the lack of clarity on the question of private investment in education or an outline of a path of education reforms. [1]

With a massive population of 1.2 billion where 41% of the population (census 2011) is in the 14-19 age bracket, even 18 Indian Institutes of Technology, 21 Indian Institutes of Management can not be enough

to meet the demands. While the availability of human capital is clearly India's strength, the inadequacies of the conventional infrastructure for delivery of technical and vocational education will continue to create severe deficiency in the quality and quantity of employable resources. Financial commitment alone without a strategic blueprint will not be enough to bridge the knowledge or skill gaps in India of employable age.

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The significant growth that the Indian economy experienced is due to the growth of its Information Technology sector. There is substantial doubt among global industry leaders and the academia whether India can sustain this growth. The doubt arises from the inability of the Indian economy to reap its potential demographic dividends due to lack of skilled labor force. .As per the National Employability Report , 47% of graduates are not employable in any sector of the knowledge economy driven future [2]. This paper focuses on how private corporations can team up with national, state and local governments to create a sustainable labor-supply model to meet the needs of todays' digital economy.

The paper uses the endogenous growth theory to develop a comprehensive public-private partnership model of resource enhancement in the Indian context of commitment to sustained growth.

The paper will emphasize on the aspect that for sustainable manpower development, the government must partner with private sectors to develop digital infrastructure for extensive and affordable delivery of higher education. The digital economy provides a new opportunity for a diverse Indian economy to create a uniform platform for delivery of quality education for all.

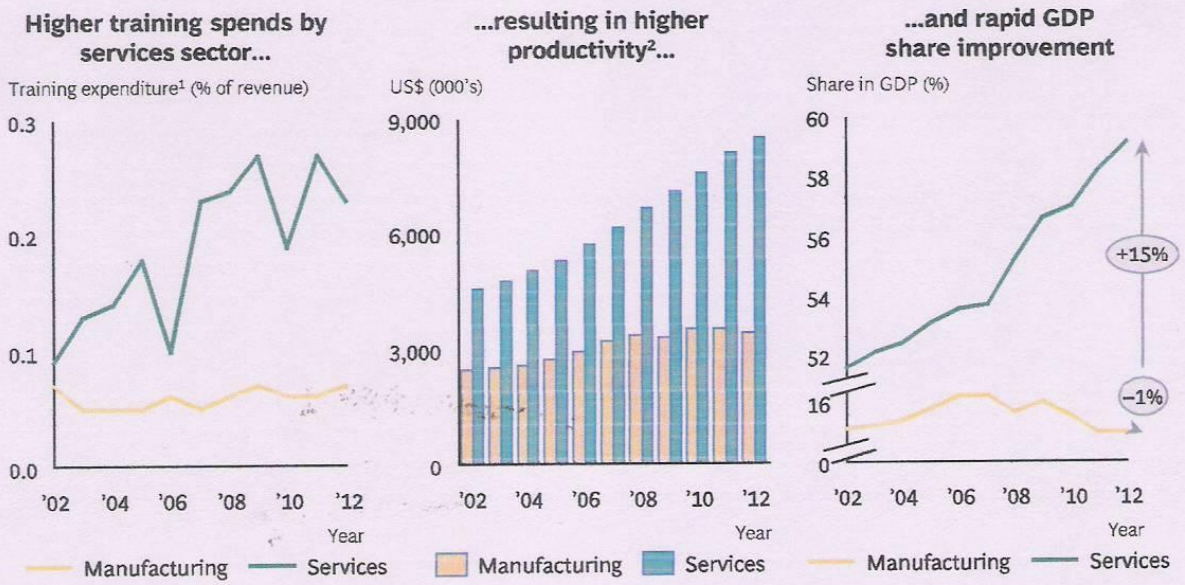
The paper also projects that such digital re-imagining can only come for a healthy and cooperative partnership between the private and the public structure, where the private structure can bring in the technology and the state of the art instructional design and the public structure can help foster the mindset for such a transformative venture.

KEY WORDS: Public private partnership, skill development, sustainable

INTRODUCTION:

The Indian economy has witnessed an unprecedented growth in the past decade and a big share of it can be attributed to the growth in its Information Technology sector. There is substantial doubt among global industry leaders and the academia whether India can sustain this growth. The doubt arises from the inability of the Indian economy to develop required skilled work force at the same pace. India has been experiencing high GDP growth rates, yet the same has not been transmitted into adequate gain in employment generation. A big chunk of contribution to this growth can be attributed to the increased activity in the service sector and to a large extent in the IT sector. Hence the increase in employment has been for the skilled workforce creating further pressure on the already constrained numbers of skilled manpower availability. Realising the importance of adequate skilled workforce to boost the economic development process of the country Government of India instituted the ITIs for imparting vocational training and IITs/IIMs for enabling specialized education to its youth. Yet, the dream remains to be farfetched. The training institutes are able to train a mere 3.1 million people as compared to 15 million new entrants into the workforce each year (GOI 2009)[3] Moreover a study by WB 2002, FICCI, 2002 [4] shows that the graduates produced by ITIs/ITCs are not needed by the industry as they lack basic scientific and technical knowledge of their \field.

