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## Vocational Education and India's Skills Deficit

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### Abstract

The policy debate on revamping and reforming education in India usually tends to focus on elementary and secondary education (delivered through schools) and higher education, with little being said on vocational education. This is not to suggest that the skills deficit is not recognised. While there are 12.8 million new entrants into the workforce every year, the existing annual training capacity is 3.1 million.

The government has developed a roadmap for reform but not without several shortcomings. First, government ministries and departments work in silos. Second, much implementation of the roadmap will remain a state subject and there is no guarantee that delivery will improve across all states. Third, though the roadmap incorporates possible private sector provisioning too, it is fundamentally based on expansions in the formal public training system. While the formal versus informal or organised versus unorganised dichotomy is often policy-induced, it is necessary to subsume successful examples of delivery in the non-formal and private categories too. Fourth, much hinges on improving vocational education in secondary schools. Therefore, at the moment, there is no particular reason for optimism.

### Executive Summary

The policy debate on revamping and reforming education in India usually tends to focus on elementary, secondary education (delivered through schools) and higher education, with little being said on vocational education. This is not to suggest that the skills deficit is not recognised. Eighty percent of new entrants into the workforce have no opportunities to develop their skills. While there are 12.8 million new entrants into the workforce every year, the existing training capacity is 3.1 million per year. In both rural and urban India, and for both males and females, attendance rates in educational institutions drop by around 50 percent in the age group of 15-19 years. Simultaneously, labour force participation rates begin to increase in the age group of 15-19 years and by the time it comes to the age group of 25-29 years, it is 95.0 percent for rural males and 94.4 percent for urban males. The figures for females are lower at 36.5 percent in rural India and 22.1 percent in urban India. The 15-29 age-group can be used as an illustration. Since post-educational institution training

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opportunities are limited, 87.8 percent of the population in this bracket has had no vocational training. Of the 11.3 percent who received vocational training, only 1.3 percent received formal vocational training. Most of the skills deficit is a problem that plagues the unorganised/informal sector.

While not exactly projections for the future, some figures on the dimensions of the skill development problem are available from the Eleventh Plan document. It was estimated that there would be a global skilled manpower shortage of 56.5 million by 2020. Of this number, India would be in a position to supply 47 million, provided adequate skills were delivered. From the existing 3.1 million per year, the skill development infrastructure will expand to provide skills to 15 million. This will not only meet the annual workforce accretion of 12.8 million, but also possess enough surplus capacity to train or re-train those in the existing labour force.

If one considers the government's roadmap for delivering these skills, such as the one stated in the Eleventh Plan document, it has the following components:

- Implement a Skill Development Mission, with Skill Development Programmes involving the private sector, so that placement is also ensured. The Skill Development Mission will be supported by the Prime Minister's National Council on Skill Development, the National Skill Development Coordination Board and the National Skill Development Corporation;
- Provide one-time capital grants to private institutions, and stipends and subsidies towards fees for Scheduled Castes (SC)/Scheduled Tribes (ST)/Other Backward Classes (OBC)/minorities and other below the poverty line (BPL) candidates;
- Enlarge the 50,000 Skill Development Centres;
- Expand the public sector skill development infrastructure by a factor of five. Once expanded, this can be handed over to the private sector for management;
- Complete the upgrade of 500 industrial training institutes (ITIs);
- Upgrade another 1396 ITIs in public-private partnership (PPP) mode. Establish another 1000 ITIs in PPP mode in under-served regions and if there is demand, set up another 500 ITIs in industrial clusters and special economic zones (SEZs);
- Upgrade 400 government polytechnics and set up another 125 new polytechnics in PPP mode in under-served regions;
- Expand the capacity for vocational education in schools, with a focus on capturing Class VII and Class IX drop-outs;
- Assess skills deficits sector-wise and region-wise;
- Establish a National Skill Inventory and a National Database for Skill Deficiency Mapping;
- Establish a trainee placement and tracking system;

- Draw a distinction between structural, interventional and last-mile unemployability;
- Re-align and reposition existing public sector training infrastructure, such as industrial training institutes and polytechnics, and revamp vocational education systems in schools. Grant these institutions autonomy and if necessary, provide for private sector management through PPP;
- Reposition the employment exchanges for career counselling;
- Establish a national qualifications framework, to establish equivalence and vertical mobility across various forms of vocational education;
- Set up third party accreditation systems, delinked from the regulator. Encourage third party ratings of institutions, on the basis of outcomes.
- Encourage the private sector to formulate skill development plans.

There are several reasons for the dissatisfaction with the government's roadmap. First, government ministries and departments work in silos. Notwithstanding the reform intentions, it is by no mean obvious that multiplicity is going to decline, with an improvement in coordination. Second, much implementation will remain a state subject and there is no guarantee that delivery will improve across all states. Attempts to incentivise reforms at State level have failed in other sectors too. Third, though the roadmap incorporates possible private sector provisioning too, it is fundamentally based on expansions in the formal public training system. While the formal versus informal or organised versus unorganised dichotomy is often policy-induced, it is necessary to subsume successful examples of delivery in the non-formal and private categories too. Fourth, quite a bit hinges on improving vocational education in secondary schools. The increase in enrolment rates at the primary level will no doubt create eventual pressures to improve the secondary school system. But at the moment, there is no particular reason for optimism.

## **The Skills Deficit**

According to the Eleventh Five-Year Plan, "The Kothari Commission on Educational Reforms, 1964-66, had visualised that 25 percent of the students at the secondary stage would go for the vocational stream. The Kulandaiswamy Committee Report had targeted this figure at 15 percent to be achieved by 2000. According to the recent National Sample Survey Organization (NSSO) data, only five percent of the population in the 19 to 24 years age group in India have acquired some sort of skills through vocational education. The corresponding figure for Korea is 96 percent".<sup>2</sup>

The Approach Paper to the Eleventh Five-Year Plan<sup>3</sup> divides the discussion on education into five segments – elementary education; secondary education; technical/vocational education and skill development; higher/technical education; and adult literacy. Adult literacy is slightly different. However, the other four do not represent neat water-tight compartments in the

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<sup>2</sup> *Eleventh Five-Year Plan, 2007-2012, Vol. II, Social Sector*, Planning Commission, Government of India and Oxford University Press, 2008.

<sup>3</sup> *Towards Faster and More Inclusive Growth, An Approach to the 11<sup>th</sup> Five-Year Plan*, Planning Commission, Government of India, December 2006, [http://planningcommission.nic.in/plans/planrel/app11\\_16jan.pdf](http://planningcommission.nic.in/plans/planrel/app11_16jan.pdf)

sense that education is a continuum and one category spills over into another. Nonetheless, having said that, it is odd that the policy debate on revamping and reforming education tends to focus on elementary and secondary education (delivered through schools) and higher education, with little being said on vocational education. Consider, for instance, the latest Annual Report of the Ministry of Human Resource Development (MHRD).<sup>4</sup> Vocational education is interpreted as nothing more than tagging a vocational stream onto secondary education. “The higher secondary stage to provide for diversified courses with emphasis on vocationalisation. Vocational education is to become a distinct stream, intended to prepare students for identified occupations spanning several areas of activity at the Plus-2 stage.”<sup>5</sup> In all fairness, the ministry’s document does have a section on technical education, but that is interpreted as technical education in the sense of higher education – engineering, technology, management, architecture, town planning, pharmacy, and applied arts and crafts.

This is not to suggest that the skills deficit is not recognised. However, before that, a few words are in order about the delivery of vocational training, both formal and informal. Within the formal system, higher technical education is imparted through professional colleges and lower technical education through vocational education in post-secondary schools. In addition, there can be specialised training through technical institutes and apprenticeship training. The MHRD has 1,244 polytechnics.<sup>6</sup> There are 5,114 Industrial Training Institutes (ITIs)<sup>7</sup> and six Advanced Training Institutes (ATIs) run by the centre. The Apprentices Act covers 20,800 public and private sector establishments. While this sounds impressive, the Plan document has the following damning indictment too.<sup>8</sup> “There are 17 ministries and departments of the Government of India which are imparting vocational training to about 3.1 million persons every year. Most of these are national-level efforts, and individually, they are able to reach a very small part of the new entrants to the labour force. Even collectively, they provide training to about 20 percent of the number of annual additions to the labour force. Each ministry/department in charge of subjects sets up training establishments in its field of specialisation.

