ILO/Regional Skills Programme/Japan

Indian National Workshop on Skills Data and LMIS

December 5, 2011
New Delhi

Workshop Report

January 2011
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1. Brief Overview

The workshop was organised at the India Habitat Centre by the ILO to present to an audience of experts and policy-makers the preliminary findings of a report commissioned to highlight the gaps in data related to skills development in India. The workshop was also briefed on comparative international experiences in developing LMIS by Geneva based ILO expert Ms. Olga Striestka-Iliina and provided an opportunity for key stakeholders to reflect on the status of the national action plan developed at the Japan/ILO workshop on addressing skills mismatch through PPP in February 2011.

The workshop was well attended with 80 participants involved at some stage during the day. Whilst no formal evaluation was conducted, feedback from participants during and after the workshop indicated a high degree of satisfaction and support for the ILO’s ongoing work in this field. The list of participants is detailed in Appendix A. This executive summary provides an overview of the key issues raised and should be read in conjunction with the more detailed minutes of the workshop contained in Appendix D. The agenda for the workshop is included as Appendix B and the Background paper circulated to all participants included in Appendix C.

2. Key Issues Raised

a. Need to develop a robust LMIS

The role of skill anticipation is very important to introduce a virtuous cycle of high skills, high productivity, high wages etc. Correctly anticipating skills will help reduce skills mismatch, prepare people for technological change etc. The market environment changes and skills development output needs to be abreast of this. A robust LMI intelligence system must have the capacity to process, analyse, and make usable LMI for use by various institutions. Both public and private institutions perform these functions and need to be nurtured to ensure they have the analytical capacity to process this info adapting to various user needs. These institutions also need to have the capacity to initiate and perform new research, combine qualitative and quantitative methods, and to translate findings into recommendations about qualifications, training supply, policy recommendations.

b. LMI data gaps in India

The results of the report investigating gaps in collection of skills-related data in India highlighted issues of time-lag, level of disaggregation of data, poor accessibility of data, sampling errors, no tracking information, etc. Long-term, standardised, time-series statistical information is needed for proper forecasting and improvement of the statistical system needs to be commenced immediately so that effects can be seen eventually. Best-practices include PPP (such as SSC) in data collection, dissemination etc.

c. LMI data collection challenges in India

In Indian conditions, there are many different complexities. Skills development is a predominantly government-led activity. There are issues such as:

- Efforts being focussed on mainly the organised sector (which has 6% of the workforce),
- Collection of data from unorganised sector is a herculean task,
- About 98% enterprises have less than 10 workers so the current system of mandatory collection of data from enterprises with more than 25 workers is not representative,
- In terms of spread, data collection from 619 districts (and lower units) is very complex and accurate forecasting is also a great challenge.
d. Need for tripartism

It would be beneficial to have a tripartite coordinating body for the LMIS to encourage collaboration and dialogue. A centrally-controlled process would not be able to perform many functions that would need to be done at the micro level.

e. Important Role of the SSCs

In India, while the NSDP has made the NCVT responsible for creating the framework for LMIS, it has also very categorically said the following for the SSCs - "establishment of a well-structured, sector-specific LMIS to assist the planning and delivery of training". The SSCs will have an important input into the design of the national system. It would be up to the SSCs and NSDC to figure out what that sectoral LMIS would look like. Where the SSCs plug in and what data they provide and what roles they would play in forecasting has not been determined.

f. Skills development priorities in the 12th Five Year Plan

The Government of India has identified 12 challenges including enhancing skills and faster generation of employment, improved accessibility to education, improvement of environment (which includes green jobs). One working group in Planning Commission has identified certain employment challenges – the need to provide correct estimates and projections at frequent intervals, expand formal employment opportunities (to convert some informal workers to formal workers), increase employment opportunities across the board by encouraging labour-intensive sectors, address issues of productivity, address problems of specific categories (women, youth, minorities, SC/STs, disabled), address issues of working poor, overcoming economic crises through retraining etc.

g. Relevance of forecasting in fast-changing economies

India is now a fast-changing economy but is bedevilled with huge skills-related data gaps. In such an environment, quantitative forecasting models are of limited use. Instead, focus should be on developing a method for comprehensive, representative, real-time data collection. It was important to ensure that the data was systematised, centralised, and made available online.

h. Sectoral-regional approach for identification and anticipation of skills needs

A sectoral approach allowed for prioritization and allowed planning for differing realities across sectors. It also made it easier to facilitate coordination across a sector. A sectoral approach helped in reducing complexity. Furthermore, it allowed a close-up examination of the sector which was useful in addressing certain questions. Tripartite involvement was very important and needed to involve employers and workers organisations. A regional approach remained a good way to foster ownership amongst organisations in the sector.