EXHIBIT 1.5 | India's services sector has improved its GDP share with focus on training and productivity



Sources: Tan & Savchencko, 2005; Prowess; Oxford Economics; BCG analysis.
Note: Real GDP in US$ has been considered. The GDP is at 2005 prices. Labor productivity is calculated by dividing sectoral GDP by the # of employees.
[1]Basis financials of top 200 public & private firms.
[2]Productivity here refers to labor productivity.

AIM: In a fast moving globally operational business environment, university industry collaborations play a crucial role in furthering the cause of competitive advantages and national development. In this context the paper proposes to study the role of Private Public Partnerships in extending skill based knowledge to the youth for achieving sustained growth in India. The study intends to explore the benefits and challenges faced in establishing practice based learning through PPPs. The purpose of the paper is to identify and outline success factors and barriers to the process of enhanced learning through PPPs. It aims to extend a framework for effective transfer of skill based knowledge under the academia industry linkage programs. This paper will study the aspect of Skill Based Education from the perspective of an enabler, providing the learners with the capabilities they require to become economically and sustainably productive.

METHODOLOGY

The study is based on extensive literature review to examine the impact of academia industry collaborations on skill based learning. The paper also projects certain international and national case studies in the field to address the aspects that lead to healthy industry education partnership. The reviewed literature examines the approach of PPPs in promoting acquisition of skill based learning by the young population of our country.

LITERATURE REVIEW

Large corporations are experiencing heightened pressure due to growing competition, shortened product life cycles and high level of business uncertainties. In the pursuit to remain competitive and achieve sustained growth, businesses are exploring external sources of innovation to acquire new ideas and develop new capabilities by accessing latest academic research. Engaging in partnerships with universities allows companies to leverage government funding and reduce the cost of their Research and Development[5]

The triple helix (university-industry-government) development strategy is becoming a powerful national tool to develop an innovation mechanism and build stronger links between private and public research sectors[6]. The triple helix model is proposed as a strategy for developing countries to accelerate their transition to the knowledge-based economy[7]

Knowledge production and diffusion is widely accepted as a critical factor for economic growth with universities playing a key role in developing a knowledge based economy[8]. When students are immersed in the professional practice related to their academic discipline, it develops professionals that employers see as highly employable[9] The concept of knowledge worker is not a new concept and underpins many of the ideas associated with knowledge-led organizations where practice based learning needs to be supported and whilst some changes have been made to educational policy to facilitate Work Based Learning, in the UK institutions [10]

CONTEXT

The ILO youth report 2013, has revealed that the youth employment crisis is deepening with 12.6% youth projected to be unemployed globally. The educated youth struggling to get employed is a matter of serious concern. The Third Annual Employment-Unemployment survey results reveal that every one person out of three graduates or above is unemployed or underemployed [11]. By 2020, India will be the world's youngest country with 64% of its population in the working age group. Realising this challenge and opportunity the twelfth five year plan has emphasized on facilitating skill development for the young population. India Inc. must collaborate with universities and develop strategic plans towards improving the youth skill base so as to ensure socio economic development. Else, the economic implications of opportunity cost lost by the industry in the global market will be highly damaging. The unavailability of suitably skilled workforce will slow down research and development, productivity and result in reduced global market share, for industry.

The globally accelerated economic growth has highlighted the shortage of availability of skilled man power, with India among the top in the list. The difficulty to fill up jobs with suitably skilled employees in India is 48% as compared to 38% the global standard in 2012 [12]. The World Economic Forum's Human Capital Index based on access and quality of education has ranked India 78 out of 122 countries.[13] A study conducted by CGD reports that, with each additional year of schooling, people earn 10% higher wages. These earnings, in turn, contribute to national economic growth.[14]

India's transition to a knowledge based economy requires a new generation of educated and skilled work force. Its competitive edge will be determined by its people's ability to create, share and use knowledge effectively. A knowledge economy requires India to develop knowledge technologists – who are flexible and analytical and who can be the driving force for innovation and growth [15]