The attempt to meet training needs through multiple authorities – labour, handlooms, handicrafts, small industry, education, health, women and child development, social welfare, tourism, etc. – leads to redundancy at some locations...The unorganised sector which constitutes about 93 percent of the workforce is not supported by any structural system of acquiring or upgrading skills. By and large, skill formation takes place through informal channels like family occupations, on the job training under master craftsmen with no linkages to the formal education training and certification. Training needs in this sector are highly diverse and multi skill-oriented. Many efforts for imparting training through Swarnjayanti Gram Swarajgar Yojana (SGSY), Prime Minister’s Rozgar Yojana (PMRY), Khadi and Village Industries Commission, Krishi Vigyan Kendra and Jan Shiksha Sansthan (JSS) are in place but the outcome is not encouraging”.

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<sup>4</sup> [http://www.education.nic.in/AR/ar\\_en\\_06\\_cont.asp](http://www.education.nic.in/AR/ar_en_06_cont.asp). The latest *Annual Report* available is still for 2005-06.

<sup>5</sup> *Ibid.*

<sup>6</sup> These offer three-year diploma courses. These figures are from *Eleventh Five-Year Plan, 2007-2012, Vol. I, Inclusive Growth*, Planning Commission, Government of India and Oxford University Press, 2008.

<sup>7</sup> Of the 5,114 1,896 are run by state governments and 3,218 are private. Since 2004-05, 100 ITIs have been identified for up-gradation as centres of excellence.

<sup>8</sup> *Ibid.*

Consequently, the overall skills deficit has often been flagged. For instance, in 2002, the S. P. Gupta Special Group<sup>9</sup> constituted by the Planning Commission stated that, “It should be noted, however, that on the average, the skilled labour force at present is hardly around six to eight percent of the total, compared to more than 60 percent in most of the developed and emerging developing countries”. In 2001, the Montek Singh Ahluwalia Task Force,<sup>10</sup> again constituted by the Planning Commission, stated that, “Only five percent of the Indian labour force in this age category<sup>11</sup> has vocational skills whereas the percentage in industrial countries is much higher, varying between 60 percent and 80 percent, except for Italy, which is 44 percent. The percentage for South Korea, which has recently been categorised as an industrialised country, is exceptionally high at 96 percent.

The developing countries listed have percentages which are significantly lower than the developed countries, but they are still much higher than India, for example, Mexico at 28 percent and Peru at 17 percent. Differences in definition may make inter-country comparison somewhat unreliable, but the level in India is clearly far too low.” While the numbers are marginally different, the Eleventh Five-Year Plan document adds the following:<sup>12</sup> “The National Sample Survey (NSS) 61<sup>st</sup> Round results show that among persons of age 15 to 29 years, only about two percent are reported to have received formal vocational training and another eight percent reported to have received non-formal vocational training indicating that very few young persons actually enter the world of work with any kind of formal vocational training. This proportion of trained youth is one of the lowest in the world. The corresponding figures for industrialised countries are much higher, varying between 60 percent and 96 percent of the youth in the age group of 20 to 24 years. One reason for this poor performance is the near exclusive reliance upon a few training courses with long duration (two to three years) covering around 100 skills. In China, for example, there exist about 4,000 short duration modular courses which provide skills more closely tailored to employment requirement”.

If more numbers are needed, the following drive home the point.<sup>13</sup> Eighty percent of new entrants into the workforce have no opportunities for development of skills. While there are 12.8 million new entrants into the workforce every year, the existing training capacity is 3.1 million per year. In both rural and urban India, and for both males and females, attendance rates in educational institutions drop by around 50 percent in the age group of 15 to 19 years.<sup>14</sup> Simultaneously, labour force participation rates begin to increase in the age group of 15 to 19 years and by the time it comes to the age group of 25 to 29 years, it is 95 percent for rural males and 94.4 percent for urban males. The figures for females are lower at 36.5 percent in rural India and 22.1 percent in urban India. The 15-29 years age-group can be used as an illustration. Since post-educational institution training opportunities are limited, 87.8 percent of the population in this bracket has had no vocational training.<sup>15</sup> Of the 11.3 percent

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<sup>9</sup> *Report of the Special Group on Targeting Ten Million Employment Opportunities per year over the Tenth Plan Period*, Planning Commission, May 2002, [http://planningcommission.nic.in/aboutus/committee/tsk\\_sg10m.pdf](http://planningcommission.nic.in/aboutus/committee/tsk_sg10m.pdf)

<sup>10</sup> *Report of the Task Force on Employment Opportunities*, Planning Commission, July 2001, [http://planningcommission.nic.in/aboutus/taskforce/tk\\_empopp.pdf](http://planningcommission.nic.in/aboutus/taskforce/tk_empopp.pdf)

<sup>11</sup> 20-24 age-group.

<sup>12</sup> *Eleventh Five-Year Plan, 2007-2012, Vol. I, Inclusive Growth*, Planning Commission, Government of India and Oxford University Press, 2008.

<sup>13</sup> *Ibid.* These numbers are based on the 61<sup>st</sup> round (2004-05) of the NSS.

<sup>14</sup> The drop is sharper for rural females and is higher in rural than in urban India.

<sup>15</sup> 85.5 percent for males and 90.2 percent for females. Understandably, the numbers without training are higher in rural areas.

who received vocational training, only 1.3 percent received formal vocational training.<sup>16</sup> “The said results also reflect that 38.8 percent of the Indian labour force is illiterate, 24.9 percent of the labour force has had schooling up to the primary level and the balance 36.3 percent has had schooling up to the middle and higher level. They also reveal that about 80 percent of the workforce in rural and urban areas does not possess any identifiable marketable skills.”<sup>17</sup> That is putting it strongly, but not far removed from the truth.

### **Probing the Problem Further**

Before generalising on the basis of all-India aggregates, it is worth probing the problem further. Most of the skills deficit is a problem that plagues the unorganised/informal sector. While there are alternative definitions of unorganised or informal, it is unnecessary to go into those definitional problems here.<sup>18</sup> But it is necessary to remember that there can be workers apparently employed in the organised/formal sector, who are on informal contracts. They too are, therefore, unorganised/informal. Using 2004-05 data, the National Commission for Enterprises in the Unorganised Sector (NCEUS) estimated the total employment to be 457.5 million and informal/unorganised sector employment to be 394.9 million, that is, 86 percent. This overall figure masks inter-state variations and in a state like Bihar, the unorganised sector share is as high as 96.2 percent. Conversely, in a state like Goa, it is as low as 62.2 percent. Of the 394.9 million who are employed in the unorganised/informal sector, 253 million work in the agriculture sector and 142 million are employed in the non-agricultural sector. However, of these 142 million, 89 million report themselves as self-employed. This is a point worth bearing in mind if skill formation is sought to be driven through an employer-employee relationship.

Admittedly, as development occurs and segmentation breaks down, the share of organised/formal components in the labour force should increase and the share of self-employment should decline, with a parallel decline in the contribution of agriculture to employment. However, that is in the future. And these are the numbers as of today, or more accurately, as of 2004-05.

Using mean years of schooling as a surrogate indicator for skill levels, Table 1 shows the skill levels today.<sup>19</sup> There are no great surprises in the table. With the exception of regular workers in the organised sector, males are more educated than females. With the exception of regular female workers in the unorganised sector,<sup>20</sup> urban workers are more educated than their rural counterparts. The organised sector has higher levels of skills than the unorganised sector and regular workers perform better than casual workers. The self-employed category has skills midway between those who are casual and those who are regular. “The mean years of schooling of organised sector workers were above the unorganised workers for both men and women in rural and urban areas across the states. The mean years of schooling among men was higher in Kerala, Maharashtra, Himachal Pradesh, Gujarat and Chhattisgarh in rural areas and Jharkhand, Uttaranchal, Punjab, Haryana, Kerala and Maharashtra in urban areas...Obviously, education is an important asset that helps entry into coveted organised

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<sup>16</sup> The number is higher for males and higher in urban than in rural areas.

