Job Creation and Skill India

A Hard Sell

By

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Job Creation & Skill India: A Hard Sell

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STRUCTURE OF THE REPORT

This report is divided broadly into three parts.

Part I: Introduction to the topic and Overview of the Manufacturing Sector in India with regard to employment statistics

Part II: Demand and Supply side barriers to Job creation in the manufacturing sector in India

Part III: Conclusion & Recommendations for the Job Creation & Skilling Initiatives

PART I

Job Creation & Skill India: A Hard Sell

INTRODUCTION

India has a large young population with 60% of the total, lying in the age group of 15 to 59 (Kapoor, 2014). But how many of them are properly skilled and employable? With the opening up of the economy and privatization, there has been significant growth in the Indian economy, however this progress has occurred against a background of weak employment performance. From 2005-2012 when India's GDP grew at an average of 8.3% per annum, employment growth was a paltry 0.4% - 1.3 crore jobs in 7 years (Aggarwal, 2014). The key underlying reason for this jobless growth is the path that India adopted by shifting directly from agriculture to services and leapfrogging the industrial phase. There was an attempt to absorb the labour force leaving agriculture into the tertiary sector, but this sector has high formalized education requirements and the lack of quality subsidized education institutions meant that only a few could afford it and thus a very small percentage of the agrarian labor force were able to actually be a part of this economic development. The others were forced to treat the services sector as the home of last resort— the shelter for the millions of migrants who have made their way to the cities from the rural sector. People who shine shoes, petty retailers, and middlemen: they all get lumped under the broad rubric of services because there is no other appropriate category. India has been somewhat successful in bringing people out of poverty with its services based approach, most of them still linger in small service sector roles with no vertical progression. But inclusive economic development needs widespread job creation, improvements in human capital, poverty reduction and the creation of a sizable 'middle class' to fuel consumption. Services cannot alone support all these objectives and therefore it is imperative that the manufacturing sector needs to step up and share the load.

According to Census 2011, India's unemployment rate grew from 6.8% in the year 2001 to 9.6% in 2011. Taking this into account, the Union Government, under Prime Minister Narendra Modi, started 2 programs as part of wider nation building initiatives that will help create jobs and provide people with skills to get employed – **Make in India and Skill India**.

Make in India is aimed at encouraging Indian as well as foreign investors to invest in manufacturing in the country, to make India a design and manufacturing hub (Govt of India, 2016). This would help the manufacturing sector grow, support our GDP and help in creating jobs i.e. be the source for demand of jobs for the young population

Skill India, on the other hand, is a program aimed at training the Indian labour force, to make them employable (Press Trust of India, 2015) i.e. be the source of supply of skilled manpower for the jobs created.

Both of the above programs have the potential to uplift the society and help improve people's socio-economic status. However, it is important that both these programs tie-in properly together.

Goals set for Make in India and Skill India are as follows:

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1. The government hopes that 100 million new jobs would be created from 2012 to 2022 (Rica Bhattacharya, 2016). This would mean creation of 10 million or 1 crore new jobs per year specifically in the manufacturing sector. A sub part of this goal would be creation of 65 million jobs in the Auto sector by 2026 through the 'Automotive Mission Plan 2026' ()

2. Make in India will help India become one of the top 3 manufacturing destinations in the world by 2020 (Govt of India)

3. Make in India will help increase the contribution of manufacturing sector to India's GDP to 25% as opposed to 17% in FY15 (Krishnamoorthy, 2015)

4. Skill India hopes to train 400 million or 40 crore people in India from 2012 to 2022.

As part of this study we aim to analyse the goals relevant to job creation and supply of skilled manpower i.e. Goals 1 & 4.

Figure 1: Summary of Job Market in India

INDIAN MANUFACTURING SECTOR: THE PAST DECADE

Manufacturing is one of the major sectors in the Indian economy, accounting for ~17% of the real GDP in FY15 and employing ~12% of the country's labour force. From FY05-12, the growth in this sector has been moderately strong at a CAGR of 8.5%, outpacing the overall GDP growth at 8.4% till 2012. As a consequence, the sector's share in the economy has grown through the years. High growth has been accompanied by an increase in productivity and profitability for the manufacturing sector (India Brand Equity Foundation, 2013).

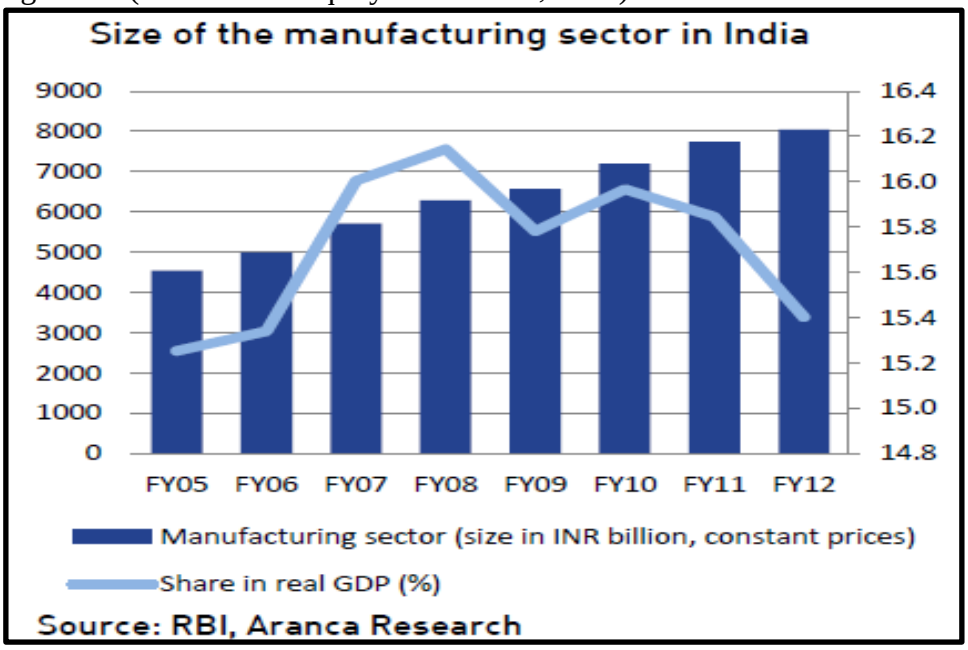

Figure 2A: Growth of Manufacturing Sector in India

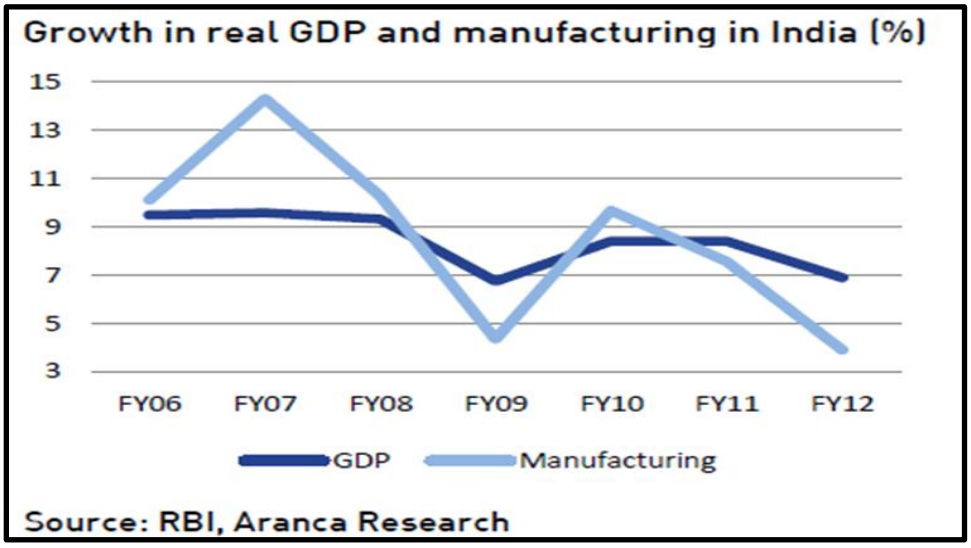

Figure 3B: Real GDP Vs Manufacturing Sector growth

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The sector growth has been sluggish since capital investment has reduced after FY13. Additional capacities are being planned for installation for all the major manufacturing units and to promote MSMEs (Micro Small and Medium Enterprises), a public procurement policy, incorporating technology, has been proposed, along with common facility centers.

EMPLOYMENT TRENDS

According to an ASSOCHAM report, the manufacturing sector recorded a 28.5% growth in employment generation during the 11th Plan period of 2007-12 – 2.9 million additional jobs were created in the manufacturing sector. (Press Trust of India, 2014).

Among all the states, Tamil Nadu topped the charts with 14.5% share in the total jobs generated by manufacturing industries across the country. Maharashtra took second place with 14% and Gujarat, third, with a 10% share.

In terms of growth rate of employment generation during the 11th Plan period, the highest was recorded in Uttarakhand. Others in the growth rate race were Bihar (71.8%), Himachal Pradesh (70%), Odisha (54%) and Maharashtra (38.8%) that successfully recorded high growth rates (Chakraborty).On the other hand, Chhattisgarh (19%), Uttar Pradesh (15%), Haryana (14 per cent), Kerala (10.5 per cent) and Punjab (9 per cent) recorded the slowest growth rate in employment generation (Chakraborty).