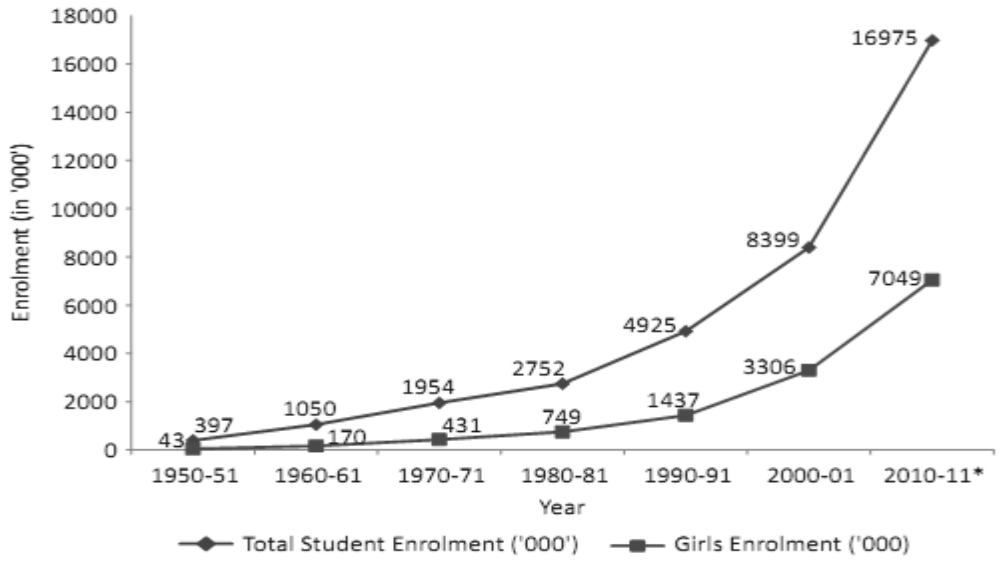
THE CURRENT SCENARIO

With a massive population of 1.2 billion where 41% of the population (census 2011) is in the 14-19 age bracket, even 18 Indian Institutes of Technology, 21 Indian Institutes of Management

can not be enough to meet the demands. While the availability of human capital is clearly India's strength, the inadequacies created by the obsolete facilities and modes of imparting knowledge, will continue to create severe deficiency in the quality and quantity of employable resources. The accelerated effort of government towards improving educational climate in the country has increased the school enrolment drastically to 96% in 2013, of children between the 6-14 age group. However, the enrolment to Higher Education continues to be as low as 20.4 % reflecting high dropout rate [16]

GROWTH OF HIGHER EDUCATION

Growth of Students Enrolment ('000') in Higher Education



**Provisional*
Source : MHRD for 1950-51 & 1960-61 and UGC for 1970-71 onwards
***Coverage** : Figures of students enrolment & teaching staff (1970-71 onwards) pertain to regular courses in Universities & Colleges (excluding Polytechnics, other Diploma awarding Institutions & Non-formal System of Higher Education)*