<sup>17</sup> *Ibid.*

<sup>18</sup> See *Report on Conditions of Work and Promotion of Livelihoods in the Unorganised Sector*, National Commission for Enterprises in the Unorganised Sector, August 2007.

<sup>19</sup> *Ibid.*

<sup>20</sup> This and the earlier surprise may have something to do with the sectors in which regular female workers (unorganised and organised) are employed.

sector jobs...Entry into the organised sector even as unprotected (unorganised) workers required higher mean years of schooling...Women with higher education are able to compete with men for jobs in the organised sector...Low access to education and lower levels of education keep the women mainly in the unorganised non-agricultural or agricultural sectors...Lower levels of education among the workers create vulnerability at two levels. It first denies access to “good jobs” in the organised sector. Second, it confines the workers to mostly casual manual jobs. Women workers in rural areas are the worst victims of this double disadvantage”.<sup>21</sup>

**Table 1: Mean years of schooling of non-agricultural workers**

	<b>Rural males</b>	<b>Rural females</b>	<b>Urban males</b>	<b>Urban females</b>
<b>Casual workers in unorganised sector</b>	3.6	1.5	4.3	2.1
<b>Regular workers in unorganised sector</b>	7.0	5.6	7.1	4.8
<b>Self-employed in unorganised sector</b>	5.3	2.9	7.7	5.1
<b>Unorganised workers in organised sector</b>	5.3	4.0	7.4	7.3
<b>Regular workers in organised sector</b>	7.9	7.2	8.8	9.6
<b>Organised sector</b>	7.6	5.7	10.1	10.1

A subsequent report by the NCEUS focused specifically on skill formation.<sup>22</sup> Before turning to this, it is worth making the point that education is not the same as skills formation, with the latter developed through some form of vocational education. Education does not necessarily lead to the development of marketable skills. However, education does provide a general template and makes it easier to access both formal and informal vocational education. Having said this, data on educational outcomes are often used as a surrogate indicator of skill formation because data on skills are difficult to obtain. Some national, but not disaggregated, data are available through the Labour Ministry’s Directorate General of Employment and Training (DGET). The only other data source is surveys by the NSSO, although skill surveys by the NSSO across different rounds do not quite follow the same methodology.

The NSS of 1993-94 had a rudimentary question on skills. Thirty-odd skills were listed, showing a bias towards what can be called traditional skills and these were low-end skills, not skills associated with professional or high-end workers. The skills listed were stenographer, machine-man, fitter, die-maker, electrician, repairer of electronic goods, motor-vehicle driver, fisherman, miner, quarryman, spinner (including *charkha* operator), weaver, tailor, cutter, carpenter, mason, bricklayer, shoemaker, cobbler, moulder, blacksmith, goldsmith, silversmith, boatman, potter, nurse, midwife, basket-maker, wick-product maker, toy-maker, brick-maker, tile-maker, *bidi*-maker, book-binder, barber, mud-house builder and thatcher. Anyone who did not possess one of these 30-odd skills was classified in the “others” or unskilled category, so that there was a bias in the question asked. With these qualifications to the question asked, only 10 percent of the population (91.2 million) possessed any skills, with the share being slightly higher in urban areas. For instance, in urban areas, 19.6 percent of men and 11.2 percent of women possessed skills, with figures of 10 percent for men and 6.3 percent for women in rural areas.<sup>23</sup> The most important skills were tailoring (17.1 percent),

<sup>21</sup> *Ibid.*

<sup>22</sup> *Skill Formation and Employment Assurance in the Unorganised Sector*, NCEUS, August 2008. This section draws on that report.

<sup>23</sup> There is a difference between skills of the population and skills of the labour force. But we are glossing over this difference, except where relevant.

followed by weaving (8.2 percent). Motor-vehicle drivers, stenographers and *bidi*-makers accounted for a little over five percent.

The NCEUS correlated these results with educational attainments and sought to classify skills delivered through formal means and those delivered informally.<sup>24</sup> For instance, a fisherman, miner, quarryman, spinner (including *charkha* operator), weaver, tailor, cutter, carpenter, mason, brick-layer, shoemaker, cobbler, moulder, blacksmith, goldsmith, silversmith, boatman, potter, midwife (rural), basket-maker, wick-product maker, toy maker, brick-maker, tile-maker, *bidi*-maker, book-binder, barber, mud-house builder and thatcher are likely to have skills acquired informally. Conversely, a stenographer, machine-man, fitter, die-maker, electrician, repairer of electronic goods, motor-vehicle driver or midwife (urban) is likely to have skills obtained through some formal mechanism. If this identification is accepted as roughly accurate, two percent of the population (4.2 percent of the labour force) had skills acquired formally, while 8.2 percent of the population (15.3 percent of the labour force) had skills acquired informally. Based on the 1993-94 data, we have a double problem – low-level of skills and skills obtained through informal channels.

In 1999-2000, the NSSO sought information on the skill levels of the unemployed. It found that in rural areas, 16.4 percent of male unemployed and 18.8 percent of female unemployed possessed marketable skills.<sup>25</sup> In urban areas, the percentage of male unemployed who possessed marketable skills was almost identical to that in rural areas. However, for unemployed females in urban areas, 32 percent possessed marketable skills. Among the rural male unemployed, 17 percent had skills as stenographer, 12 percent as drivers (both vehicles and tractors), nine percent as mechanics and 8 percent as electricians. Among the rural female unemployed, 37 percent had skills of tailoring/cutting and 22 percent as stenographer.<sup>26</sup> Among urban male unemployed, 18 percent had skills as stenographers, nine percent of mechanics, eight percent as electricians and seven percent as drivers. Among urban female unemployed, 30 percent had skills as stenographer and 22 percent as tailors. In each of the four categories, more than five percent had computer programming skills.

Though these answers are on the basis of self-reporting, three questions arise. First, are these marketable skills for a market which no longer exists, such as for stenographers? This cannot be the answer for mechanics, electricians and drivers, perhaps even tailors. Second, is there a problem with the quality of skills and the lack of formal training and certification? Third, is there a geographical mismatch, with the demand for skills occurring in certain parts of the country and the supply in others?

In 2004-05, the NSSO asked a question on the skill profile of the youth, defined as those between 15 and 29 years. Skills were defined as informal (both hereditary and others) and formal, formal vocational training interpreted as one where there was a structured training programme leading to a recognised certificate, diploma or degree. In 2005, the 15 to 29 years age-group accounted for 27 percent of the total population, which amounted to 289.5 million. Of these, only 11.5 percent (33.4 million) received any training, formal or informal.<sup>27</sup> However, within this 33.4 million, 11.1 million had received (or were receiving) formal training.

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<sup>24</sup> *Ibid.*

<sup>25</sup> *Ibid.*

<sup>26</sup> Since this is a rural figure, this ought to be a bit of a surprise.

<sup>27</sup> *Ibid.*



Understandably, formal training was higher in urban than in rural areas. However, informal skill acquisition was evenly spread across urban and rural areas. For youth, the 2004-05 survey brings out inter-state differences starkly. This is shown in Table 2. Amongst the youth, most of those with formal training were in Kerala, Maharashtra, Tamil Nadu, Himachal Pradesh and Gujarat. Not surprisingly, Bihar's share was the lowest. A better indicator of the state's performance was the share of the young population that had some variety of formal training. In this, Maharashtra, Kerala, Tamil Nadu, Gujarat and Andhra Pradesh performed well. Was this because there was better training capacity and infrastructure? Was it because industrial activity existed in these states? Was it because there was a positive correlation between some minimum level of educational attainment and acquisition of formal training? The answer is probably a combination of various factors.