The ASSOCHAM report further says that the Indian manufacturing sector is undergoing a revival phase. With improved economic performance, the sector may help in generating about 3.2 million additional manufacturing jobs during the 12th Plan period from 2012-2017 (Press Trust of India, 2014).

MANUFACTURING PERFORMANCE AT STATE-LEVEL

Though there have been positives to the manufacturing side, it must be noted that the sector hasn't been able to be the principal contributor to the states' economies over the last 3 decades, similar to the national performance. The contributions have varied between 3 to 32 per cent across states. While some states like Gujarat, Punjab, Haryana and Bihar have witnessed significant increase in share of manufacturing sector, West Bengal and Tamil Nadu have seen a consistent decline.

While the share of incomes is illustrated in Figure 3A, it might help to further understand the performance of states in terms of employment share. Over the last 3 decades, 7 out of 15 states have seen decline in their share of total employment from manufacturing. A direct relationship between income share and employment shares holds for most of the states except Tamil Nadu, Kerala, Gujarat and Uttar Pradesh. Refer to Figure 3B.

Share of manufacturing sector in NSDP

States	1980-81	1990-91	2000-01	2007-08
Andhra Pradesh	8.2	11.9	11.5	11.5
Assam	9.9	9.8	8.1	9.2
Bihar	3.3	4.7	14.5	12.4
Gujarat	17.7	24.7	24.6	26.5
Haryana	13.5	19.0	18.9	18.0
Karnataka	14.8	19.0	14.4	14.7
Kerala	10.8	11.8	11.1	8.8
Madhya Pradesh	10.2	13.2	14.2	12.1
Maharashtra	24.8	25.5	20.4	20.3
Orissa	7.8	8.4	8.8	12.7
Punjab	8.8	12.9	14.7	15.1
Rajasthan	11.5	11.6	14.0	12.4
Tamil Nadu	31.9	28.1	21.8	21.0
Uttar Pradesh	8.6	13.2	11.6	11.3
West Bengal	20.2	17.0	16.1	14.7
Mean	13.5	15.4	15.0	14.7

Figure 1A: State-wise share of Income contributed by the manufacturing sector

Share of states in employment 1980–81 to 2007–08

States	1980-81 to 1989-90	1990-91 to 1999-2000	2000-01 to 2007-08	1980-81 to 2007-08
AP	9.6	10.9	10.8	10.4
Assam	1.6	1.5	1.4	1.5
Bihar	4.6	3.5	2.3	3.6
Gujarat	9.9	9.3	9.3	9.5
Haryana	2.8	3.4	4.2	3.4
Karnataka	5.0	5.7	6.5	5.7
Kerala	3.2	3.7	3.7	3.6
MP	4.3	4.5	3.6	4.2
Maharashtra	17.3	15.5	14.0	15.7
Orissa	1.6	1.7	1.6	1.6
Punjab	3.7	4.1	4.7	4.1
Rajasthan	2.3	2.7	3.1	2.7
Tamil Nadu	11.4	13.2	15.2	13.1
Uttar Pradesh	9.2	8.3	7.6	8.4
West Bengal	11.8	8.6	6.2	9.1

Figure 2B: State-wise share of employment contributed by the manufacturing sector

COMPETITIVENESS INDEX

Even though the above signs indicate a positive outlook for the Indian Manufacturing sector, the Manufacturing Competitiveness Index tells a different story. While in 2013, India was ranked number 4 on the list, the ranking has dropped considerably in 2016, taking India to number 11.

Current Competitiveness Index

Country	2016		2013 Rank	Trend
	Rank	Index score		
China	1	100.0	1	=
USA	2	99.5	3	▲
Germany	3	93.9	2	▼
Japan	4	80.4	10	▲
South Korea	5	76.7	5	=
United Kingdom	6	75.8	15	▲
Taiwan	7	72.9	6	▼
Mexico	8	69.5	12	▲
Canada	9	68.7	7	▼
Singapore	10	68.4	9	▼
India	11	67.2	4	▼

Figure 4: Manufacturing Competitiveness Index

India' lack of global competitiveness in the manufacturing sector can be attributed to 4 reasons:

1. The age old **policies of industrial protectionism** prevalent in India meant that manufacturers never had to face true competition and now that they do, they are unable to cope with their international counterparts.
2. Indian workers are **4 to 5 times less productive** in than their counterparts in China or Thailand. (IMC - Economic Research and Training Foundation, 2014)
3. In terms of **production planning, supply chain management and product quality**, Indian manufacturers lag behind their foreign peers further decreasing their productivity levels
4. Lack of foresight on the part of the Indian government to develop **power and transport infrastructure to meets the needs of the future economy**; absence of an industrial policy; dismantling controls of the DGTD

PART II

DEMAND SIDE: JOB CREATION – REALITY CHECK

Under this section we aim to analyze the possible reasons that could hamper job creation via the Make in India program. They have been grouped into 4 main headers.

Is Export Led Growth the correct strategy for India to create new jobs in the 21st century?

↓

Global Trade Slowdown: If answer to the previous question is yes, is there even enough demand globally to accommodate a new manufacturing based economy and create new jobs ?

↓

Capital Requirements: If answer to the previous question is yes, How much amount of fixed capital investment is needed to create jobs as per the proposed plan? Is this feasible?

↓

FDI Inflows: Even if we get this quantum of FDI, where does the FDI into India come from and where does it go to: Capital Intensive vs Labour intensive industries? Moreover, which states does this FDI go to? Is this matched with the demographic dividend of the country? If not, are these areas sufficiently prepared to handle mass migration in terms of infrastructure?

DECLINE OF EXPORT LED GROWTH

Export led growth has been a successful development strategy for several decades, but there have also been clear signs of fraying. (I.Palley, 2011)

Stage I: In this stage countries had their own indigenous industrial base & home grown technologies and export growth was triggered by an undervalued exchange rate. Germany and Japan during the 1945 to 1970 period were the pioneers of this stage.

Stage II: This stage lasted from 1971 to 1985 and captures the performance of the four East Asian Tiger economies. Under-valued exchange rate played a key role again, but now foreign technology acquisition also played a key role.

Stage III: This stage is captured by Mexico's export led growth and **NAFTA Model**. The countries in this stage positioned themselves as manufacturing hubs for foreign MNCs, rather than developing their own industries. They aimed to enhance their trade competitiveness to become attractive destinations for foreign direct investment by MNCs. Under the NAFTA model there are 3 main features. First, it promotes trade but not the **classical trade of balanced exports and imports**. Second, it is based on relocating existing production and diverting new investment, that benefits emerging market economies by creating jobs, transferring technology, and relieving balance of payments constraints on growth. However, these economies do not own the industrialization process as was the case in stages I and II. Third, it does considerable damage to developed economies via deindustrialization, creation of international financial imbalances, and undermining the wage–productivity growth link which in turn undermines the coherence of the domestic income and demand generation process.

Stage IV: This stage is an extension of Stage III and is truly captured by China's performance. Under this model 3 main changes were made to the NAFTA Model i.e. **asymmetric global engagement with high import tariff barriers**, **capital controls to manage an under-valued currency & development of national technology base based on JVs where MNCs where minority stakeholders, forced sharing of technology and IPR theft**. The MNCs which were initially hesitant to comply with this model, eventually gave in because they considered this as the price for entry into the huge Chinese market, hoping they can make profits later.

Now **India's Make in India objectives resonate with the Stage III model** in its ways of incentivizing MNCs to setup manufacturing plants in India and use it as an export platform. India is not in a position to use the Stage IV model as it lacks China's bargaining position. Although the Indian market is almost equally lucrative as China's, the MNCs have been doing business in the Indian market for a long time post liberalization in the 1990s and don't have to pay the price for entry. Participants in the Stage III model such as Mexico have been fairly less successful compared to China and other Stage IV participants. This is clearly evident if we compare the **GDP growth, labour productivity and Total factor productivity** of different stage participants in this strategy.

Source: Palma (2010)	GDP Growth		Labour Productivity		Total Factor Productivity		
	1950 - 1980	*1980 - 2008*	*1950 - 1980*	*1980 - 2008*	*1960 - 1980*	*1980 - 1989*	*1990 - 2004*
Mexico	6.40%	2.60%	3.10%	-0.10%	1.60%	-2.40%	-0.60%
China	4.90%	8.50%	2.00%	6.70%	0.60%	4.20%	4.70%

Figure 5A: Stage III vs Stage IV - Comparison of impact on GDP

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Mexico's GDP growth has been sluggish since 1980, while TFP and labour productivity have been negative. Therefore there are clear signs to believe that export led growth may not be the most suitable strategy for India or other developing economies in the future to create new jobs. This is due to 3 main structural problems. (I.Palley, 2011)

1. **Debt Saturation of the Developed economies**: The Stage III model was based on robustness of the demand generated out of the consumer markets in the developed economies specially US. For over 3 decades, these markets were fueled by debt and asset price inflation, without realizing that this model was unsustainable. Now most of the developed nations are debt ridden and hence leaving a gaping hole in the export led strategy.
2. **Pattern of Trade in the China centric global supply chain**: China's growth model is based on playing the role of an assembler of goods from other East Asian economies and then distributing it to industrialized nations. Therefore, China now occupies a unique position in the global supply chain, where replacing it with a new destination would be extremely cumbersome for most of the MNCs involved. The share of East Asian exports going into China has been rising and India currently does not have the infrastructure to disrupt this supply chain.