i. The need for an industry-led skills development system

Experience shows that countries where skills development has been imparted by the industry, there has been much less skills mismatch (eg. Germany, Japan). The need of the hour was to align the national skills development system with the industry and reduce irrelevance and mismatch.

j. Upgradation and modernisation of Employment Exchanges

To make Employment Exchanges more relevant and to enable them to provide high quality information to all stakeholders, the government has decided to upgrade the Employment Exchanges under the National e-Governance Plan. This upgrade would be conducted in 22 months during the 12th Five Year Plan. Expected outcomes of the upgrade project are as follows:
✔ Availability of real-time information to bridge demand-supply gap and planning and policy interventions
✔ On-line data submission by all employers
✔ Use of IT to enable Employment Exchanges to better deliver services to citizens at the grassroots level
✔ National Web Portal to ensure availability of all employment-related services on a single window, and also networking with ITIs and ITCs

It was being proposed that applicants could file online without needing to go to the Employment Exchange. The network of 100,000 Community Service Centres in rural areas would be developed as outreach centres. The applicants could then get their data verified at the Employment Exchange at their convenience.

3. **2011 National Action plan for India on ‘Addressing Skills Mismatch through PPP’**

Whilst the national action plan developed during the 2011 ILO/Japan workshop was noted during the workshop, there was limited discussion as it was judged to be of insufficient detail and relevance to the discussion and issues that had emerged from the workshop. It was agreed that the ILO/MOLE National Working Group on Skills Data should further review and redraft the action plan as a result of the workshop.

4. **Agreed actions**

The following broad conclusions and actions were agreed upon:

✔ All specific suggestions made at the workshop will be discussed further at the next meeting of the ILO/MOLE National Working Group on Skills Data;
✔ Further work is required to scope the data flows and institutional arrangements that will underpin the ongoing development of the LMIS in India;
✔ Greater clarity is required between key stakeholders such as the NSDC, IAMR and MOLE so that further development of the system can progress on an agreed basis;
✔ The ILO/MOLE National Working Group on Skills Data should further review and redraft the action plan as a result of the workshop.

5. **Conclusion**

The workshop provided a good opportunity for the ILO to continue its program of technical assistance to the government of India through the ILO/Japan Regional Skills Program.
## Appendix A: List of Participants