**Table 2: Inter-state variations in skill formation among youth, 15 to 24 years**

State	Share of state in those with formal training (percent)	Percent of youth in state with formal training
Jammu & Kashmir	0.4	2.0
Himachal Pradesh	1.0	5.6
Punjab	2.8	4.1
Uttarakhand	0.8	3.9
Haryana	2.8	4.5
Delhi	1.7	4.1
Rajasthan	2.5	1.7
Uttar Pradesh	6.9	1.7
Bihar	0.8	0.5
Assam	0.8	1.4
West Bengal	6.9	3.2
Jharkhand	0.8	1.3
Orissa	1.9	1.9
Chhattisgarh	2.0	3.5
Madhya Pradesh	3.4	2.2
Gujarat	6.6	4.7
Maharashtra	21.7	8.3
Andhra Pradesh	6.6	3.2
Karnataka	4.6	3.1
Kerala	12.2	15.5
Tamil Nadu	11.3	7.6
North-East	0.4	1.3
Union Territories	1.3	12.6

## Projections for the Future

While not quite projections for the future, some figures on the dimensions of the skill development problem are available from the Eleventh Plan document.<sup>28</sup> It was estimated that there would be a global skilled manpower shortage of 56.5 million by 2020. Of this figure, India would be in a position to supply 47 million, provided adequate skills are delivered.<sup>29</sup> From the existing 3.1 million per year, the skill development infrastructure will expand to provide skills to 15 million. This will not only meet the annual workforce accretion of 12.8 million, but also possess enough surplus capacity to train or re-train those in the existing labour force.

<sup>28</sup> *Eleventh Five-Year Plan, 2007-2012, Vol. I, Inclusive Growth, ibid.*

<sup>29</sup> This should not be interpreted in the narrow sense of migration out of the country.

The NCEUS estimates<sup>30</sup> are slightly different, as is the methodology. The NCEUS worked out projections for the labour force and used the rule of thumb (based on international experience) that 50 percent of the labour force needs to be formally trained. On this basis, the annual training capacity needs to be 12.5 million during the Eleventh Plan, 16 million during the Twelfth Plan and 18 million during the Thirteenth Plan. Perhaps one should also mention that the McKinsey figure of incremental skilling is 1.5 million per year, leading to 20 million by 2015, though this is only based on manufacturing.<sup>31</sup>

There is also some tentative identification of where these skill needs are going to be. For instance, within the services category, the Planning Commission<sup>32</sup> identifies the following for high growth and employment – information technology-enabled services (ITES), telecommunication services, tourism, transport services, healthcare, education and training, real estate and ownership of dwellings, banking and financial services, insurance, retail services, and media and entertainment services. Other sectors mentioned are energy production, distribution and consumption, floriculture, construction of buildings and construction of infrastructure projects.

Within industry groups are automotives, food, chemicals, basic metals, non-metallic minerals, plastic and plastic processing, leather, rubber, wood and bamboo, gems and jewellery and handicrafts, handlooms and *khadi* and village industries. In a separate identification from the point of view of the demand for skills, there is mention of 20 sectors – automobiles and auto-components, banking/insurance and financial services, building and construction, chemicals and pharmaceuticals, construction materials/building hardware, educational and skill development services, electronics hardware, food processing/cold chain/refrigeration, furniture and furnishings, gems and jewellery, healthcare services, ITES or Business Process Outsourcing, information technology (IT) services or software services, leather and leather goods, media, entertainment, broadcasting, content creation and animation, organised retail, real estate services, textiles and garments, tourism, hospitality and travel trade and transportation, logistics, warehousing and packaging.

The more detailed analysis by the NCEUS states the following:<sup>33</sup> “Broadly speaking, at the high end of the workforce, we have segments requiring high levels of general education and/or technical education. Our primary focus is on segments of the workforce which have comparatively low levels of education, and which are currently with or without (formal/non-formal) skills. Among these segments, those with a fairly high incidence of skills (predominantly non-formal) and rapid growth of employment are clearly those on which formal training initiatives would need to focus.

Our analysis identifies the following trades on a prima facie basis as those in which an intensive effort to expand training would be required: construction workers, stone cutter; salesmen, shop assistants; transport equipment operators; tailors, dress-makers, sewers, upholsterers; carpenters, cabinet and wood; tobacco preparers, tobacco product makers; hair dresser, barber, beautician; house keeper, matron, steward, cooks, waiters, bartenders; stationary engine operators, equipment operators, material handling, loaders; plumber, welder, sheet metal, structural, metal preparers, erectors; painting; arts and journalists. There

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<sup>30</sup> *Skill Formation and Employment Assurance in the Unorganised Sector*, NCEUS, August 2008, *ibid*.

<sup>31</sup> *Made in India: the Next Big Manufacturing Export Story*, Confederation of Indian Industry and McKinsey, October 2004.

<sup>32</sup> *Ibid*.

<sup>33</sup> *Ibid*.

are other sectors/segments which are also growing rapidly but where current levels of training are low. Examples of these trades are: maids, related house keeping service; professional workers; building caretaker, sweeper, cleaner.” Quality issues apart, these are not necessarily the skills being imparted today. The skill profile from NSSO 1999-2000 has already been mentioned. Table 3 shows the skill profile of the young (15 to 29 years), based on the NSSO 2004-05, who have had some formal training.<sup>34</sup>

**Table 3: Percentage distribution across segments of young (15 to 29 years old) population with formal vocational training**

<b>Sector</b>	<b>Total</b>	<b>Male</b>	<b>Female</b>
Mechanical engineering	7.9	12.3	1.0
Electrical & electronic engineering	12.5	18.2	3.5
Computer trades	30.0	29.9	30.0
Civil engineering & building construction	3.3	4.7	1.2
Chemical engineering	0.3	0.5	0.0
Leather	0.2	0.3	0.1
Textiles	9.8	1.9	22.2
Catering, nutrition, hotels, restaurants	0.9	1.1	0.6
Artisan/craftsman/handicrafts, cottage industries	1.9	1.5	2.5
Creative arts/artists	1.2	0.8	1.9
Agriculture, crop production, food preservation	0.6	0.7	0.4
Non-crop based agriculture	0.5	0.5	0.5
Health & para-medical	6.4	4.3	9.9
Office & business-related	4.8	5.1	5.8
Drivers, mechanics	5.9	9.4	0.5
Beauticians, hair-dressing	1.7	0.0	4.3
Tour operators, travel managers	0.1	0.0	0.0
Photography	0.1	0.2	0.1
Childcare, nutrition, pre-schools, crèches	1.0	0.0	2.6
Journalism, mass communications, media	0.3	0.3	0.1
Printing technology	0.5	0.6	0.5
Others	9.1	7.9	10.9

To obtain a better idea of what is likely to happen in the future, we did our own projections, based on the NSSO,<sup>35</sup> and the results of these are shown in Table 4. The total employment in 2008-09 is estimated at 390.15 million and is estimated to increase to 828.95 million, based on the sectoral employment elasticities. This shows that the substantial growth in employment will fall under two categories – farmers, fishermen, hunters and loggers, and workers in rubber, paper, printing, painting, construction and equipment operators.

<sup>34</sup> *Ibid.*

<sup>35</sup> This follows the 1-digit NCO classification and the physical description does not show differences between Digits 7, 8 and 9.

However, the 1-digit National Classification of Occupations (NCO) categorisation of Table 4 is too aggregated. Hence, a disaggregated analysis at the 2-digit NCO level is shown in Table 5, ignoring workers who are employed in agriculture. This offers a much better understanding of what is likely to occur. This table is interesting because of several reasons. First, it is not invariably the case that demand for skills will increase uniformly across the board. For example, while there may be a remarkable increase in demand for brick-layers, construction workers and supervisors, there may also be a significant drop in the demand for clerical workers. This reduced demand is something that is rarely flagged. Second, in identifying sectors where there will be a need for skill-upgrading, there is often a tendency to identify highly-visible and high-value segments.