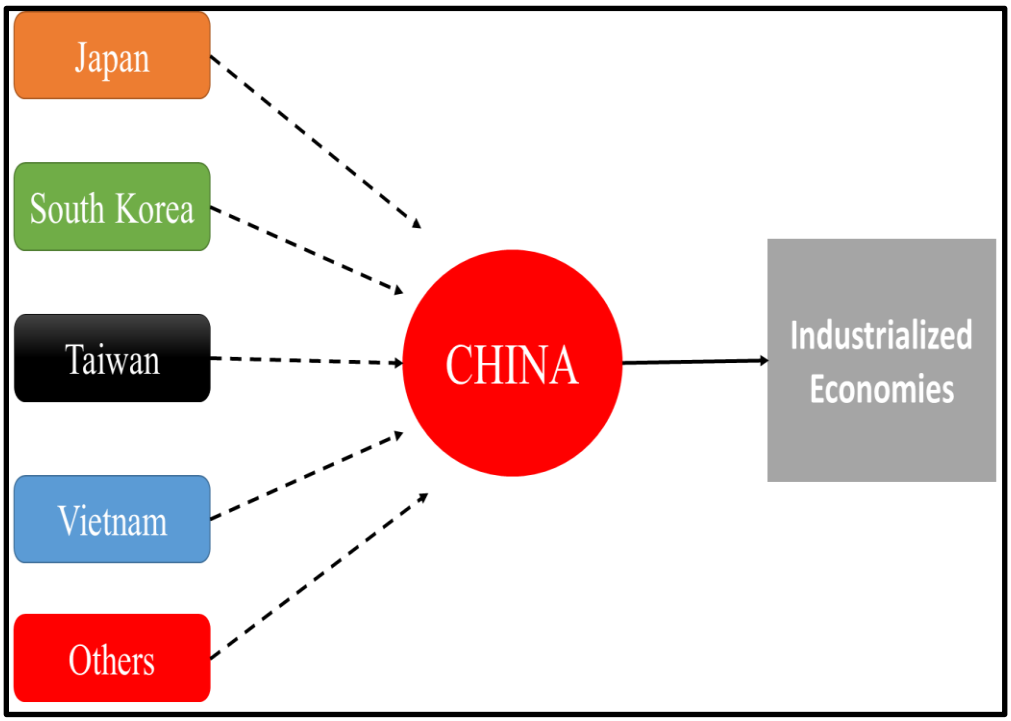

Figure 6B: Stylized Representation of the China Centric Global supply chain

3. **Destructive Competition:** By incentivizing MNCs to shift production between countries, the emerging economies are undermining each other. The critiques like to call this "**The global race to the bottom**". Each country is trying to get ahead by using a mix of **wage suppression, labour exploitation and suppression of business regulations & environmental standards**. Effectively none of the countries gain a sustainable competitive advantage. For deeply rooted development, using these tactics to create jobs in India is not the correct approach.

GLOBAL TRADE SLOWDOWN

After the global financial crisis of 2008, trade volumes have recovered but the growth has been sluggish and nowhere close to the pre-crisis numbers. After a solid post-recession rebound in 2010 of 13%, trade volumes grew by 6.2% in the year 2011, 2.8% in 2012 and 3% in 2013 (Figure 1). These numbers are well below the average trade growth of 7.1% during the pre-crisis period (1987-2007) and are slightly below the world GDP growth rate in real terms, which has been close to 3% in the recent years. These recent developments in international trade growth are now commonly referred to as the "Global Trade Slowdown" (IMF Working Paper Series, 2015).

A key concern of this slowdown is its impact on India's exports. The extent to which the global slowdown will affect a country's exports can be understood from the extent to which the country's trading partners have been affected by the slowdown and their level of export dependence. In the 1990s, greater than 50% of India's exports were going to the OECD markets, with 28% going to EU markets and around 15% to the USA. Around 16% went to the developing nations, with the Asian markets being more dominant. A similar percentage went to the Russian Federation. Over time, these numbers have changed and there has been some diversification in terms of the direction taken by India's exports. The share of the EU has declined to 20% in 2007–08, while the share of the USA has declined to 13%. The share of the United Arab Emirates has increased to 9.7% in 2007–08 from a meagre 4.5% earlier. A considerable increase has been observed in the share for developing countries in Asia, in India's export basket. Going up from 23% in 1995–96 to 31.5% in 2007–08. However, a majority portion of India's exports i.e. 33% still go to the United States and EU (UNCTAD, 2013), which are somewhere at the epicenter of the slowdown and hence this could impact Indian trade and the associated jobs adversely. This is already evident as employment in export units, reeling under shrunken global demand saw a sharp decline. **There were only 5,000 job additions in the first half of FY 2016 compared with 271,000 in the corresponding period of FY 2015. In the automobile sector, for instance, there were 23,000 job losses in export units compared to the 26,000 job additions in the other seven labor-intensive sectors in the second quarter of FY 2016**. (Shweta Punj, 2016). Other sectors likely to be impacted include labor intensive sectors such as textiles and textile products, ores and minerals, marine products and gems and jewelry, while capital intensive sectors such as engineering products and petroleum products will be least affected. Therefore, the global trade climate is not conducive to creation of 10 million new jobs per year in India. Moreover, this raises another key concern: Should India be focusing on export driven strategy for creation of jobs in the manufacturing sector or should the focus be more towards domestic demand i.e. "**Make for India**". The current RBI governor Raghuram Rajan has also cautioned against the current policies of Make in India for job creation because the global demand is expected to remain muted for the next 5 years.

CAPITAL REQUIREMENTS FOR JOB CREATION

Based on the Annual Survey of Industries for 2013-2014, **an investment of Rs.12.73 crores on Fixed Capital, created gainful employment for 73 workers** (Ministry of Statistics and

Programme Implementation, 2014). Under the current incentive driven strategy, the Indian government plans to open up sectors to FDI to attract foreign investments. If we were to assume that the current ratio of **Fixed Capital to New workers added** is maintained, to create 10 million jobs every year, we would need an annual fixed capital investment of Rs.17.43 trillion or 268.28 billion USD. If we set an optimistic target of 50% of this investment coming in form of FDI and going into the manufacturing sector, considering that most of initiatives under Make in India have been tailor made to the requirements of foreign investors, we are looking at an annual FDI requirement of 134 billion USD, an unrealistic figure considering India's total FDI during April 2014 – March 2015 stood at 30.9 billion USD (Department of Industrial Policy and Promotion, 2015) representing 1.7% of its GDP. Expecting a further 400% increase in FDI inflows and maintaining the same over the next 10 years to meet its job creation goals would be excessive optimism on part of the Indian government. Moreover China's export led growth policy is a major roadblock in achieving these FDI numbers. Since China's labor force is so large and wages are so low, it will continue to siphon large chunks of FDI from the developed nations, leaving the other emerging economies to play with the left overs.

FDI INFLOWS: SOURCE, NATURE, SECTORS AND STATE-WISE DISTRIBUTION

The Make in India initiative has been aimed at dramatically boosting Foreign Direct Investment in India. After the September 14 launch of the initiative, there was an initial increase of almost 40% in FDI between October 2014 and June 2015, but while people tend to notice the 61.6% growth over the previous fiscal year, salient features of FDI are often ignored.

The first among them is the source of FDI inflows. In financial year 2015, **48% of FDI inflows came in from Mauritius and Singapore i.e. tax havens and offshore financial centers**. Therefore, these cannot be considered original sources of financing considering the possibility of round tripping of funds. They may or may not constitute actual investments and maybe are just diversions from other sources to avail of tax benefits under the Double Tax Avoidance Agreement. The government needs to examine their authenticity.

SHARE OF TOP INVESTING COUNTRIES FDI EQUITY INFLOWS *(Financial years):*

Amount Rupees in crores (US$ in million)

Ranks	*Country*	*2012-13 (April - March)*	*2013-14 (April – March)*	*2014-15 (April '14- January, 2015)*	*Cumulative Inflows (April '00 - January '15)*	*%age to total Inflows (in terms of US $)*
1.	MAURITIUS	51,654 (9,497)	29,360 (4,859)	46,663 (7,662)	417,148 (86,187)	36 %
2.	SINGAPORE	12,594 (2,308)	35,625 (5,985)	32,152 (5,262)	157,959 (30,707)	13 %
3.	U.K.	5,797 (1,080)	20,426 (3,215)	6,906 (1,148)	107.791 (21,911)	9 %
4.	JAPAN	12,243 (2,237)	10,550 (1,718)	9,802 (1,611)	90,446 (17,879)	7 %
5.	NETHERLANDS	10,054 (1,856)	13,920 (2,270)	19,094 (3,136)	75,393 (14,371)	6 %
6.	U.S.A.	3,033 (557)	4,807 (806)	9,646 (1,582)	65,376 (13,510)	6 %
7.	CYPRUS	2,658 (490)	3,401 (557)	3,104 (513)	38,834 (7,959)	3 %
8.	GERMANY	4,684 (860)	6,093 (1,038)	5,018 (821)	36,623 (7,340)	3 %
9	FRANCE	3,487 (646)	1,842 (305)	3,617 (592)	22,323 (4,471)	2 %
10.	SWITZERLAND	987 (180)	2,084 (341)	1,792 (293)	14,895 (3,009)	1 %
TOTAL FDI INFLOWS FROM ALL COUNTRIES *		121,907 (22,423)	147,518 (24,299)	155,489 (25,525)	1,199,919 (243,228)	-

**Includes inflows under NRI Schemes of RBI.*

Note: (i) Cumulative country-wise FDI equity inflows (from April, 2000 to January,, 2015) are at – Annex-'A'.