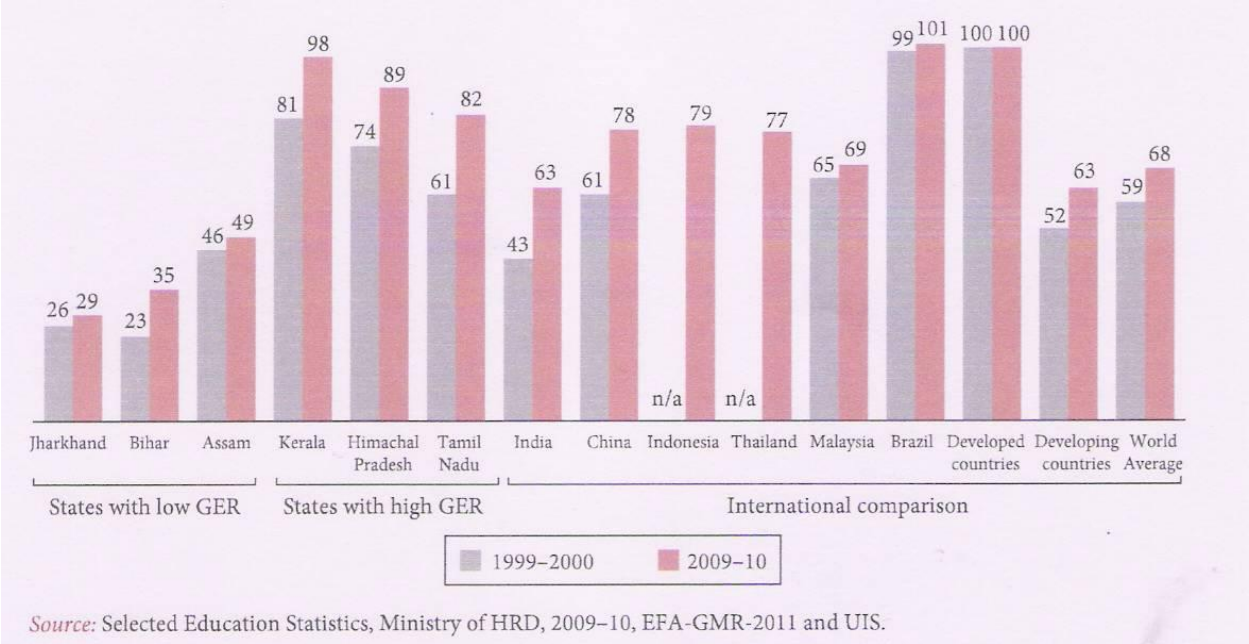


Figure 2: Gross Enrolment Rate Comparative figures

Further, the basic knowledge and skill level of these children is quiet questionable. The Annual Status of Education Report (2013) states that barely 47% of Indian students of fifth grade can read at a second grade level. More than 15 million young population needs quality (skill based) education every year in India. Concerted efforts of the government have led to an increase in no. of ITI/ITCs from 5,114 in 2007 to 10,344 in 2013. [17] The current vocational training capacity through various public/private institutes is only 3million [GOI 2009]. An estimated 50–70 million jobs will be created in India over the next five years and about 75%–90% of these additional employment avenues will require some vocational training. At present only 10% of the population has undergone some kind of vocational training as compared to other countries like Korea (98%) Germany (78%) Japan (80%) Canada (77%) and the UK (68%) (ILO 2011). According to the NSSO report, vocational training is received by only 10% of persons aged between 15 and 29 years[18]. Out of this, only 2% receives formal training and non-formal training constitutes the remaining 8%. A study conducted by Confederation of Indian Industry and Boston Consulting Group (BCG) estimates that India is likely to increase deficit of 5.25 million employable graduates and vocationally trained workforce by 2012 [19]

The Federation of Indian Chambers of Commerce and Industry survey also shows similar results. A survey collected responses from 55 enterprises on the quality and relevance of vocational training from industry perspective. Almost 60 per cent stated that educational institutions were not geared to meet the knowledge demands of global economy; over 43 per cent reported as academic institutions not being aligned to the industry needs; and 87 per cent per cent conveyed the need of institutions to have greater exposure to industrial practices. The respondents also stressed the importance of implementing academia industry collaborations as a means of ensuring a better fulfillment of both industry needs and institution requirement [20]

It is well recognized that knowledge enhancement improves growth opportunities for emerging market. The pressure to develop well educated skilled workforce through knowledge transfer is not limited only to emerging economies. The USA and UK too are concerned regarding the loss of jobs to economies with better skills like India and China. Developing enhanced skills and knowledge is a universal challenge, as globally economies compete on standardized upgraded knowledge referred to as 'Digital Taylorism'[21]

Hence, it is necessary to integrate knowledge transfer process into the national development policy of the nation. The key components of this process are: (i) creating an awareness about the knowledge transfer initiatives, (ii) Ensuring participation of all stakeholders to reduce resistance and (iii) Facilitate enhanced knowledge adoption level. Research suggests that knowledge transfer effectiveness depends on the level of development of the host country. In the least developed economies (LDEs), the absorptive capacity is much lower and therefore requires more activities on capacity building and training during collaboration. In newly industrialised economies (e.g. Brazil, India, Russia), the level of education is higher, which increases an absorptive capacity and need for cooperation [22]

The 11th plan and 12th plan have laid drastic emphasis on skill building education with special focus on skill development through Industry partnership. In the year 2009 the government has formulated National Skill Development Plan (NSDP) with the objective to develop 500 million skilled workers by 2022. The National Skill Development Corporation (NSDC) was set up as a specialized authority with the mandate to facilitate private participation for skill development of 150 million people. Though there has been a marked shift in emphasis on skill development through PPPs in recent years, but it fails to deliver the quality and quantity in training as required by the industry resulting in high unemployment rate among youth in the age of 15-29 years

Unemployment Rate Among Youth (15–29 years)

	1992–94	1999–2000	2004–05	2009–10
Rural Male	9	11.1	12	10.9
Rural Female	7.6	10.6	12.7	12
Urban Male	13.7	14.7	13.7	10.5
Urban Female	21.2	19.1	21.5	18.9