**Table 4: The aggregated future scenario, 2008-09 to 2025-26**

Sector	Projected employment in 2025-26 (million)	Incremental employment from 2008-09 to 2025-26 (million)
Professional, technical & related workers	24.7	9.2
Administrative, executive & managerial workers	34.5	20.3
Clerical & related workers	12.4	2.1
Sales workers	54.0	22.8
Service workers	27.2	11.2
Farmers, fishermen, hunters, loggers	427.7	215.2
Workers in mines, metals, wood, chemicals, garments, tannery, food & tobacco	28.3	8.4
Workers in leather, wood, stone, iron, glass, machinery, electrical, sound equipment, plumbers, jewellers	27.4	10.3
Workers in rubber, paper, printing, painting, construction, equipment operators	191.9	139.2
Not classified	1.0	0.1

As Table 5 shows, increased demand will result in many sectors that are relatively less visible, low-value and low-wage, and typically characterised as belonging to the informal/unorganised sector, where formal training is rarely the norm. Third, a shortage of skills is associated with a demand/supply mismatch and wage inflation. Table 5 also shows the annual increase in real incomes, assuming supply and demand both increase according to present trends. Sectors with high (such as jurists) and low wage (jewellery and precious metals) inflation are those that one would have not identified *a priori*.

**Table 5: The aggregated future scenario, 2008-09 to 2025-26**

<b>2-digit NCO code</b>	<b>Physical description</b>	<b>Incremental employment from 2008-09 to 2025-26</b>	<b>Percent annual change in real incomes</b>
95	Bricklayers & other construction	47,400,000	3.8
98	Transport equipment operators	11,600,000	3.7
43	Salesmen, shop assistants	8,600,000	6.9
94	Production & related	6,883,721	3.5
97	Material handling & related equipment operators	6,269,618	3.9
53	Maids, house-keeping	4,269,131	4.1
26	WPDM, other services	4,133,830	7.7
15	Teachers	3,193,507	10.6
40	Merchants & shop-keepers	3,100,000	6.9
25	WPDM, transport, storage & communication	3,006,952	6.1
79	Tailors, sewers, upholsterers	2,759,466	2.8
81	Carpenters, wood-workers	2,742,559	3.3
24	WPDM, mining, construction, manufacturing	2,477,991	7.7
93	Painters	2,226,366	3.0
44	Insurance, real estate, securities	2,218,171	7.2
34	Computing machine operators	1,420,988	6.5
64	Plantation labour	1,415,441	3.8
82	Stone-cutters, carvers	1,371,606	4.2
29	Administrative, executive, managerial	1,322,329	10.9
75	Spinners, weavers, knitters, dyers	1,239,584	3.6
78	Tobacco	1,206,283	4.4
19	Professional workers	1,060,857	8.3
56	Hair-dressers, beauticians	1,040,618	3.1
87	Plumbers, welders	898,159	3.0
52	Cooks, waiters, bar-tenders	609,019	3.6
8	Nursing, health technicians	464,436	6.1
22	WPDM, wholesale & retail trade	440,956	8.0
85	Electrical & electronic workers	424,890	7.2
92	Printing	400,347	3.3
71	Miners, quarry-men, well-drillers	377,516	4.0
88	Jewellery, precious metals	343,805	2.8
54	Building caretakers, sweepers	334,980	3.7
50	Hotels, restaurants	323,180	3.0
89	Glass formers, potters	320,226	4.2
23	WPDM, financial institutions	315,683	8.8
33	Book-keepers, cashiers	303,784	6.8
80	Shoe makers, leather goods	294,418	3.4
7	Physicians, surgeons	247,869	7.6
17	Sculptors, painters, photographers	242,278	8.2
55	Launderers, dry cleaners	231,830	4.2
91	Paper & paper board	156,313	2.9
12	Accountants, auditors	149,563	5.1
57	Protective service workers	148,467	3.1
3	Engineering technicians	141,159	6.9

2	Architects, engineers, surveyors	134,923	7.2
74	Chemical processors	117,132	3.6
10	Mathematicians, statisticians	115,706	5.9
45	Money lenders, pawn brokers	108,328	6.9
18	Composers, performing artists	92,669	6.6
73	Wood preparation, paper	86,746	3.8
42	Technical salesmen	79,901	8.2
	Miscellaneous	72,615	
37	Transport conductors, guards	58,574	5.8
13	Social scientists	54,799	8.8
49	Sales workers	48,944	6.5
20	Elected & legislative officials	48,287	8.3
76	Tanners, pelt dressers	47,196	3.6
21	Administrative & executive officials	44,224	6.9
60	Farm plantation, dairy supervisors	40,516	3.0
86	Broadcasting, sound equipment	29,212	3.4
14	Jurists	27,018	11.4
51	Housekeepers, matrons, stewards	23,430	3.5
16	Poets, authors, journalists	23,333	9.9
39	Telephone & telegraph operators	- 22,634	6.5
36	Transport & communication supervisors	- 23,049	6.6
83	Blacksmiths, tool-makers, machine tool operators	- 52,438	3.4
90	Rubber & plastic	- 73,666	3.0
72	Metal processors	- 101,601	3.7
59	Service workers, n.e.c.	- 102,757	3.3
77	Food & beverage processors	- 165,311	3.7
30	Clerical, supervisors	- 360,995	6.4
35	Clerical, workers	- 371,049	5.8
99	Labourers	- 526,006	4.0

### The Government Roadmap

To restate the obvious, we have a problem with skills. If one considers the government's roadmap for delivering these skills, such as the one stated in the Eleventh Plan document,<sup>36</sup> it has the following components:

- Implement a Skill Development Mission, with Skill Development Programmes involving the private sector, so that placement is also ensured.
- The Skill Development Mission will be supported by the Prime Minister's National Council on Skill Development (PMNCSD), the National Skill Development Coordination Board (NSDCB) and the National Skill Development Corporation (NSDC).
- Provide one-time capital grants to private institutions and stipends and subsidies towards fees for SC/ST/OBC/minorities and other BPL candidates.

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<sup>36</sup> *Ibid.*

- Enlarge the 50,000 Skill Development Centres.
- Expand the public sector skill development infrastructure by a factor of five. Once expanded, this can be handed over to the private sector for management.
- Complete the up-gradation of 500 ITIs. Upgrade another 1,396 ITIs in PPP mode. Establish another 1,000 ITIs in PPP mode in under-served regions and if there is demand, set up another 500 ITIs in industrial clusters and special economic zones.
- Upgrade 400 government polytechnics and set up another 125 new polytechnics in PPP mode in under-served regions.
- Expand the capacity for vocational education in schools, with a focus on capturing Class VII and Class IX dropouts.
- Assess skills deficits sector-wise and region-wise. Establish a National Skill Inventory and a National Database for Skill Deficiency Mapping.
- Establish a trainee placement and tracking system.
- Draw a distinction between structural, interventional and last-mile unemployability.
- Realign and reposition existing public sector training infrastructure, such as industrial training institutes, polytechnics and revamp vocational education systems in schools. Grant these institutions autonomy and if necessary, provide for private sector management through PPP.
- Reposition the employment exchanges for career counselling.
- Establish a national qualifications framework, to establish equivalence and vertical mobility across various forms of vocational education.
- Set up third party accreditation systems, delinked from the regulator.
- Encourage third party ratings of institutions, on the basis of outcomes.
- Encourage the private sector to formulate skill development plans.

The PMNCSD, the NSDCB and the NSDC have since been set up. Beyond the signal that skill development is important and has been recognised as such, it is too early to speculate what will come out of these efforts. Much the same can be said of the “National Skill Development Policy”, formulated by the Ministry of Labour in March 2009.<sup>37</sup>

Nevertheless, some points from this policy should be flagged. First, “The Corporation would constitute Sector Skills Councils with the following functions: a) Identification of skill development needs including preparing a catalogue of types of skills, range and depth of skills to facilitate individuals to choose from them; b) Development of a sector skill development plan and maintain skill inventory; c) Determining skills/competency standards and qualifications; d) Standardisation of affiliation and accreditation process; e) Participation in Affiliation,

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<sup>37</sup> <http://labour.nic.in/policy/NationalSkillDevelopmentPolicyMar09.pdf>.

accreditation, examination and certification; f) Plan and execute Training of Trainers; g) Promotion of academies of excellence; and h) Establishment of a well structured sector specific Labour Market Information System to assist planning and delivery of training.”

If this is done, if nothing else, there should be improvement in the quality of information on skills deficits, sector-wise and region-wise. And there should also be movement on affiliation, accreditation, examination and certification. Much of this is sought to be done through the National Council on Vocational Training. “All the existing Institutions/Councils/Boards under different Ministries, involved in skill development will be encouraged to follow National Vocational Qualification Framework (NVQF).