(ii) %age worked out in US$ terms & FDI inflows received through FIPB/SIA+ RBI's Automatic Route + acquisition of existing shares only.

Figure 6A: Source of FDI Inflows into India

The second feature we need to examine is the sector-wise breakdown of FDI inflows. If the FDI inflows are to be used for job creation in the manufacturing sector, they need to be directed towards the labour intensive industries. Currently, the sectors attracting highest FDI equity inflows in India are **Services – 17%** (Financial, Banking, Insurance, Non-Financial, R&D, and Testing), **Telecommunications – 7%** and **Construction – 10%**.

SECTORS ATTRACTING HIGHEST FDI EQUITY INFLOWS:

Amount in Rs. crores (US$ in million)

Ranks	Sector	2012-13 (April - March)	2013-14 (April-March)	2014-15 (April '14-January, 2015)	Cumulative Inflows (April '00 - January '15)	% age to total Inflows (In terms of US$)
1.	SERVICES SECTOR **	26,306 (4,833)	13,294 (2,225)	16,159 (2,642)	201,728 (42,101)	17 %
2.	CONSTRUCTION DEVELOPMENT: TOWNSHIPS, HOUSING, BUILT-UP INFRASTRUCTURE	7,248 (1,332)	7,508 (1,226)	4,359 (722)	112,916 (24,028)	10 %
3.	TELECOMMUNICATIONS (radio paging, cellular mobile, basic telephone services)	1,654 (304)	7,987 (1,307)	16,978 (2,832)	83,697 (16,995)	7 %
4.	COMPUTER SOFTWARE & HARDWARE	2,656 (486)	6,896 (1,126)	8,023 (1,308)	67,694 (14,125)	6 %
5.	DRUGS & PHARMACEUTICALS	6,011 (1,123)	7,191 (1,279)	7,559 (1,259)	63,630 (12,856)	5 %
6.	AUTOMOBILE INDUSTRY	8,384 (1,537)	9,027 (1,517)	12,529 (2,045)	60,725 (11,857)	5 %
7.	CHEMICALS (OTHER THAN FERTILIZERS)	1,596 (292)	4,738 (878)	3,408 (562)	48,642 (10,230)	4 %
8.	POWER	2,923 (536)	6,519 (1,066)	3,704 (612)	46,359 (9,512)	4 %
9.	METALLURGICAL INDUSTRIES	7,878 (1,466)	3,436 (568)	2,488 (406)	40,738 (8,481)	4 %
10	HOTEL & TOURISM	17,777 (3,259)	2,949 (486)	3,990 (656)	40,198 (7,774)	3 %

*Note: (i)** Services sector includes Financial, Banking, Insurance, Non-Financial / Business, Outsourcing, R&D, Courier, Tech. Testing and Analysis*

(ii) Cumulative Sector- wise FDI equity inflows (from April, 2000 to January, 2015) are at - Annex-'B'.

(iii) FDI Sectoral data has been revalidated / reconciled in line with the RBI, which reflects minor changes in the FDI figures (increase/decrease) as compared to the earlier published sectoral data.

Figure 6B: Sectors attracting highest FDI Inflows

Now if we compare this with the labour intensity for industries in India, we see that most of the FDI is being directed into capital intensive industries. For example, if a European automotive player sets up a manufacturing unit in India, it is likely that it will bring along its globally standardized **machine intensive automated processes**. The fact that will they be willing to switch to labor intensive methods is anyone's guess. If manufacturing jobs are to be created out of these FDI inflows, they need to be utilized in the labor intensive sectors such as **Textiles, Paper & wood products, Food products & Non-metallic products**. Now how do we make the foreign players invest in these labor intensive industries?

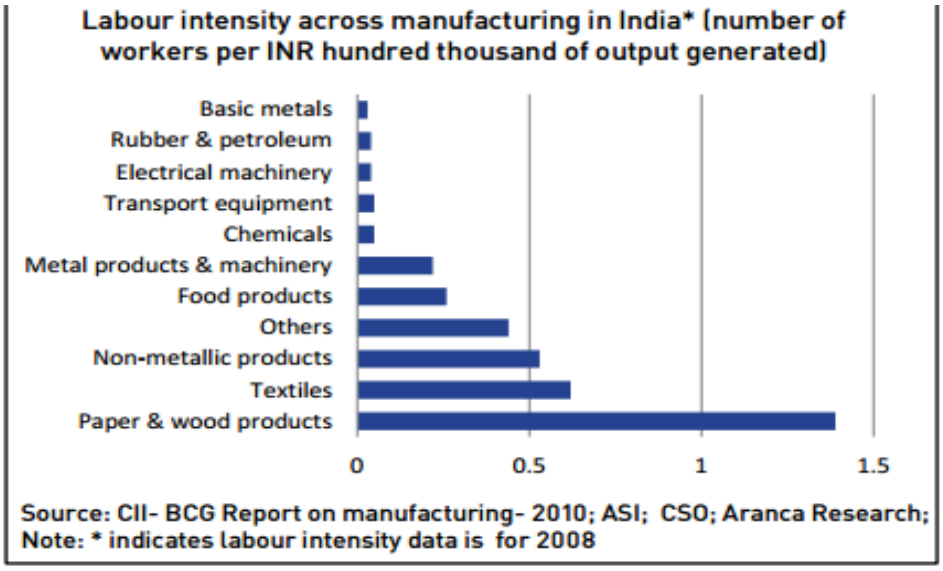

Figure 6C: Labor Intensity of Industries

Creation of jobs out of these FDI inflows is a target for the Indian government and cannot be expected to be the agenda for foreign players. The foreign players making these investments are purely concerned about their ROI and therefore they would be looking to invest in sectors which have a **high capital efficiency i.e. revenue per capital invested & high labor efficiency i.e. revenue in million per 1000 workers employed**. **The average ratio for capital efficiency & labor efficiency across industries in India is 2.4 and 48 respectively**. But if we look at the capital & labor efficiency of the sectors we identified above for maximizing job creation, we find lower than average performance. Therefore, FDI inflows into these sectors will continue to be low, unless the underlying structural parameters are improved upon.

