

Manufacturing and Education: The missing links

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Abstract

Background/Objectives: The Make-In-India policy is a takeoff on the National Manufacturing Policy (NMP) (2011) which seeks to bolster India's manufacturing and employment substantially. There is also a distinct shift from public sector dominance to Public Private Partnership (PPP) architecture and creating the right environment for private sector to flourish. However, a new education policy in sync with such manufacturing strategy is long awaited.

Methods/Statistical analysis: This paper seeks to highlight the different dimension of the missing links between the two policies. It has extensively depended on official sources to bring out appropriate tabular statements to bring out the trend analysis of various sectors in terms of employment, value addition and share in GDP. It has also analyzed major reports and findings in the education sector and cross verified the data through field study by adapting statistical sample study method.

Findings: The major findings are: inadequacy in budget allocation to different segments of education, serious short falls in terms of outcomes in primary education, research and patents registered by the universities and laboratories and significant gaps in skill availability to meet the opportunity in the pipeline. The stagnancy in the contribution of manufacturing sector in GDP share and employment generation has been brought out. The institutional constraints for realizing Ease-of-Doing Business and lack of financial empowerment of Panchayati Raj Institutions (PRIs) have also been highlighted.

Application/Improvements: The paper calls for empowering and emboldening our PRIs so that quality grass root learning has a cascading impact at higher levels of learning and facilitate our yen to be a major Asian power through the Skill India initiative.

Keywords: Make-In-India, NMNP, PPP, GDP, Ease of Doing Business, PRIs, Skill India

1. Introduction

India choose the path of Socialism for fostering industrial development, culminating into the Industrial Policy Resolution 1956 and the Mahalanobis growth strategy based on Harrod-Domar model. The Kothari Commission (1966) provided a framework for bolstering science & technology, education in India and called for a substantial hike in allocation to education; 6% of GDP. India abdicated the myopic socialist path and prudently opted for free market economics as the spring well to attract private sector involvement and initiative in several sectors which were earlier denied to them. The education policy 1986 and 1992, underscored the importance of increasing equity and access in education. The RTE Act 2009 [1] has been a watershed policy move as it has made primary education a fundamental right for every Indian citizen. Concurrently the private sector has also show a distinct predilection in the higher education sector. The various Commissions like Birla-Ambani, Sam Pitroda and Narayan Murthy (2000-2012) have essentially drawn the attention of the government to the imperative need for greater private sector involvement, foreign university participation, public private partnership and dilution in the asphyxiating control of the UGC [2, 3, 4]. The National Manufacturing Policy, 2011 has made a decisive break from the commanding heights of PSUs by promoting PPP as the new template of industrial policy for increasing share of manufacturing in GDP to 25% and provides 10 million employment opportunities every year [5]. The NDA government has come to power with its clarion call to bolster the growth through initiatives like Make in India [6], Skill India [7], Digital India [8] and Smart City [9] etc. While these announcements have found reverberation, both within India and globally, discerning analysts feel that there is a lack of synergy between major policy announcement like Make in India and our education

policy, leading to a lack of momentum in our growth and employment generation trajectory. This paper attempts to bring out (a) The changing contours of our education and manufacturing policy over the years (b) Their impact on quality education, research, skill creation and manufacturing momentum (c) Issues and concerns, (d) The way forward to synergize the major policy initiatives.

2. Education and Manufacturing policy over the years

2.1. Educational policy

The British policy on education in India was basically to encourage English education; with a view to create a clerical cadre to buttress British imperialism. The Kothari Commission (1966) flagged the importance to improve productivity; treat science as a basic component in education and improve research in science and technology. The National Policy on Education (NPE) (1986) sought greater role in reinforcing integrative character of research, advanced study and international aspects of education and cultural development. Subsequently the NPE (1992) tried to facilitate inter regional mobility by providing equal access to every Indian. In R&D, S&T special measures are to be taken to establish network arrangement between different institutions in the country to pool their resources [10].