This framework will have the following features: a) Competency based qualifications and certification on the basis of nationally agreed standards and criteria; b) Certification for learning achievement and qualification; c) A range of national qualification levels – based on criteria with respect to responsibility, complexity of activities, and transferability of competencies; d) The avoidance of duplication and overlapping of qualifications while assuring the inclusion of all training needs; e) Modular character where achievement can be made in small steps and accumulated for gaining recognisable qualification; f) Quality Assurance regime that would promote the portability of skills and labour market mobility; g) Lifelong learning through an improved skill recognition system; recognition of prior learning whether in formal, non-formal or informal arrangements; h) Open and flexible system which will permit competent individuals to accumulate their knowledge and skill through testing & certification into higher diploma and degree; i) Different learning pathways – academic and vocational – that integrate formal and non-formal learning, notably learning in the workplace, and that offer vertical mobility from vocational to academic learning; j) Guidance for individuals in their choice of training and career planning; k) Comparability of general educational and vocational qualifications at appropriate levels; and l) Nationally agreed framework of affiliation and accreditation of institutions. m) Multiple certification agencies/institutions will be encouraged within the NVQF.”

Second, “At present about 23,800 establishments are covered under the Apprenticeship Training Scheme imparting training to 2.58 lakh apprentices. Over the next five years, this will be increased to about one lakh establishments covering about one million apprentices. The existing Apprentices Act, 1961 will be revisited to meet desired target.”

Third, “Employment Exchanges will be strengthened and upgraded under the National Employment Service to provide counselling, guidance and placement services to the employment seekers. They will also channel the candidates into jobs, apprenticeship and training. Efforts will be made to expand formal employment.”

Fourth, based on a Confederation of Indian Industry study, the skills demand is estimated to be of the kind shown in Table 6.

Fifth, the “Prime Minister’s National Council on Skill Development has set a target of 500 million persons by 2022. Accordingly all the ministries will devise skill development plans and set the targets for Eleventh, Twelfth and Thirteenth Five-Year Plans and the Planning Commission would allocate necessary resources to meet the above targets under plan schemes. The Planning Commission would also ensure that all the ministries are making necessary provisions for skill development in their annual plans and setting the targets/milestones for skill development and employment. All the targets will be in the direction of achieving above objectives.”



Sixth, “All the ministries/departments will add one annex in their annual report on “Skill Development and Employment generation”. The Ministry of Labour and Employment will develop necessary format for this purpose.”

**Table 6: Projected demand for skills, 2015**

Sector	Demand in millions	Additional comments
Auto	2-2.5	5 percent specialised, 25 percent skill level II, 30 percent skill level I, 40 percent minimal education
Construction	15	2 percent specialised, 11 percent skill level II, 12 percent skill level I, 75 percent minimal education
Retail	4-5	6-8 percent specialised, 32-43 percent skill level II, 45-50 percent skill level I, 10-15 percent minimal education
Healthcare	4-4.5	10 percent specialised, 40 percent skill level II, 16 percent skill level I, 34 percent minimal education
Banking & financial services	4.5-5	5 percent specialised, 15 percent skill level II, 65 percent skill level I, 15 percent minimal education
Creative industry	0.5-0.8	5 percent specialised, 20 percent skill level II, 65 percent skill level I, 10 percent minimal education
Drivers	51	An additional 8,000 warehouse managers
Mines & minerals	1.8	
Construction	55.2	
Engineering	1.8	
Banking & insurance	3.9	
Drugs & pharmaceuticals	1.4	
Biotechnology	1.2	
Healthcare	20.7	
Textiles	86.5	
IT and ITES	14.8	
Tourism	12.5	
Agro & food processing	0.2	
Chemicals & fertilisers	1.4	

Before reacting to the government’s roadmap, it is worth bearing in mind that globally, there are no clear answers as to the superiority, or otherwise, of public-delivery *vis-à-vis* private delivery.<sup>38</sup> There are PPP models in several countries in Europe. In Japan, training is essentially provided through the enterprise, whereas in the rest of East Asia, delivery is fundamentally public. At the other end, in Britain and the United States, delivery is primarily private. Vocational education through schools works well in the United States, Sweden, France, South Korea and Taiwan. The apprentice system works well in Germany. Reviewing the global experience, the NCEUS concluded that, “It has been seen that comprehensive systems of skill development that exist internationally are primarily for the formal sector, as it is economies that are dominated by the formal sector that have evolved such systems. In countries of East Asia, which have been characterised as state-led, demand driven systems, it is the universalisation of basic education, enlarging the coverage of secondary education and developing a vibrant system of vocational education that laid the foundation towards specifically targeting skills designed towards the workplace. Strengthening the educational system and universalising access is

<sup>38</sup> See the discussion in, *Improving Technical Education and Vocational Training, Strategies for Asia*, Asian Development Bank, 2004.

thus an essential prerequisite for widespread skill development, particularly when the skill mix needs to change to accommodate the needs of greater integration with the knowledge economy. While training systems might be supported by the government, especially in a situation where externalities limit the extent to which private initiative is forthcoming, it is essential to tailor training to employment as much as possible. Evolving systems of apprenticeship and enterprise based training that allow trainees to use their skills, with suitable incentives provided to employers and those trained, is essential. Furthermore, training assessment needs to be a joint exercise between those who need trained manpower (employers), those who need to be trained (workers) and those that evolve systems and frameworks (the state), as successful experiences demonstrate.”<sup>39</sup> While the point about greater informality in Asia is well taken, one should mention that high informality also results from government policy-induced distortions.

The NCEUS distinguishes between four systems that exist in India today – the formal public (government) training system, public training that caters to the informal sector, the non-government (both private and non-government organisation [NGO]) network of formal training institutions and the non-government (primarily NGO-driven) system of informal training. In the first category one has vocational education through schools,<sup>40</sup> polytechnics through the MHRD, the Craftsmen Training Scheme and the Apprenticeship Training Scheme through the DGET under the Ministry of Labour and Employment. The plans to expand public capacity under the “National Skill Development Policy (NSDP)” are essentially under this segment. In these projections, the present capacity is estimated at 9.9 million and by 2022, it is estimated to increase to 53 million.<sup>41</sup> Of the 53 million capacity in 2022, 15 million will be through the NSDC and 10 million through the Ministry of Labour and Employment. In the second segment of public training that caters to the informal sector, one has community polytechnics run by the MHRD, the JSS for disadvantaged adults,<sup>42</sup> the National Institute of Open Schooling, Ministry of Labour and Employment’s Skill Development Initiative,<sup>43</sup> Ministry of Micro, Small and Medium Enterprises’ entrepreneurship development programmes and entrepreneurship skill development programmes, PMRY,<sup>44</sup> the Swarna Jayanti Shahari Rojgar Yojana,<sup>45</sup> the SGSY<sup>46</sup> and Department of Rural Development’s Rural Development and Self-Employment Training Institutes (RUDSETI).<sup>47</sup> The Ministry of Textiles, Development Commissioner (Handicrafts), Ministry of Youth Affairs and Sports, Ministry of Women and Child Development, Department of Science and Technology, Ministry of Agriculture, Ministry of Health and Family Welfare, Ministry of Tourism, Ministry of Food Processing, Ministry of Social Justice and Empowerment and Ministry of Minority Affairs also have small programmes with some skill development components. Some programmes introduced by states like Andhra Pradesh, Rajasthan, Tripura, Maharashtra, Orissa and Jammu and Kashmir can also be included in the second segment of public training that caters to the informal

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<sup>39</sup> *Skill Formation and Employment Assurance in the Unorganised Sector*, NCEUS, August 2008, *ibid*.

<sup>40</sup> Especially Plus-2 in secondary schools. A centrally sponsored scheme has existed since 1988. Such training is followed by apprentice training under the Apprenticeship Act.

<sup>41</sup> *Ibid*.

<sup>42</sup> This can be implemented by NGOs.

<sup>43</sup> This was started in 2007.