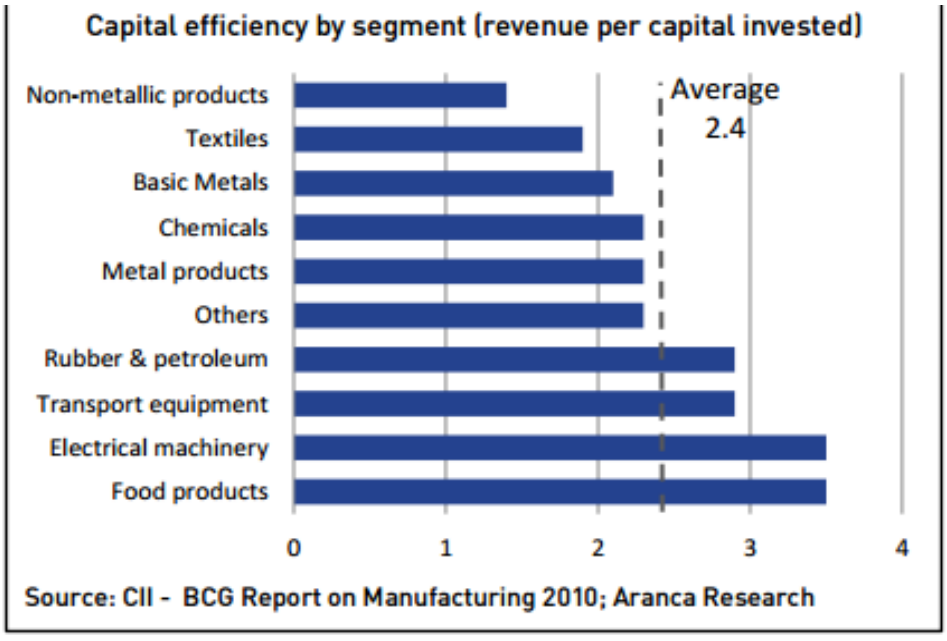

Figure 6D: Capital Efficiency across segments

Job Creation & Skill India: A Hard Sell

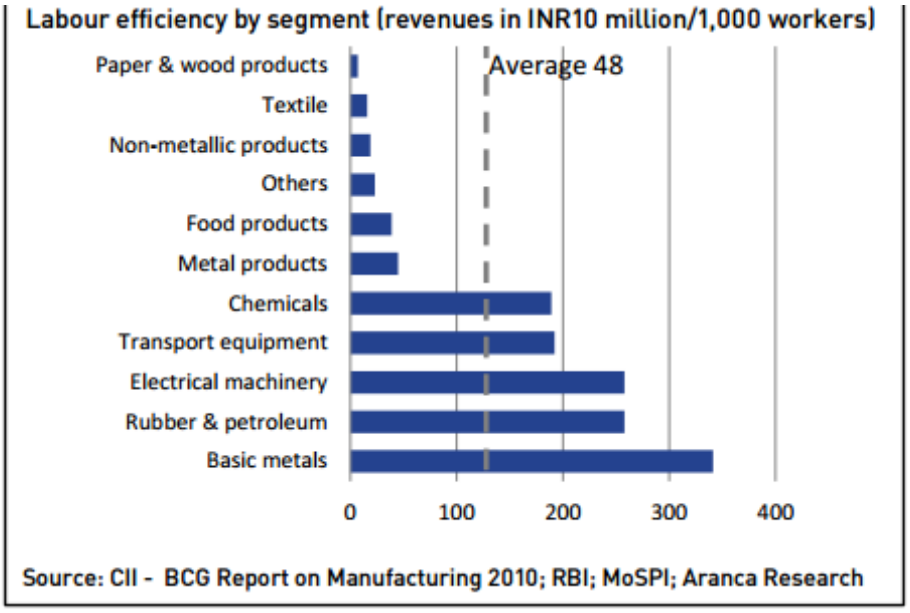

Figure 6E: Labour Efficiency across segments

The next point of discussion under this sub-header is the geographic distribution of the FDI inflows. It is critical to match this distribution with the demographic dividend of the nation to ensure that the newly created jobs are timely fulfilled by the local population. If we look at the state-wise distribution of the FDI inflows, we notice that **6 out of the 18 RBI regional offices** (Mumbai – 30%, New Delhi – 20%, Chennai – 7%, Bangalore – 6%, Ahmedabad – 6%, Hyderabad- 4%) **report almost 75% of the inflows**. That means any new manufacturing jobs that arise out of these FDI inflows will be concentrated in the states of Maharashtra, Tamil Nadu, Gujarat, Delhi and Karnataka. On the other hand, a major part of India's population increase has happened in the poorer socio-economic regions specifically the **BIMARU states**. Among the relatively socio-economically advanced states such as Karnataka and Tamil Nadu, the fertility rate was below 2.1 in the year 2009. This was lower than the level required to maintain population stability, if the standards for infant mortality in most developed nations were to be followed. However, in poorer states like Bihar, the fertility rates were ~4.0 (Goswami, 2013). This means that fulfilment of these new jobs would require a mass migration from the BIMARU states to the already over-populated metros. It must be noted that urban spaces have not necessarily supported the quality of life the Indian youth are looking forward to. **Almost one-fifth of the urban population in India lives on less than $1 per day**. Also, it has been found that while income levels in cities appear to be higher, the cost of living is constantly rising, leading to reduction in savings, inadequate access to health care and lack of good-quality education. Unfortunately, the biggest cause of death among younger women in cities remains maternal mortality. To add to that, more than 50% of young urban women are anaemic, pointing to inadequate food and nutrition (Shivakumar, 2013). The biggest issue in cities such as Mumbai and Delhi is housing. **If another lot of 200000+ workers, who will be paid close to minimum wages are to migrate to these cities, where will they actually stay?** This clearly shows how our urbanization policies are inadequate to support this mass migration. Initiatives such as the **Delhi Mumbai Industrial Corridor** are still stuck in the doldrums due to

political agendas and development of **Special Economic Zones** has not received sufficient industry support.

STATEMENT ON RBI'S REGIONAL OFFICES (WITH STATE COVERED) RECEIVED FDI EQUITY INFLOWS[1] *(from April, 2000 to January, 2015):*

Amount Rupees in crores (US$ in million)

S. No.	RBI's - Regional Office[2]	State covered	2012-13 (April - March)	2013-14 (April - March)	2014-15 (April '14- January, 2015)	Cumulative Inflows (April '00 - January '15)	%age to total Inflows (in terms of US$)
1	MUMBAI	**MAHARASHTRA, DADRA & NAGAR HAVELI, DAMAN & DIU**	47,359 **(8,716)**	20,595 **(3,420)**	**30,360 (4,983)**	**344,449 (71,740)**	30
2	NEW DELHI	**DELHI, PART OF UP AND HARYANA**	17,490 **(3,222)**	38,190 **(6,242)**	**35,433 (5,779)**	242,204 **(48,315)**	20
3	CHENNAI	**TAMIL NADU, PONDICHERRY**	15,252 **(2,807)**	12,595 **(2,116)**	**20,384 (3,340)**	85,790 **(10,536)**	7
4	BANGALORE	**KARNATAKA**	5,553 **(1,023)**	11,422 **(1,892)**	13,886 **(2,258)**	74,753 **(14,934)**	6
5	AHMEDABAD	**GUJARAT**	2,676 **(493)**	5,282 **(860)**	6,811 **(1,112)**	51,193 **(10,622)**	4
6	HYDERABAD	**ANDHRA PRADESH**	6,290 **(1,159)**	4,024 **(678)**	7,621 **(1,256)**	48,536 **(9,901)**	4

Figure 6F: State Wise Distribution of FDI Inflows – Top 6 Destinations

The phenomenon of demography transformation in India is termed 'economic miracle' for East Asia, where such booms have been seen in the past. China was able to manage the mass migration of its agricultural workforce to industrial centres effectively and being a communist nation played a key role. However, India and other East Asian countries are not the same. "*India's population density is three times the East Asian average and eight times the World average of 45 people per square kilometre*" (Goswami, 2013). Considering the forecasts, if India actually has around 1.69 billion people by 2050, it would mean, **500 people per square kilometre on an average and closer to 5000 people per square kilometre in the metros**. Besides, to deal with such a large population, India is ill-equipped in terms of infrastructure, as compared to East Asia. In terms of soft to hard infrastructure, starting from healthcare, education to housing, electricity, roads and employment growth, the country is visibly strained. To cite an example, **India has installed energy capacity of 200 gigawatts while China has 1000+ gigawatts and a plan for clean electricity of 600 gigawatts by 2020 is in the pipeline**. Power cuts in New Delhi and Chennai are a daily favourite of the tabloids. To make it worse, some of the newly installed Indian power stations are facing coal shortages. India will definitely need much more capacity than its current mining rate of 600 million tonnes of coal per year. This is also causing pollution levels to rise, both locally and globally leading to air quality problems like in China. In terms of oil, the country imports close to nearly 80% of its crude oil requirements. The position of India's food supply isn't good either. "*We have a problem and it can be starkly put in the following way: around 2004–*

2005, our per capita food grains production was back to the 1970s level", a member of India's planning commission said (Goswami, 2013). Between the years 2005 and 2007, the average Indian even in the urban hubs, per day, consumed only 2,300 calories — 100 calories below the defined rural poverty line. So, for India, treating lightly Malthusian predictions about food supply until 2050 or beyond may not be prudent. Worldwide food prices have been on the rise to unforeseen levels, and India too has been suffering from high food inflation. Finally, even if India manages to feed its burgeoning population, its growth may not be ecologically sustainable. The global demand for water in 2050 is projected to be more than 50 per cent of what it was in 2000, and demand for food will double. On average, a thousand tons of water is required to produce one ton of food grains. It's not surprising, then, that international disputes about water have increasingly been replicated among states in India, where the Supreme Court is frequently asked to intervene. The sine quo non fact is as of now, the main FDI destinations are not suited to handle the mass migration due to this manufacturing rush.

SUPPLY SIDE: SKILLED WORKFORCE – REALITY CHECK

To understand the supply side of the employment scenario, it is important to analyse the following 3 main factors.

Mind-set of the working class: How is the perception difference between white-collar employment and blue-collar jobs going to affect overall growth in the manufacturing sector in India?

Labour Laws: What is the role played by varying labour laws across union and states in hindering or supporting the process of employment?

Skilling Initiatives: What are the skilling initiatives already taken by the government and are they in line with the demand that is going to be created and the expectation of the industry?

MIND-SET OF THE WORKING CLASS

The working class mindset is another important factor that needs to be taken care of, especially about blue-collar jobs. The manufacturing industry requires, by default, a lot of blue-collar workers throughout and without them it would be close to impossible to run the industry. However, the impressions of these jobs in people's mind isn't very positive. With India's economy leap frogging to the Tertiary Sector so quickly in the late 1990s and early 2000s, the move to white-collar jobs

was much faster than expected. Most successful economies like the US and China have moved slowly from primary to secondary and then finally to tertiary. This has helped the economy as well as people's mindsets towards jobs change gradually.

However, in India, the sudden move to white collar made blue collar jobs, a lot less sought after. **If there is an opportunity to work in a BPO in India for Rs. 10,000 as compared to a shop floor job of Rs. 11,000 then the former would be preferred because there is more respect in the society associated with it**. Also, there is much less respect given to a sweeper or cleaner than someone who sits in an office. All this does have an impact on the overall potential for people to work in industry jobs and hence affect the supply of labour for jobs.

While in conversation with Mr. Shiv Shukla, Assistant Director at FICCI, we realized how even the industry realizes this factor of insensitivity that exists among Indians when it comes to respect for jobs. He said that the mindset does play a critical role in affecting people's desire to take up a particular job, especially with India becoming more tech-savvy and a service-oriented economy. With the growth of the services sector, the want for industrial jobs has gone down drastically. He also mentioned that the outreach for industrial jobs is much lower. People aren't sufficiently aware of the actual quality of jobs being offered in the industry and how well they can pay. This lack of information also leads to a poor opinion among people about manufacturing.