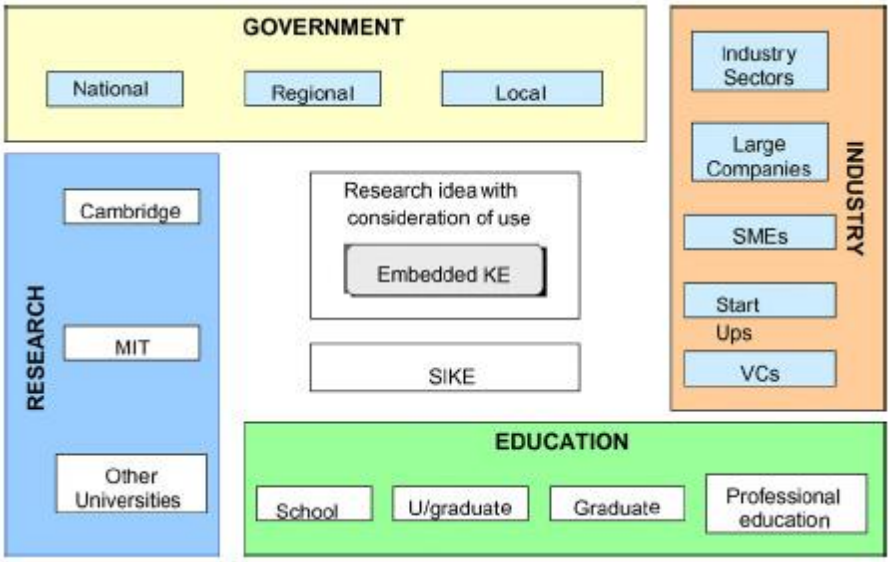
Source: NSS 55th, 61st and 66th rounds.

INTERNATIONAL SUCCESS STORIES OF PPPs

Malaysia aspires to become a fully developed nation by the year 2020 [23] In pursuit of the same the government has emphasized a public private partnership in the areas of human capital development and Research & Development for meeting the socio economic objectives[24] The

Malaysian plan 2011-15 has focused on industrial collaborations which can help fresh graduates to get equipped with the evolving requirements of industry. To broaden the industry experience of university faculty members and to facilitate collaboration between industry and relevant universities, the Knowledge Transfer Partnership (KTP) program was introduced in 2011- 2012 [25], Malaysian government launched the Graduate Employability Blueprint (GEB) for 2012-2017, which aims to boost the level of employability skills amongst youth and to fulfill the requirement of skilled manpower by industry, leading to economic and national development.

The Massachusetts Institute of Technology (MIT) is a prime example of successful collaboration of university with industry to develop a two-way flow of knowledge which helps to boost university-based research and facilitate the flow of technology, from university to business sector. In order to refine the MIT approach and to transplant it to the UK, the British government in 2000 created the Cambridge-MIT Institute (CMI) and is using it as a vehicle to launch a Knowledge Integration Community (KIC) model to enhance the fruitfulness of university industry links [26]. Under this unique knowledge exchange model four essential components have been put together – Government, Education, Industry, and Research



The six-component model of a Knowledge Integration Community (Industry, Government, Research and Education) through two binding mechanisms: knowledge exchange (KE) and the study of innovations in knowledge exchange [27]. The model has proposed integration between university, industry and government to facilitate mutually beneficial collaborated effort.

PPPs have been strategically used by Asian countries to increase their competitive strength and suitably equip them to deal with global super powers. Japanese Ministry of Economy, Trade and Industry (METI) set a target of establishing 1000 PPPs by March 2005. This figure exceeded expectations with major contributors from Tokyo University, Waseda University and Osaka University. This increased number of PPPs in Japan was a direct result of the favourable policies by the government. This makes it amply clear that a well defined policy framework alone can result in successful university industry collaborations.

In China, approximately RMB 2.2 billion had been poured in from the republic's coffers itself which accounts for nearly 50% of the total R&D funds [28]. Moreover, research projects championed by industry were further provided incentives by matching funds from government. Japan too had extended extensive monetary support to public universities and national laboratories though the country's economy was experiencing heavy deficit. In Malaysia, the Ministry of Higher Education (MOHE) has allocated a total of MYR 3.1 billion between 2006-2010 for research under the 9th Malaysian Plan in which MYR 336 million had been approved out of a MYR 285 million allocation for the Fundamental Research Grant Scheme[29], indicating a firm commitment to support university industry collaborations (UICs) .

INDIAN INITIATIVES

Corporate houses can actively participate in industry led skill development programmes and channelize funds allocated for corporate social responsibility in supporting skill development initiatives. They can play an important role in re orienting the existing skills development infrastructure in India to suit the changing market dynamics.