Post 2009, the RTE Act has ensured universal access to primary education as a fundamental right. However, the higher education sector has been marked by greater private sector engagement. Several committees have buttressed such a market oriented approach to education. Ambani-Birla (2000) envisioned the creation of a knowledge based economic and society, and championed the principle of use pay policy supported by loan schemes and financial grants for economically backward section. Government should support and partially fund centres of higher learning, provide financial guarantee to student loan, ensure uniformity in content and quality and education development planning. The Sam Pitroda Knowledge Commission (2009) recommended expansion of the number of universities to 1500 in the country. The commission also recommended the establishment of 50 national universities by government or by private sponsoring bodies to be set up by society or trust or section 25 companies. The commission preference was for private universities and establishment of an independent regulatory authority for higher education as independent regulatory authority for higher education (IRAHE). The Narayan Murthy Report (2012) focuses quality deficiency, quantity mismatch and funding gaps and recommended a PPP approach by having centres of excellence.

2.2. Industrial policy resolution of 1956

Industrial Policy Resolution (1956) [11] set the objective of establishing a socialistic pattern of society. It provided more powers to the governmental machinery. It laid down three categories of industries which were more sharply defined. These categories were:

- ❖ Schedule A: those industries which were to be an exclusive responsibility of the state.
- ❖ Schedule B: those which were to be progressively state-owned and in which the state would generally set up new enterprises, but in which private enterprise would be expected only to supplement the effort of the state; and
- ❖ Schedule C: all the remaining industries and their future development would, in general be left to the initiative and enterprise of the private sector.

2.3. National manufacturing policy 2011

It is a watershed policy for India in which the policy aims to increase the share of manufacturing in the country's GDP from the current 16% to 25% by 2022, create 100 million additional jobs in the next decade. It envisages establishment of National Investment and Manufacturing Zones (NIMZ) equipped with world-class infrastructure that would be autonomous and self-regulated developed in partnership with the private sector.

2.4. Impact on Manufacturing and Employment generation

The Industrial Policy Resolution (1956) did not allow the private sector dynamism to run its course in our manufacturing; industries and the public sector undertakings became cesspools of inefficiency by calling them as "temples of modern India". The growth momentum is considerably less, compared to the service sector which has been our shining template during the last decade. The following table 1 brings out the trends.

Table 1. Trends of Growth: Major Sectors

Parameter	2012-13	2013-14	2014-15	2015-16	Average Growth
GDP	5.6	6.6	7.2	7.6	6.75
Export	-1.8	4.7	-1.3	-17.6	-
Manufacturing	6.2	5.6	5.5	9.5	6.7
Services	8.0	7.8	10.3	9.2	8.8
Agriculture	1.2	4.2	-0.2	1.1	1.6

Source: Economic Survey, 2015-16

Further, manufacturing has not been able to generate the kind of employment normally expected. Its share in GDP remains very low as the following table 2 would show.

Table 2. Sectoral Contribution to Employment & GDP

Sector	1999-2000		2014-2015	
	Employment	Share in GDP	Employment	Share in GDP
Agriculture & Allied Services	60	23.2	52.9	17
Manufacturing	11	15	10.7	15
Construction	5.3	11.8	12	11
Services	23.7	50	24.4	57
Total	100	100	100	100

Source: Economic Survey, 2015-16

It would thus be seen that through services have been our shining stars, their contribution to employment generation is rather wafer thin [12].

3. Impact on quality education, Research, Skill base

3.1. Impact on quality of Primary education

The tripod of India's education policy is Equity, Access and Excellence. The Annual Survey of Educational Research (ASER) Report 2014, while acknowledging that near universal access to primary education has been achieved transcending caste, religion and gender in India, it flags the myriad concerns that afflict the primary schools run by the government in different states and all India in terms of infrastructure and outcomes. Table 3 brings out the serious academic deficit that bedevils this critical sector [13].