Though Mr. Manish Sabharwal, CEO of TeamLease, agrees that respect for a job is a factor, he strongly believes that wages are a bigger factor. If the job can't raise a person's socio-economic status, then it wouldn't attract anyone. However, if that factor is being taken care of then respect for the job would come eventually. Hence the supply of potential workers for jobs would go up if wages are improved and at least kept comparable to the tertiary sector.

We believe both these factors play an important role in the desire for people to take up a job in any sector. Wages relate to the tangible aspects of life where definitely money is required to run the household. However, respect in the society associates with the intangible aspects. Considering a country like India where **saving face** is a cultural characteristic, and one's job determines his/her social status. If the impression among people about a particular job is poor, then people wouldn't want it. Initiatives such as NSDC's "**Hunar hai to Kadra hai**" campaign attempt to reinforce pride in skill based training & blue collar jobs, but a lot more needs to be done. Even within skill training, training centres that offer English for conversation or data entry skills see full programmes, while on the other hand plumbers, electricians and bricklayer programmes do not have enough attendance. Hence, it is imperative for the government and the people in the manufacturing sector to change this outlook for blue-collar jobs and make them attractive by offering better wages and sensitizing people.

LABOUR LAWS

Labour laws in India being archaic and different across states have been another cause for concern. The Centre recognizes the fact that labour flexibility is important for attracting foreign investments

and yet there haven't been enough reforms implemented to support the same. The Trade Unions Act of 1926 was the oldest law created by the British and it was amended after 75 years, yet it stands unclear on certain conditions. The method of collective bargaining by trade unions hasn't yet been decided upon by the Centre and India hasn't ratified the Fundamental ILO Conventions on freedom of association even after 65 years. Labour is a part of the Concurrent List in the constitution i.e. states can enact their own laws for labour in the state. This has allowed certain states to introduce collective bargaining for trade unions and provide them with more flexibility. Rajasthan, Maharashtra, Kerala, Bihar and Madhya Pradesh have been at the forefront to improve labour flexibility (Sundar, 2014).

Employers and employees both would prefer being in control of the situation and being given sufficient flexibility. The industry has been demanding freedom to hire and fire, closing down without prior endorsement by the government etc. While the employees would always look for their own flexibility and security in the job.

The difference across states in laws plays an important factor here with certain states being more liberal at both fronts. If there is too much influx of employees due to supportive laws for certain states then training institutes need to be setup accordingly, however there isn't sufficient effort being put in this regard. Similarly, the foreign investment coming in, needs to be accounted for.

The lack of certain basic requirements in labour laws at the center has led to controversies like the one at the MRF plant at Tiruvallur in 2009 (Sundar, 2014). With this situation, it is no wonder that Bharat Bandh like the one on 2nd September 2016 happened, demanding for further labour reforms (PTI, 2016). Potential employees will keep looking out for opportunities and unless there is uniformity across the country in terms of labour laws, there will be an impact on the possible supply for jobs.

SKILLING INITIATIVES

Although the terms **Human Capital** and **Skills** are often used interchangeably, *Skilling is a subset of the former*. Skilling refers to providing trainees with some form of basic expertise, with the prime objective of enabling them to **gain quick employment or provide occupational mobility**. In the Indian context, skilling efforts are often remedial in nature and targeted at school/college dropouts. On the other hand, Human Capital investments can be viewed as "**Process of adding to society's stock of efficiency units of labour**" by investing in *skills, resources, knowledge, health and qualifications* that can be easily accessed by individuals to enhance their own employability. The current skilling initiatives that the government of India has taken up under the name "Skill India" are by the **Ministry of Skill Development and Entrepreneurship in association with the National Skill Development Corporation (NSDC).** Though the initiative is said to have a political agenda behind it, it is certainly a noble move and has the potential to improve the country's economy in a big way, in the future. Recently, Phase 1 of Skill India was concluded and **an investment approval of Rs. 12,000 Crore** for Phase 2 was announced (Rica Bhattacharya, 2016). The plan for Phase 1 was to skill 2.4 million Indians. By the end, 1.97 million Indians were

said to have been skilled with many of them taking jobs in the country or going abroad. Another common feature recently has been "Skill Day" events being conducted regularly in New Delhi on for 20 different sectors including **Hotel & Tourism, media, telecom, IT etc. to get industry and youth together to talk to each other about the future**. To analyze India's underlying problems of human capital development & Skilling, we can use the **STEP** (*Skills toward Employment and Productivity*) framework. In terms of human capital investments, over the last 3 decades, the focus of the Indian government has been primarily on Stage I (Basic Health) and Stage II (Primary Education) i.e. **Early Human Capital Formation**. This was based on the assertion that grass-root level success can be easily nurtured via industry specific skilling programs later on, but the success has been fairly limited. According to Census 2011, India's unemployment rate grew from 6.8% in the year 2001 to 9.6% in 2011. Taking this into account, the Union Government, under Prime Minister Narendra Modi started focussing on Stages 3 to 5 of the STEP framework (discussed as part of Recommendations section) and launched the **Skill India program** as part of wider nation building initiatives that will train 400 million in India from 2012 to 2022 and make them employable. As part of secondary research of the policies underlying the Skill India campaign, we found that the Indian policy makers seem to be trying to imitate China's present day manufacturing success by focussing on **low-/semi-skilled manufacturing jobs**, which may not be the appropriate model considering India's demographic dividend and education system. Some of our key observations regarding the current policies were:

1. The government has adopted a **reactive approach** with the focus purely on skilling the current working age population and that too, in a narrow technical/vocational sense, not even on soft skills – rather than on human capital formation.
2. There is a **continued dichotomy between educational and skill institutes**, with negligible mainstreaming of skill development, in its broadest sense, in educational institutes.
3. There is no action plan for preparing the workforce for **the knowledge economy**, with the entire focus being on the requirements of present-day industry and specific sectors. This has not only led to a limited time-horizon in skilling efforts, but also sector-specificity, that too focused on low-/semi-skilled manufacturing jobs.

To identify operational bottlenecks underlying the skilling policy paralysis in India, we spoke to industry experts and government officials. Some of our key findings from our interview session with Mr.Shiv Shukla were:

1. **Lack of Industry Buy-in for Skilling Programs**: Currently there is no mechanism to provide alignment between policy makers and the industry along the skilling frontier. This manifests itself in 2 ways:
    - **Expected number of Jobs that will be created**: The current skilling programs train individuals based on the job growth projections by the Ministry of Labor and NSDC and this data is not in line with the employer's estimates. For example, let us assume the NSDC predicts that 10000 new jobs will be created in the automotive sector during the next quarter, while the industry as a whole plans to hire only 5000 new workers during the same period

based on its internal sales growth projections. These extra 5000 workers would either remain unemployed or would need to be retrained to make them **employable** for a different industry.

- **Industry Specific Skills**: Although the employers are optimistic about the outcomes of the Skill India campaign, they believe that a **re-skilling requirement** will continue to exist as the skilling program methods are not in line with their in-house training & standard of work requirements.

Both these reasons mean that the expenditure on the skilling programs has a low ROI.

2. **Measurement/Evaluation of Jobs created**: The current system doesn't have an efficient mechanism to measure **the impact of the skilling programs**. Currently training organizations are expected to provide a report to the government highlighting the number of people skilled and how many of them were placed. The government appoints a third party to audit these reports and data is often inflated. Hence, there is no measure of how many trainees actually did join the job, if they continued in the job they joined for longer than 3-6 months or did they simply discontinue and are unemployed again. Hence employee satisfaction is not being correctly monitored. The method followed by the government compiles 5 years of data for the **provident fund (PF) and public provident fund (PPF) accounts** (mandatory for new recruits for their first job) and then increase in the number of accounts is considered a rough estimate of the number of new jobs created. However, the effectiveness of this technique is questionable since a PF account maybe created for even a 3-month job; while it may not even be created if the person joins the unorganized sector e.g. Security Guard, Maids etc.
3. **Inefficiencies in Indian Apprenticeship System**: The Indian Apprenticeship Act (1961) was drawn up based on the principles of 'learning by earning' and 'learning by doing' with the aim of utilizing facilities available in the industry for the purpose of practical training to meet the skilled manpower requirements of the country. (World Bank, 2013) But currently India has only about 300,000 apprentices compared with a labour force of nearly 500 million people, which equates to a proportion of 0.01% whereas countries such as Germany and Australia have 3.7% of their workforce participating in apprenticeships. The main reasons for this sub-par performance are:
    - *Lack of enterprise engagement in the system*: Only 24000 firms currently enrolled and process of registration is tedious
    - *Overly strict and burdensome regulation and compliance* under the 1961 Apprenticeship Act which translate into higher costs accruing to the employers and hence lack of willingness to sign up on their part.
    - *Inadequate stipend offered to apprentices* and *lack of social respect for the certification*: A cultural bias exists in the country against apprenticeships and vocational education. Youth feel that formal academic degree is more prestigious, and continue to apply for such degrees. According to a senior professional in the skilling space, the bottom 20% of engineering colleges (a large number of students) are most likely paid lesser than top graduates from

training institutes. *Lack of progression into higher educational qualification:* A National Apprenticeship certificate lies outside the scope of formal education as it is not integrated with the national qualifications framework. A certificate holder cannot apply for a higher degree such as Bachelors of Science, Engineering etc. since the certificate is not valid for fulfilling the minimum requirements criteria. Hence potential aspirants who seek career growth are likely to be turned off.