Many large corporations like Larsen & Toubro, Bharti Group, Hero Group, Maruti, ITC, Infrastructure Leasing & Finance Services Ltd. Etc., have established training facilities that offer world class training programs that create an environment of e-learning and innovation. The Sector Skills Council (SSC) model, which is a National Partnership Organization that brings together academia, industry, labour and the government, has been adopted from the UK, has proved useful in addressing human resource gaps in the country

Gram Tarang Employability Training Services Limited (Ltd) (GTETS), is a initiative by the Centurion Group of Institutes (CGI) with a purpose to promote employability training for the youth of India. GTETS provides technical training, building cognitive and practical abilities, and promoting required change in the social and behavioral traits of candidates to make them employment ready for specific industries. This intervention is focused at the bottom of the economic pyramid in the eastern states of India, providing practical solutions to skill gaps among disadvantaged young people. GTETS is planning to set up over 50 satellite centers across the states of Jharkhand, Assam and Meghalaya. [30]

The Tata Motors's PPP initiative is a prominent example as it has effectively used the core competency of the industry to harness best results from the initiative. Tata Motors is a partner to 135 government run industrial training institutes across the country. It trains nearly 10,000 youth per year in the field of vehicle repair and maintenance. This linkage has clearly supported community's employability needs and the industry's requirement of skilled manpower.

BENEFITS

Public Private Partnership gives great impetus to the research initiatives of an educational institute. It acts as a great enabler in integrating real time research exposure into its curriculum. PPPs provide a major platform for universities to transfer technology, rejuvenate research and improve the curriculum on top of eventually possibly being a prime avenue for the sustainability of the research faculties [31]

Several studies have revealed that development of human capital is relatively more cost effective through PPPs than engaging private training centers.

Studies have shown that companies that collaborate with universities typically have higher productivity rates than companies that do not have such collaboration [32]. Companies that collaborate with universities benefit from enhanced research and development which leads to improved productivity at reduced cost.

A combination of good education with training that is of good quality and is relevant to the labour market –

- empowers people to develop their full capacities and to seize employment and social opportunities;
- raises productivity, both of workers and of enterprises;
- contributes to boosting future innovation and development;
- encourages both domestic and foreign investment, and thus job growth, lowering unemployment and underemployment;
- leads to higher wages;
- when broadly accessible, expands labour market opportunities and reduces social inequalities. [33]

METHODS

There are several methods used for employer engagement in skill development partnerships. One of the most important and effective mode used, has been supporting research activities of the campus students. Several industries have partnered in the set up and functioning of incubation centers at universities.

A unique mode of contribution through PPP during the current decade, has been development of industry oriented courses by the industry for the colleges/universities. This initiative partnered at several colleges by TCS, Wipro, Infosys, Toyota and various banks works as a win win situation. These courses are contemporary, practical in nature and developed keeping in mind the latest market skill requirement.

Some of the conventional methods of partnership are:

Work Based Learning (WBL) – During the course of study the application of theory is taught through industry intervention

Work Related Learning (WRL) – The student attends work for hands on practice learning and the same is a part of the academic program (eg. Nursing/teaching)

Work Experience Learning (WEL) - Three main categories of WEL are reported: organised work experience as part of a programme of study; organised work experience external to a programme of study; and *ad hoc* work experience external to a programme of study.[32]

Sandwich Based Learning (SWL) – A part of the academic program is scheduled for practice learning and is allotted due weightage.

Apprenticeship - Work as a trainee before being fully absorbed on the job if found suitable

The industry has also very successfully contributed through curricula development, field visits, membership on advisory boards of educational institutes, extending live/research projects and consultancies, partnering research incubating centers at educational institutes.

CHALLENGES:

Culture differences, bureaucracy and inflexibility of universities' processes and policies, lack of well-designed reward mechanisms and inefficient management of knowledge transfer transactions act as barriers to knowledge transfer between academia and industry [34]

The fixed mindset and traditional methods of pedagogic delivery restrain the academicians from implementing practice based learning

Inadequate knowledge and resistance to change acts as a barrier in effective implementation of experiential learning

The small and medium enterprises have not encouragingly participated in the initiative over the years

The commitment of industry is more concentrated towards curricula development and inputs towards policy changes. However extending work place training is not much forthcoming

There are no set parameters to evaluate the effectiveness of these initiatives
Employer engagement may not be consistent especially during recession as the benefits outweigh the economics
The corporates need to be clearly communicated regarding the requirements and their role in the partnership.