<sup>44</sup> This was started in 1993 and has an element of training for self-employed entrepreneurs.

<sup>45</sup> This was started in 1997 and has an element of training in urban areas. It has two separate components for self-employment and wage employment.

<sup>46</sup> This also has a training component.

<sup>47</sup> The first RUDSETI was set up in Karnataka in 1982. Ministry of Rural Development also has pilots in partnership with IL&FS.

sector. There are several different categories that fit into the third segment of private networks of formal training institutions – for-profit training centres or institutes, training for employment within one’s own enterprise, training delivery and finance in partnership with public agencies and foundations with a developmental agenda, as part of corporate social responsibility. There are several examples in each category. While NGO initiatives are often informal, some have involved offering of formal industrial training institutes. It is unnecessary to give specific instances.

There are several reasons for dissatisfaction with the government’s roadmap. First, government ministries and departments work in silos. Notwithstanding the reform intentions, it is by no means obvious that multiplicity is going to decline, with an improvement in coordination. Second, much implementation will remain a state subject and there is no guarantee that delivery will improve across all states. Attempts to incentivise reforms at state level have failed in other sectors too. Third, though the roadmap incorporates possible private sector provisioning too, it is fundamentally based on expansions in the formal public training system. While the formal versus informal or organised versus unorganised dichotomy is often policy-induced, it is necessary to subsume successful examples of delivery in the second, third and fourth categories. Fourth, quite a bit hinges on improving vocational education in secondary schools. The increase in enrolment rates at the primary level will no doubt create eventual pressures to improve the secondary school system. But at the moment, there is no particular reason for optimism.

### **The Matching Problem**

In this final section, we turn to an issue that is usually ignored in the reform discussion, though it will be addressed if a skills inventory and the labour market information system is indeed developed. This concerns the matching problem, of matching labour supply to labour demand, something that employment exchanges are supposed to do. Indeed, the earlier quote from the NSDP mentions employment exchanges and their reform. A quote from the annual report of the Ministry for Labour and Employment says, “With each successive Five-Year Plan, there has been considerable expansion of the activities of the Employment Service and Training Service in the centre and the states. The total number of Employment Exchanges functioning at the end of March 2009 was 968 (including 82 University Employment information and Guidance Bureaux)...In order to maintain authentic Labour Market Information, Employment Service in the states has been implementing the Employment Market Information (EMI) programme. The programme covers all establishments in the Public Sector and non-agricultural establishments in the Private Sector employing 10 or more workers. A total of 3.02 lakh establishments were covered under the EMI programme as on 31 March 2006.”<sup>48</sup> This sounds impressive. But if the employment market information does not perform well, there is no reason why the proposed labour market information system should perform well. If one reads the annual report carefully, one discovers that there is plenty of information about training programmes run by employment exchanges and the amount of money that has been spent on them. But there is absolutely no information on how many jobs were obtained through employment exchanges, the match-making role that they were expected to perform.

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<sup>48</sup> *Annual Report, 2008-09*, Ministry of Labour and Employment, <http://labour.nic.in/annrep/annrep0809/Chapter-22.pdf>.

“There have been no attempts, so far, on collecting statistical material on employment and unemployment; the only published figures at present available are the registrations and placements of employment exchanges. These figures cannot, however, give an idea of the total volume of unemployment. Firstly, employment exchanges are confined to industrial towns and the figures of registrations and placements which they compile are restricted mostly to the industrial and commercial sector. Secondly, even in the industrial sector, there is neither compulsion for the unemployed, to register with the exchanges, nor is there any obligation on the part of the employer to recruit labour only through these exchanges. Even the information regarding unemployment among the industrial workers is, thus, inadequate. Thirdly, in the nature of the case, employment exchange statistics cannot indicate the amount of disguised unemployment which is otherwise believed to exist. This means that the extent to which qualified persons have to accept work which does not give them the income which persons with similar qualifications get elsewhere cannot be assessed from these data. There is also to some extent registration of persons who are already in employment and who desire to seek better jobs. This tendency is reported to exist in the more qualified section of registrants, but to the extent a region maintains these persons on the register of employment seekers, there is an overestimate of the number unemployed.” This was not written yesterday. It is a quote from India’s First Five-Year Plan (1951-56) document.<sup>49</sup> Nothing would substantially change if this were to be written now.

Despite problems of unemployment and underemployment, before the global financial crisis, the industry perception was fairly unambiguous. Workers are not available. This is often a comment on the lack of requisite skills, but is also increasingly a feedback on non-availability, regardless of skills. The broader point about the lack of skills and low educational attainments is well taken and often talked about in reports emanating from within India and from without. We have also highlighted this in earlier sections. For instance, it figures in a list of ten things a recent Goldman Sachs report wants India to focus on.<sup>50</sup> What is, however, often missed is a regional-cum-spatial mismatch. Purely in passing, the Goldman Sachs report states that, “As with other aspects of Indian life, there are considerable differences in organisational structures for education in different states, so broad generalisations are difficult”. Government documents and reform blueprints also rarely mention this matching problem. There are geographical areas and segments where there is excess demand and ones where there is excess supply. The demographic dividend accrues in parts of the country. But that is not necessarily where jobs are being created. Earlier, public sector (and even private sector) establishments could be set up in locations where there was labour. But with de-licensing, this is no longer a possible option.

Unorganised sector male wage employment is primarily in manufacturing, construction, trading and transport. For women, trading and transport can be replaced by domestic services. Depending on how we count, the total is around 70 million. These figures are from 2004-05. They must have increased since then and it is a considerable number. Hence, one should ask the question: How do these workers find out what jobs are available and decide on temporary or permanent migration? The answer is simple. Barring limited instances of job offers at factory gates, there are only two channels: informal (family, caste, community) networks and labour contractors. This kind of information dissemination cannot be efficient, apart from commissions, exploitative or otherwise, paid to agents.

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<sup>49</sup> Chapter 39, *Employment*.

<sup>50</sup> “Ten Things for India to Achieve its 2050 Potential,” *Global Economics Paper No. 169*, Goldman Sachs, June 2008.

A long quote from a NCEUS report is in order, about wage employment in the unorganised sector:<sup>51</sup> “Employment is obtained in the unorganised sector mainly through three modes, the importance of these three modes vary from activity to activity and industry to industry. First, is by ‘standing at the factory gate’, second is through a family, caste and community based network and third is through labour contractors or ‘Jamadars’. There is a total absence of any form of formal publicity for employment; no newspaper advertisements or posters in public places announcing job vacancies etc. Occasionally, employers stick notices such as “Wanted: Sample tailors”, “Wanted skilled workers for shirt making” and “Wanted: Packers”. Posters with “Wanted Sales Man” or “Wanted Typist” are not uncommon in the unorganised services sector. Workers without access to caste or community networks have to shift from one ‘factory gate’ to another until they get a job. The Labour Bureau surveys show that a large part of the unorganised employment in the industries such as textiles, garments, powerlooms, *agarbati* and toys and dolls, is obtained at the ‘factory gate’. Migrant labour are particularly disadvantaged if they have to get jobs at the factory gate. All these imply limited job choices and low levels of mobility for workers in the unorganised sector...Contract labour was found in large numbers in certain activities in the unorganised sector such as in stone quarrying, *bidi* rolling, rice shelling, brick-kiln and construction...In construction, an estimated 10.7 million construction workers, accounting for 83 percent of all construction workers in India in that year, were employed through contractors and did not receive minimum employment protection and benefits whatsoever.” Other than such dis-intermediation and information dissemination being inefficient, there can be no question of skill formation if recruitment is through such informal channels.