4. **Assessment of Training** Organizations: There is no clear assessment policy for training organizations. The government currently provides funding approvals on the basis of a system of third party assessment of skilling organizations. Based on our interaction with a FICCI representative, we can say that since the **funding approvals for the training institutes depend on the results cited in these reports, bribery is a common practice to inflate the numbers.** This leads to dilution of the quality of training organizations in place.

5. **Employer's Bias - Education vs Training**: If an organization were given an option of hiring an educated worker vs. a skilled worker, they would choose the educated one. The lack of training element in the current Indian education system also affects the chances for people to get inducted into the industry. There isn't yet a proper university for skilling that could possible hand out a degree instead of a certificate for a particular skill. In India, there is still the employer bias towards a degree even though a skilled person might do a much better job of it. Now this may require either a change in mindset on the employers' side by making them understand the quality of skilling or a change in the setup from the government side by creating universities for skilling or inculcating skilling courses in the existing universities. Integration with existing universities has potential and can give more assurance to employers too however the openness of universities to these ideas is still unknown.

PART III

CONCLUSION AND RECOMMENDATIONS

As our analysis reveals, the strategy of banking on developing India into a manufacturing hub with the "**Make in India**" campaign and aiming to create **low/semi-skilled manufacturing jobs** may not be a suitable long term solution with the rapidly changing contexts and demands of the Indian economy. As the World Economic Forum suggests, *long-term thinking around human capital & skilling often does not fit political cycles or business investment horizons; lack of such long term planning can perpetuate continued wasted potential in a country's population and losses for a nation's growth and productivity* (ICRIER, 2015).

DEMAND SIDE: JOB CREATION

The "**Make in India**" campaign needs to be adequately supported along with other measures to tie in GDP growth with job growth and ensure better outcomes for the Indian labour market.

Some of the key policy recommendations on this front are:

- **Appoint a National Jobs Adviser to the Prime Minister in the PMO**: When the country has an economic adviser & a defence adviser, why not a Jobs Adviser? The Adviser's role would be to align job growth planning with economic planning and ensure integration of the multiple but siloed job-related policies across central ministries, as well as with the states. He/She would work along with the economic adviser to ensure that **FDI is directed into labour intensive industries by offering tax rebates in such sectors** and further diversification of exports. Mid-policy course corrections are always needed and he/she would work a tightly monitored ship. (Wadhwani, 2016)

- **Launch a major Startup & Small Business Innovation Initiative (SSBI)** along the lines of when the US launched 'Small Business Innovation & Research' initiative 4 decades back, wherein various government departments allocate funding for innovation by SMEs, selected through an **open, competitive process**. This has helped create thousands of new companies and millions of new, quality jobs. We need a similar initiative in India, based of course on India's priorities and needs. Each of the major ministries could fund 500-1,000 innovation grants annually, of *Rs 25 lakh to Rs 1 crore each*, to SMEs selected through an open, competitive process managed by one or more major innovation-centric universities like the IITs or IIMs. (Wadhwani, 2016)

- **Don't let the agriculture sector slide**: The Indian agriculture sector has been unable to realize its true job creation potential due to weak linkages between agricultural training and extension, crop production, credit, processing, marketing, and insurance. Considering the huge requirements for food that await humanity, India should continue to concentrate on the agriculture sector by **strengthening the farm & crop credit schemes and insurance programs**, encouraging **contract farming agreements between agri-business firms such as Olam**

International and self-help groups in the villages and establishing a network of village-based farm schools and soil test laboratories.

Another scenario that the Indian government needs to focus on is **Labour Exports**. India will enjoy a surplus of nearly 47 million skilled manpower by 2020, while the rest of the world would witness a manpower shortage of 56.7 million. This presents a perfect opportunity for India to position itself as the **skilled labour depot of the world**. The outflow of labour will be of 2 types:

1. Emigration of highly skilled professionals migrating to developed countries like US, UK, Canada, etc.
2. Emigration of unskilled and semi-skilled workers going mostly to the Gulf countries, Malaysia, Europe etc.

Swarna Pravas Yojana' scheme in the 12th Five Year plan, currently being implemented in North Eastern states, aims to train ~2 lakh workers for overseas employment in sectors that face international skill shortage is a correct step in this direction.

Truth be told, Indian workers have been migrating to greener pastures for over half a century and sending in remittances, but this migration has been Indian government can now provide a structured approach to this migration (similar to the labor export policy adopted by the Philippines government) trend by:

• **Conduct labor market assessment studies in target countries to identify skill gaps** likely to arise in the future and building this information into the design and enrollment of skilling programs. For example, a recent survey indicates that European countries such as Sweden, Finland, France, Poland and Romania will face a manpower shortage in the health & personal care sector by 2020. This information can be used to intensify efforts on training of nurses and beauticians in states where the demand-supply gap is at the widest such as the BIMARU states.

• **Sign MOUs on labour with target countries to enhance employment opportunities, determine minimum wages** and for bilateral cooperation in protection and welfare of migrant workers. This would help in avoiding scenarios of exploitation of the Indian labor force as prevalent today in UAE, Qatar, Saudi Arabia and Australia.

• **Designing the skilling programs as per international standards** and **getting them accredited by the labor authorities of the target nations**. This would ensure that all certifications are internationally certified and re-skilling is not required. For example, Indian nurses in the UAE have to enroll themselves for a new certification program upon migration, while the Philippine nursing program has been predesigned according to the UAE's Ministry of Health guidelines. Hence an employer faces an extra cost when hiring Indian nurses and thus adjusts this cost in the form of lower compensation for Indian nurses. VIGO Healthcare is already working on such initiatives for nurses in Kerala.

• **Introducing foreign languages as part of curriculum in government schools at the primary and secondary level**. Being fluent in the local language is an essential requirement/added advantage for jobs in countries such as Saudi Arabia, France and Germany etc. The Kerala state government has already introduced Arabic as an optional subject in government schools to leverage its existing migrant community strength in the Middle East.

• **Setting up Pre-departure training institutes** to culturally sensitize migrants about the traditions, rituals, business practices, of the foreign country.

• **Ensuring faster processing of work-permits/Visas** to ensure job opportunities are not lost due to administrative red-tape

SUPPLY SIDE: SKILLING MANPOWER

To develop a structured approach towards this goal we can use the **STEP** (*Skills toward Employment and Productivity*) framework. The focus should be on tying in human capital investments and policies across all 5 stages to make India into a **knowledge economy which is dynamic, highly-skilled and broad-based**.

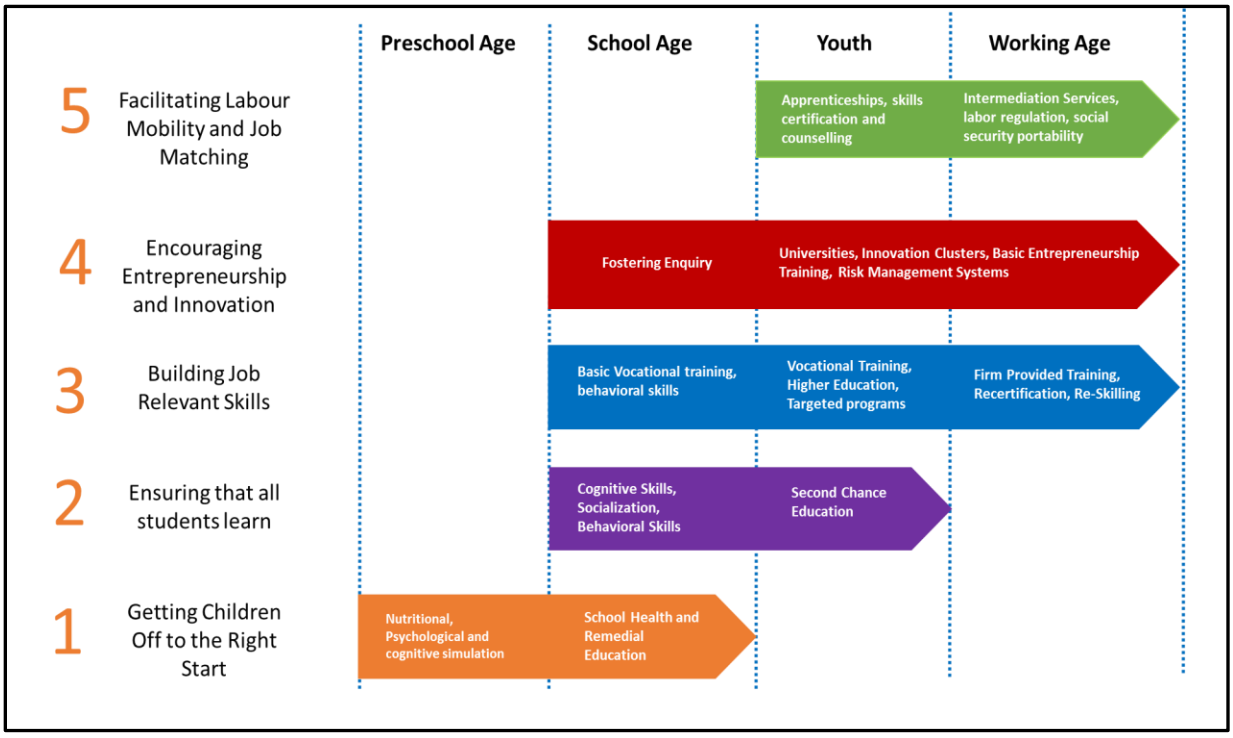

Figure 7: STEP Framework

Although Stages 1 and 2 which focus on early health and education are beyond the focus of this project, some of the key recommendations for these stages are:

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- The Indian government should aim to develop better coordination **between pre-primary schooling and primary health institutes** to focus on holistic development of children at an early stage. Moreover individual skills should be promoted at the school, rather than purely focusing on math and science proficiency. A drastic shift in teaching methods from **theory based to on-hands learning** specifically at government schools is needed.