SUGGESTIONS:

When corporates put in efforts and time = cost it may or not eventually result into direct and immediate benefit to the organization. Hence, the Government must look into extending financial support (especially to SMEs) and preferential treatment to industries participating in the skill development initiative
Industries can adopt educational institutes to provide skill based education to its students using mutually beneficial methods.
The academic leaders must work closely with the employers to facilitate effective delivery of the program
The failure of effective employer engagement may be due to apparent lack of understanding of the academic and administrative nuances by the industry professionals. Hence a trained adviser should be appointed to liaison between the industry and academic institution to establish and sustained partnership which is monitored and evaluated at intervals.
Active participation of industry in research promotion and support to incubation centers in educational institutes should be encouraged.
Establish contracts with industry which can extend short term real life projects which can be of commercial interest to the industry partner
A proactively supportive role of the government through professionally planned and executed policy decisions will go a long way in the sustained success of PPPs in skill development.

MEASURING LEARNING OUTCOMES
Developing effective and objective methods for measuring and reporting of learning are important in the process of effective employer academia partnership. This will play a catalysing role in making State & district education administrators to focus more on improving education quality as measured by grade wise student knowledge up gradation

LEARNING FROM INTERNATIONAL EXPERIENCE.

There are several international initiatives that have moved focus from enrolment to learning outcomes. UNESCO and the Centre for Universal Education (CUE) at the Brookings Institution have set up a 'Learning Metrics Task Force' to study the feasibility of common learning goals to improve learning outcomes. India should play a leading role in defining and implementing learning outcome measurement standards, since it has the largest primary school education system in the world

VOCATIONAL EDUCATION

Vocational education is an important contributor towards creating educational opportunities which enhance individual employability and reduce the mismatch between demand and supply of skilled manpower. Currently vocational education is being offered by various ministries, private initiatives, vocational education institutes and technical schools. To bring about outcome oriented learning from the vocational training it is pertinent that a structured approach is brought into force. A complete revamping of the methods, equipment and facilities used for training, restructuring duration of courses which allow flexibility of entry and exit into job market at different levels, is necessary so as to achieve desired results.
To make the vocational education effective and inclusive it is essential that the student is able to select from a wide option depending upon his interest aptitude and economic capacity
A firm resolve should be made to improve the overall learning experience of a student through

improved infrastructure facilities and well equipped and trained teachers.

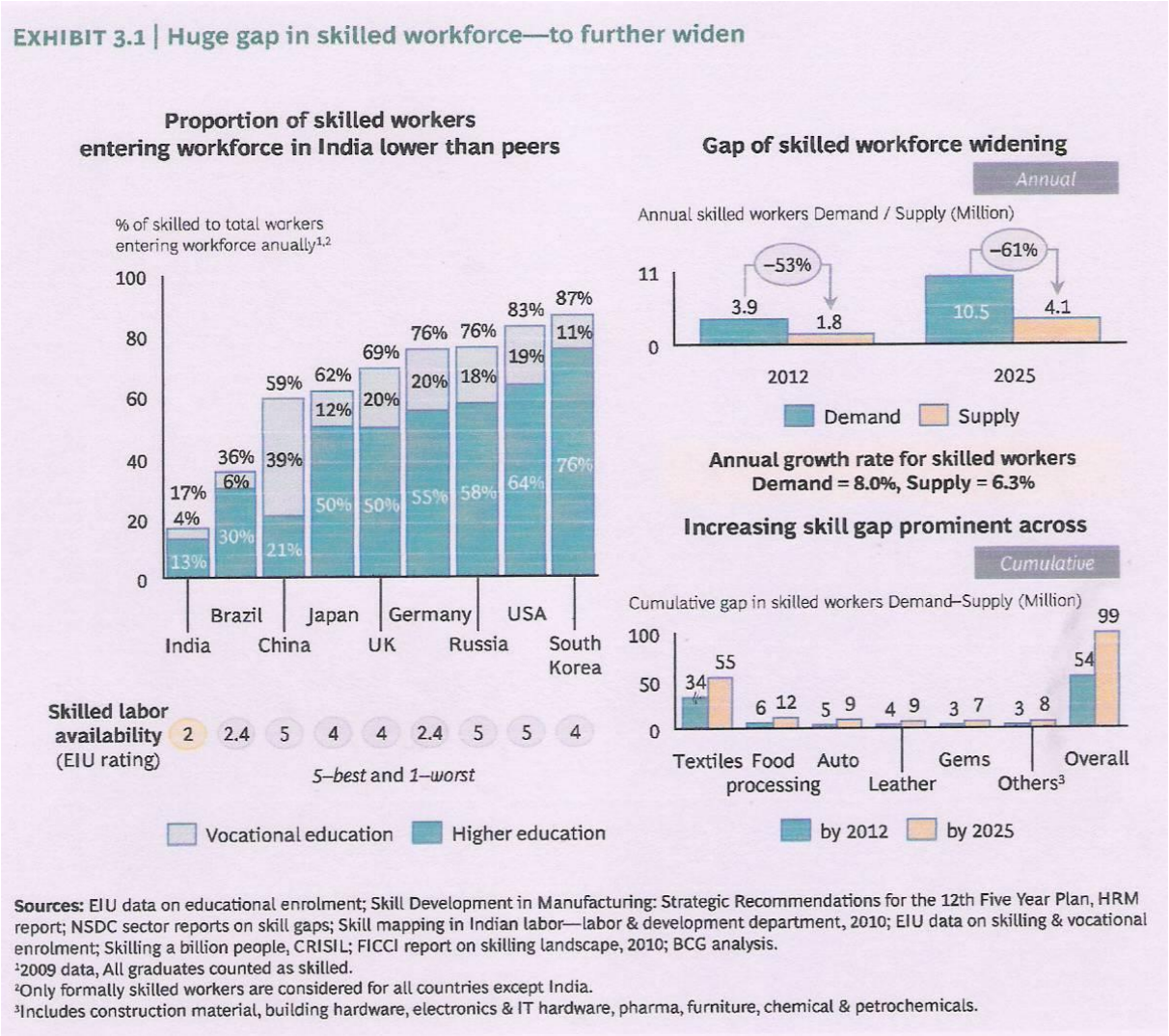
A well researched and regularly revised curriculum to amply meet the demands of the market driven economy should be in place.