Clearly, one needs efficient clearing houses that match supply and demand. Is that not what employment exchanges are supposed to do? Not quite. First, the system started (in 1945) because of the need to resettle demobilised defence service personnel and later (1948) displaced persons from Pakistan. Second, the mandatory Employment Exchanges (Compulsory Notification of Vacancies) Act of 1959, applicable to public sector and private sector units (excluding agriculture) that employ more than 25 people, is not as compulsory as one may think. For the private sector, the mandatory requirement only applies below a threshold level of wages and these have not been revised for years. Whatever the law may say *de jure*, there is nothing mandatory about employment exchanges *de facto*. For the public sector, a Supreme Court judgement in 1996 said that appointments no longer had to be from the pool that was registered with employment exchanges, as long as job vacancies were suitably publicised. The public sector also set up channels like Staff Selection Commissions, Banking Service Commissions and Railway Recruitment Boards. The DGET website states that, “Therefore Employment Exchanges are left with only stray cases that too at the lower levels of employment. Therefore in the placement side (regular wage employment) the role of Employment Exchanges is definitely going to be not very significant.”<sup>52</sup> One cannot be more honest than that. The aforementioned NCEUS report stated that, “A few workers said they had registered at the Employment Exchange where they received unemployment allowance of Rs. 50 per day. But they stopped going to the Exchange since it costs them Rs. 80 each day to reach there”.<sup>53</sup> The apparent attraction of employment exchanges is that they are free. Private placement agencies charge, and the DGET also tells us that these private ones may be fraudulent, besides being city-centric.

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<sup>51</sup> *Report on Conditions of Work and Promotion of Livelihoods in the Unorganised Sector, Ibid.*

<sup>52</sup> <http://dget.gov.in/>

<sup>53</sup> *Ibid.*

What do the 968 employment exchanges do? There will be a song and dance about the training services they provide. But training is a separate issue. On matching supply and demand and providing employment, as of 31 December 2007, 39.97 million people were registered with employment exchanges to seek jobs. As far as employment exchange performance is concerned, 263,540 people got jobs through employment exchanges in 2007 and 7.3 million registered themselves with employment exchanges in 2006. To reinforce the spatial point made earlier, most placements were in Gujarat (178,346), Tamil Nadu (23,757), Kerala (10,962), Maharashtra (8,207), West Bengal (5,304) and Rajasthan (4,544).<sup>54</sup> If one leaves out Gujarat, the numbers are insignificant. Most new registrations are in Uttar Pradesh (with most of the backlog in West Bengal). Administration and expenditure on employment exchanges are now state subjects, an earlier matching grant from the centre having run its course. In 1952, a committee known as the Training and Employment Services Organization Committee (popularly known as the Shiva Rao Committee) was set up and it recommended that the administration of employment exchanges should be handed over to state governments. Until 1969, funding came through central sources. However, once this system was scrapped, though the service *per se* continues to be a joint responsibility, expenditure comes out of state government budgets. Hence, it is difficult to get data on expenditure on employment exchanges, or on what it costs the budget to get people those 263,540 jobs.

A back-of-the-envelope computation with the Delhi government's budget suggests that it costs the government (and, therefore, citizens) Rs. 228,381 for a single placement.<sup>55</sup> An employment exchange exists in Chitradurga in Karnataka, staffed with bureaucracy. However, this has not provided a single job in the last four years and Chitradurga is not an exception. This is not efficient usage of scarce public funds and equally scarce infrastructure in those 968 exchanges. The Mid-Term Appraisal of the Tenth Five-Year Plan (2002-07) was fairly forthright about what should be done with the employment exchanges.<sup>56</sup> "At present, the employment exchanges function as offices of the state governments, as is prescribed under the Employment Exchanges (Compulsory Notification of Vacancies) Act, 1959. These exchanges also collect data on the number of workers employed in the establishments in their respective areas, which is used by the government for statistics relating to employment in the organised sector. The coverage of the establishments is very poor and the data fails to capture the changes in employment. A role for employment exchanges can be considered for providing employment-related information services for new initiatives like the National Food for Work Programme and the proposed employee guarantee scheme, in both of which work on projects in rural areas is to be assured at the level of the household. However, their functions will have to be restructured and they will have to be relocated to the rural areas. Currently, they are located at the District Headquarters in most parts of the country. So far, very few states have set up web-based information systems on employment services. E-governance initiatives should be used for generating and maintaining information for providing employment services for the rural areas. The delivery of employment-related information services by private employment exchanges should be encouraged in the urban areas. The Employment Exchanges Act should be amended to allow private employment exchanges to provide job placement services to both private sector and public sector/government establishments and to collect the data on the creation of employment opportunities at the level of the establishments." This city-centric focus of the present

<sup>54</sup> *Rajya Sabha Parliamentary Question*, 18 March 2008.

<sup>55</sup> *State of Governance: Delhi Citizen Handbook*, Centre for Civil Society, 2006.

<sup>56</sup> *Mid-Term Appraisal of the Tenth Five-Year Plan*, Chapter 8, <http://planningcommission.nic.in/midterm/english-pdf/chapter-08.pdf>.

employment exchanges is something the Communist Party of India (Marxist) also accepts. M. K. Pandhe, the President of the Centre of Indian Trade Unions wrote, “However, they collect data only for the organised sector while the vast area of unorganised sector is out of the purview of these exchanges. Moreover, these employment exchanges are only operating in the urban areas and have no centres in the rural areas.”<sup>57</sup> But this replacement of public employment exchanges by private placement does not seem to have any takers generally. For instance, the budget for 2009-10 has promised that employment exchanges will be electronically linked on-line through the Net and applications can be received centrally. This becomes “garbage in and garbage out”, since the employment exchanges simply are not efficient as clearing houses in the matching function.

The Ministry of Labour estimates that there are around 800 private placement agencies that are large and are not fraudulent. If one sets up a regulatory structure, fraudulent ones will be eliminated and informal networks (family, caste, community, contractors) will become large and formalised, ensuring economies of scale and scope in information processing, dissemination and intermediation. Some states have experimented with reforming employment exchanges. In 2002, the Administrative Reforms Commission (the Harnahalli Ramaswamy Commission) recommended that employment exchanges should be downsized. States like Gujarat<sup>58</sup> and Rajasthan<sup>59</sup> have experimented with allowing private placement agencies to get into the matching function. Even a state like West Bengal has permitted private training organisations to offer training at employment exchanges. However, no state has yet taken the logical step of winding down public employment exchanges and handing the assets over to private placement agencies for management. Since this has been contemplated for industrial training institutes, there is no reason why it should not be done for employment exchanges as well. Instead, with the UPA government, the wheel has turned in the opposite direction.

The argument is that public employment exchanges need to be revamped and computerised, not scrapped. As far as Indian budgets go, a great sum of money is not involved in computerisation. One-third of the employment exchanges are apparently already computerised. However, such plans and talk of International Organization for Standardization certification should be considered against the backdrop of inefficient public expenditure and opportunity costs of those resources. An audit report for 2004-05 for West Bengal stated that, “The Directorate of Employment, West Bengal, through its network of Employment Exchanges, caters to activities like registration of job seekers, renewal of registration and submission of list of eligible candidates to employers. Computerisation of 40 employment exchanges in the state was taken up along with network connectivity and the work was entrusted to the Employment Trade & Technologies Development Corporation Limited on a turn-key basis. However, even after spending Rs. 6.52 crore, the computerised system installed in the employment exchanges have been lying inoperative for the last 30 to 46 months, owing to a default timer-based lock implanted by the vendor, the non-completion of the creation of the database and the non-installation of the software due to the abandonment of work by the vendor, largely frustrating the basic objective of the scheme. The application

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<sup>57</sup> “The National Employment Service – A Hoax,” *People’s Democracy*, 6 June 2004.

<sup>58</sup> These are called *Rozgar Sahay Kendras* in Gujarat, labelled as public-private partnerships. The public employment exchange provides a database of people on the register (the supply of labour, so to speak) and the private agency matches it with demand.

<sup>59</sup> Job “*melas*” have been organised in Rajasthan.

software also lacked in data processing and data manipulation controls. Absence of data disaster recovery strategy led to substantial data loss”.<sup>60</sup>

Insofar as employment exchanges are concerned, this is the norm rather than the exception. Therefore, while the skills deficit is important, by privatising the matching function, one should also ensure more efficient distribution of existing skills.

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<sup>60</sup> [www.intosaiitaudit.org/hosted\\_external\\_publications/India\\_3WEST\\_BENGAL.pdf](http://www.intosaiitaudit.org/hosted_external_publications/India_3WEST_BENGAL.pdf).