- The Indian education system has been criticized for promoting **memorization and conformity at the cost of creativity and analytical rigor**, as a result of which, as multinational employers in India complain, while it is easy to find employees for junior positions, it is difficult to get good managers. A key suggestion here would be to focus on **developing soft skills such as ability to effectively communicate** from the grass-root level itself. The figure below highlights the key focus areas for how 21st century student outcomes should be designed.

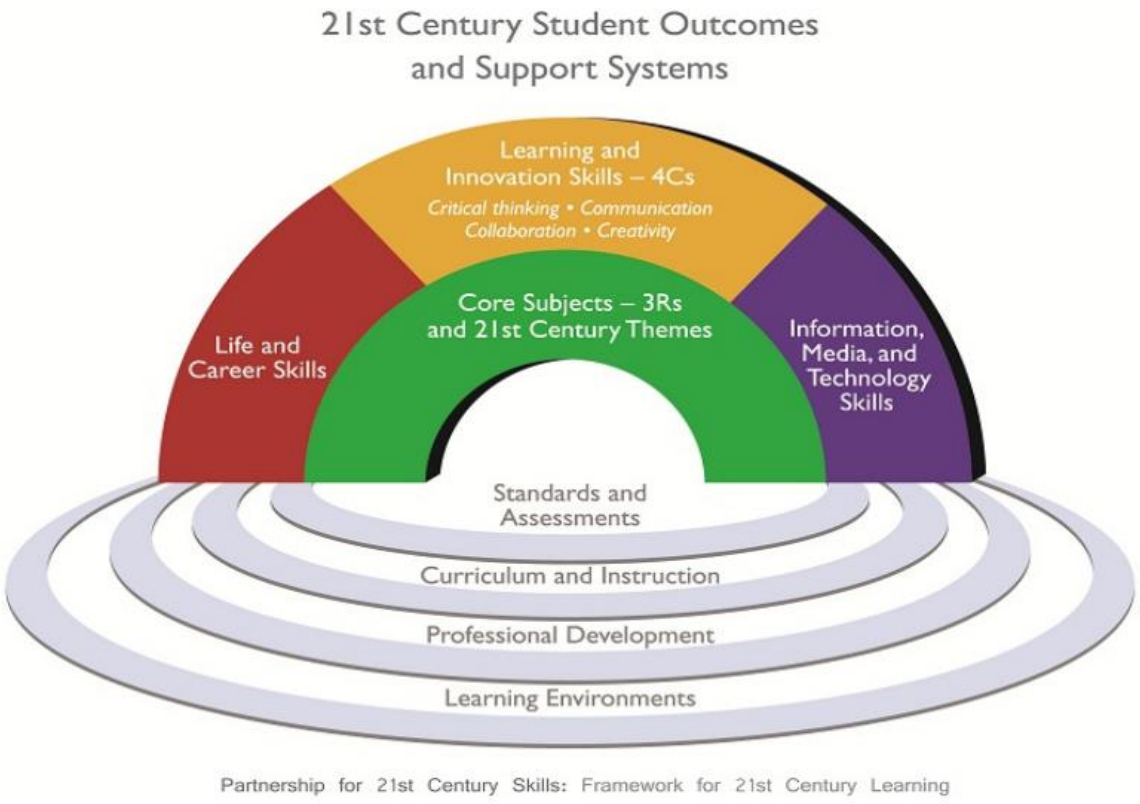

Figure 8: Student Outcomes

- Rather than adopting the Chinese approach of skilling at a later stage, India needs to experiment with the **bivalent schools** model popular in South Korea and Germany. (E Skill Development Report , 2014). The bivalent schools provide access to both the labour market and tertiary education. Employers play a key role in the management of vocational system. Therefore every stage of education i.e. basic, primary and secondary is guided by labour market requirements & **hence the probability of an unemployable individual entering the job market is low**.

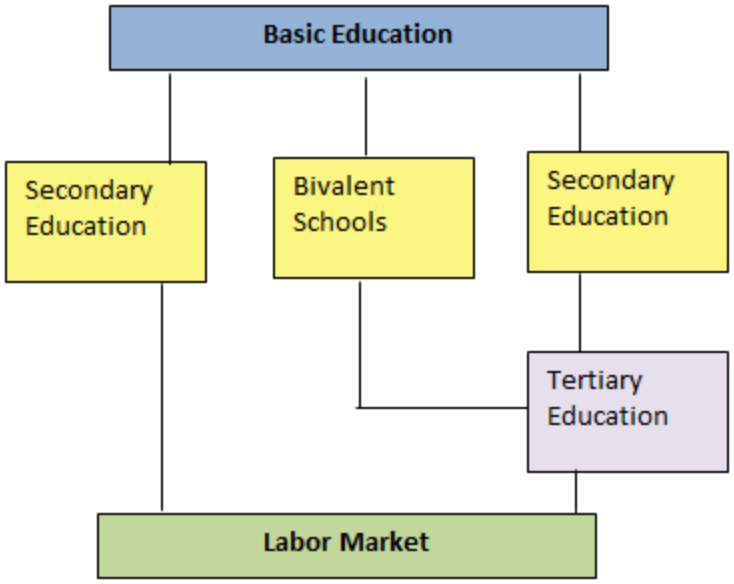

Figure 9: Model of Bivalent schools

For stages 3 to 5, some of the key recommendations are:

- **Activating the true potential of the Indian Apprenticeship System**: The government can **initiate creation of a Naukri/LinkedIn type portal specifically for apprentices** where their skills would be endorsed. It needs to **fix apprentice stipend at a percentage of industry specific minimum wages** and **introduce financial incentives in the form of corporate tax rebates for employers** – on employment, completion and retention of an apprentice, and for employing disadvantaged apprentices. It should open apprenticeships to people of all ages above 14 years (in non-hazardous trades) and without minimum educational qualifications (with language, literacy and numeracy support), so that bottom of the pyramid individuals can sign up for these programs. Another option could be **introducing third party employers** (similar to Group Training Organizations in Australia) acting as labour hire companies, to employ apprentices and 'lease' them to employers during the period of the apprenticeship, to liaise among enterprises. **TeamLease** is a perfect example of this alternative. **Germany's dual system of apprenticeship** could work well in India in the long term if a behavioral/mindset change regarding manual work is achieved. It eliminates the one company bias by offering more practical lessons at workshops run by guilds and chamber of commerce. Students can apply directly to companies after which the specific company enrolls them into a local training school where the students juggle between the school and the company. More than 350 professions are recognized as training occupations and more than 60% of high school graduates enroll for this system. High degree of involvement is seen amongst the employers and social partners.

- **Getting Industry Buy-In for Skilling Programs**: The government needs to develop **Quality Pacts** (QPs) with employers. Each QP would contain an exhaustive list of **industry,**

organization and role specific skills. The skilling programs would be redesigned along the lines of these QPs and every trainee would only be awarded a certificate of completion only upon ticking all the requirement boxes. This would help in reducing the re-skilling requirements. Secondly, at the start of the financial year, each employer in the organized sector would be asked to share a **quarterly estimate of the new blue collar jobs expected to be created**. The NSDC would compile the data from employers for each industry, and based on the requirements as per the QPs, put a **yearly cap on the number of enrollments for industry specific skilling programs**.

- **Correct Measurement techniques for number of jobs created**: The government needs to launch a centralized **Labour Market Information Portal** which will provide information on various topics like basic education, training institute performance, employment history, etc. Whenever a new trainee is enrolled at any institute, he would be registered on the portal. Upon completion of the course, the trainee would update his **employment status and company information**. He would also be able to fill in employee job satisfaction surveys which would be used to rate the training institute's methodologies. The portal would also help in providing key labour statistics and job search across the country.

- **Improving the quality of Vocational Institutes**: The aim should be to attract top talent to lead vocational training institutes. How many IIM or IIT graduates as of now would be willing to take up such a role? **This can be rectified by offering better pay, removing bureaucratic hurdles and offering a clear career trajectory**. Moreover most of the ITIs face a dire shortage of trainers. As per NSDC estimates, approximately 86 lakh teachers and trainers are currently needed and hence a nationwide recruitment campaign is required. Another option is to adopt the **PPP model for vocational training institutes** to improve quality of services. Under this model land, building and teachers will be provided by the government and the business of teaching and running the school will be done by companies. Rajasthan has already tried experimenting with this approach.

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