Competency-based innovative electives should be developed and offered to facilitate skill development at the right stage.

Skill formation should be mainstreamed by integrating on job experience with the support of industry, to ensure job ready students on completion of the program

To make learning outcomes more applicable from employability point of view it will be important that vocational training is not left to be trained through vocational institutes alone. It should become a part of the mainstream education system from VIII grade onwards. Moreover industry partnership will play a pivotal role in facilitating on job experiences for the students

In India, only 4 per cent of the population of 19–24 age group has acquired some sort of skills through vocational education, while the corresponding figure for Korea is as high as 87 per cent.



Sources: EIU data on educational enrolment; Skill Development in Manufacturing: Strategic Recommendations for the 12th Five Year Plan, HRM report; NSDC sector reports on skill gaps; Skill mapping in Indian labor—labor & development department, 2010; EIU data on skilling & vocational enrolment; Skilling a billion people, CRISIL; FICCI report on skilling landscape, 2010; BCG analysis.

[1]2009 data, All graduates counted as skilled.

[2]Only formally skilled workers are considered for all countries except India.

[3]Includes construction material, building hardware, electronics & IT hardware, pharma, furniture, chemical & petrochemicals.

At this juncture factors resulting in the impressive success of China in Skill Development and Employability generation is worth a reference.

- Chinese Government has extensively invested in vocational training and more than 50% of secondary level students undergo vocational training compared to not more than 5% of Indian youth.
- The infrastructure to train 20 million students has been created in China as compared to 2 million in India [data source BCG CII report]
- PPP is a serious affair with every student to undergo atleast one year industrial training to get the diploma.
- Favorable Government policies and flexible curricula makes education - Industry specific.
- It is mandatory for the vocational course teachers to undergo atleast 1 month of industrial training every year.

CONCLUSION

The benefits of Public Private Partnership are immense hence it is pertinent that the Industry i.e. the private sector along with the Public sector i.e. the government and educational institutions work in a holistic manner to develop sustained solutions towards skills development for the large section of young manpower of India. Globalisation, continual technological innovation, knowledge capitalism and the need for a competitive economy have all had a highly significant impact on the nature of the range of skills and competency formation needed to establish the desired future knowledge based work force [35]

It is well accepted by governments and industry that economic development can be only knowledge led. Therefore, it is imperative that considerable attention and efforts are directed towards enabling skill development in the pursuit of generating wealth through knowledge creation.

The paradigm shift towards global knowledge exchange has brought forward the concept of open innovation. The global organizations will have to optimally utilize the Knowledge Transfer Practice and reap in the benefits to remain competitive. In a globalised business environment, for the national economies to remain competitive the academia industry partnership will play a critical role. Several studies have revealed that for developing strategies and road maps that can lead to sustainable and inclusive growth it is necessary that an effective industry government and university partnership is established.

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