Table 3. Outcome Deficits

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| <ul style="list-style-type: none"> • Only 58% of children enrolled in classes 3 to 5 can read a class-1 text • Less than half (47%) are able to do a simple two-digit subtraction • Only 37% of children enrolled in class 4 or 5 can read fluently • Less than half (45%) are able to divide 20 by 5 • Reading and Maths skills of class 4 pupils in India's top schools are below the international average |
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Source: ASER Report 2014

3.2. Impact on skilling

The Skill India 2014 report brings out that if we continue at the current pace, we would have a skill gap of 75-80% across industry sectors. The Economist has bought out that how Mr. Modi has set a dizzying target to provide vocational training to 500 million people by 2022. However, the Skill India Report 2016 brings out only 2.5% are having vocational training as against 68% in UK and 75% Germany. It also brings out how salary levels are less than 2 lakh for 65% of those joining in various sectors of particular concern in the fact that 93% of the employment is in the low skill unorganized sector [14].

3.3. Importance of factor productivity

It was Robert Solow, the Nobel Laureate, who underscored the importance of total factor productivity through his celebrated equation $Q = A \times K^\alpha L^\beta$ where **A is scale of production & level of technology, K & L are factors of production and α and β are factor productivity**. The remarkable GDP growth in China after 1979 was significantly contributed by the factor efficiency of labour (42%) as compared to 18% prior to liberalization [15].

4. Issues and concerns

4.1. Inadequacy of allocation in education & research

The following table 4 brings out the trends in allocation both in school and higher education.

Table 4. Trends in Central Spending on Education (Rs. Cr.)

Parameter	2014-15	2015-16	2016-17	% increase
School Education	45722	42186	43554	+3
Higher Education	23152	25399	28840	+14
Total	68874	67585	72394	+7

Source: India's Budget Document 2016-2017 [16].

It would be seen that the overall allocation is around 3% of GDP and shows no real increase in the present year's budget. This is much lower than both public allocation by developed and EMEs which is of the order of 6%. Besides investment in R&D is 0.8% of GDP as against 3-5% by most developed & EMEs, who have a significant value addition in their products and are major exporting countries [17].

4.2. Institutional Bottlenecks

The two institutions that we have inherited from the British viz. judiciary and the bureaucracy are presently bedeviled by interminable delay and lack of accountability. Our poor Ease of Doing Business ranking (130) by the World Bank is largely due to an extremely dilatory judicial system which frustrates contract enforcement and prolonged default recovery. The delivery mechanism of bureaucracy lacks transparency and accountability.

4.3. Structural constraints

The PRIs created in 1993 were expected to bolster grass root empowerment. Advanced countries like Germany & USA have adopted fully empowered (financially and administratively) local bodies, which are mandated to provide quality primary education, health and sanitation service [18]. The other structural snafu is the constant bickering between the Centre and the States who have different political orientation. What is distressing is that even in issues like creating a NCTC, which will bring problem of terrorism under a coordinated umbrella, or a GST which will create a seamless national common market, political expediency has taken precedence over sound economic logic.

5. Way forward

In the foregoing pages we have brought out how structural and institutional factors have kept our education level at a low ebb. This is being further exacerbated by a tendency to saffronise universities. The dominant ideology viz. market fundamentalism seems to unite most of the political parties. However, they seem to pay scant attention to the increasing tendency to commercialize places of learning which puts the poor and the middle class into serious economic inconvenience. Behind the veil of free primary education lurks an apathetic government who pays lip service to the criticality of providing quality education at the grass root level and has a scant priority for social sector in budget allocation. As Prof. Dreze observed "*Sending rockets to Mars and running bullet trains but remaining a third world country as far as social services like education is concerned seem to be an odd view*". There is a definite need to empower and embolden the PRIs financially and administratively, if we are looking at a long term synergy between value addition in education and self reliant India through manufacturing hubs [19]. It's also time we close the chasms in terms of digital empowerment, skill quotient that afflict vast section of our population. Prof. Stiglitz rightly observes, unfettered markets will "*lead to more monopoly power, more abuses of the financial sector, more unbalanced trade relations*" [20]. It is through proper regulation of the market while fostering the animal spirit of the

corporate, establishing centre state synergy and ensuring true empowerment of the Panchayats, India can be the pied piper of Asia, in the days ahead.

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