### ILO Forum on Skills Data and Labour Market Information Systems

5 December 2011

**LIST OF PARTICIPANTS**

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<th>Sl.No.</th>
<th>Name of Participant</th>
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<tr>
<td>1.</td>
<td>Mr. Sharda Prasad&lt;br&gt;Director General of Employment &amp; Training and Joint Secretary Ministry of Labour and Employment&lt;br&gt;Government of India&lt;br&gt;New Delhi&lt;br&gt;Ph: 23710446, <a href="mailto:shardaprasad81@nic.in">shardaprasad81@nic.in</a></td>
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<td>2.</td>
<td>Mr. R. L. Singh&lt;br&gt;Deputy Director General (Training)&lt;br&gt;Ministry of Labour and Employment&lt;br&gt;Government of India&lt;br&gt;New Delhi&lt;br&gt;Ph: 23710485, 9212474871, <a href="mailto:rl.singh@yahoo.com">rl.singh@yahoo.com</a></td>
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<tr>
<td>3.</td>
<td>Mrs. Amarjeet Kaur&lt;br&gt;DDG (Employment)&lt;br&gt;Ministry of Labour and Employment&lt;br&gt;New Delhi&lt;br&gt;Ph: 23350896, <a href="mailto:amartaran@yahoo.com">amartaran@yahoo.com</a> and <a href="mailto:ddg-dget@nic.in">ddg-dget@nic.in</a></td>
<td></td>
<td>+3</td>
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<td>4.</td>
<td>Mr. Ashok Sahu&lt;br&gt;Principal Adviser (Labour, Employment &amp; Manpower/Development Policy &amp; Perspective Planning)&lt;br&gt;Planning Commission&lt;br&gt;Yojana Bhavan (Room No. 205), Sansad Marg, New Delhi – 110 001&lt;br&gt;Ph: 23042805</td>
<td></td>
<td>+4</td>
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<td>5.</td>
<td>Mr. Pawan Agarwal&lt;br&gt;Adviser (Higher Education), Planning Commission&lt;br&gt;Government of India&lt;br&gt;R.No.216, Yojana Bhawan, Sansad Marg,&lt;br&gt;New Delhi - 110 001&lt;br&gt;Ph: 23096631, M: 9810806606, <a href="mailto:apawan08@gmail.com">apawan08@gmail.com</a>, <a href="mailto:pagarwal.pc@gmail.com">pagarwal.pc@gmail.com</a></td>
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<td>6.</td>
<td>Mr. Santosh Mehrotra&lt;br&gt;Director General&lt;br&gt;Institute of Applied Manpower Research (IAMR)&lt;br&gt;Sector A-7, Narela Institutional Area, Delhi – 110 040&lt;br&gt;Ph: 27787214, <a href="mailto:iamrindia@nic.in">iamrindia@nic.in</a></td>
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<td>7.</td>
<td>Ms. Ankita Gandhi</td>
<td>Institute of Applied Manpower Research (IAMR)</td>
<td>A-7, Narela Institutional Area, Delhi – 110 070</td>
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<td>8.</td>
<td>Mr. S. S. Mantha</td>
<td>Chairman (Acting)</td>
<td>All India Council for Technical Education</td>
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<td>New Delhi - 110003</td>
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<td>9.</td>
<td>Mr. J. Dash</td>
<td>DG &amp; CEO</td>
<td>National Sample Survey Office</td>
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<td>Sardar Patel Bhawan</td>
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<td>10.</td>
<td>Mr. S.V. R. Murthy</td>
<td>Deputy Director General</td>
<td>National Accounts Division, Central Statistics Office</td>
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<td>Ministry of Statistics and Programme Implementation</td>
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<td>NAD Hall-2, Sardar Patel Bhawan, Sansad Marg, New Delhi – 110 001</td>
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<td>11.</td>
<td>Mr. M. Kasirajan</td>
<td>Director of Employment &amp; Training</td>
<td>Government of Tamil Nadu</td>
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<td>Thri-vi-ka Industrial Estate</td>
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<td>Alandur Road, Guindy, Chennai – 600 032, TAMILNADU</td>
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<td>12.</td>
<td>Mr. Sanjay Singh</td>
<td>Secretary</td>
<td>Technical Education and Skill Development Department</td>
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<td></td>
<td>Government of Madhya Pradesh</td>
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<td>Mantralaya, Vallabh Bhawan, Bhopal, 462 004, MADHYA PRADESH</td>
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<td></td>
<td></td>
<td></td>
<td>Ph: 0755-2550840, <a href="mailto:singhsanjay@mpgov.in">singhsanjay@mpgov.in</a></td>
</tr>
<tr>
<td>13.</td>
<td>Ms. Pooja Gianchandani</td>
<td>Head-Skills Development</td>
<td>FICCI</td>
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<td></td>
<td></td>
<td></td>
<td>Federation House, Tansen Marg, New Delhi – 110 001</td>
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<td>14.</td>
<td>Mr. S. Sen</td>
<td>Deputy Director General</td>
<td>Confederation of Indian Industry</td>
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<td></td>
<td></td>
<td>23, Institutional Area, Lodi Road, New Delhi – 110001</td>
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<td>Ph: 24629994, <a href="mailto:s.sen@ciionline.org">s.sen@ciionline.org</a></td>
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<td>Mr. Sharad Patil</td>
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<td>Employers Federation of India</td>
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<td>Mr. P.C. Sharma</td>
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<td>Bharatiya Mazdoor Sangh (BMS)</td>
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<td>17</td>
<td>Mr. O.P. Sharma</td>
<td>Secretary</td>
<td>Indian National Trade Union Congress</td>
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<td>18</td>
<td>Mr. Amitava Guha</td>
<td>Member, Working Committee</td>
<td>Centre of Indian Trade Unions</td>
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<td>19</td>
<td>Mr. R.A. Mital</td>
<td>Secretary</td>
<td>Hind Mazdoor Sabha</td>
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<td>Ms. Aparajita</td>
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<td>SEWA Bharat</td>
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<td>38</td>
<td>Mr. Basab Banerjee</td>
<td>Head of Standards &amp; QA</td>
<td>National Skill Development Corporation</td>
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<tr>
<td>39</td>
<td>Ms. Ranjani K. Vaidyanathan</td>
<td>Associate – Standards &amp; QA</td>
<td>National Skill Development Corporation</td>
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<td>Gen. Chahl</td>
<td>Security Sector Skills Council</td>
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<td>Gen. B.S. Ghotra</td>
<td>Security Sector Skills Council</td>
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<td>Mr. Sunil Chaturvedi</td>
<td>Auto SSC</td>
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<td>43</td>
<td>Mr. Santosh Nayar</td>
<td>Energy SSCC</td>
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<td>46</td>
<td>Mr. Bijay Sahoo</td>
<td>Chairman</td>
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<td>48</td>
<td>Mr. Sandeep Kaur</td>
<td>Office to the Advisor to Prime Minister</td>
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<td>Mr. Jayant Krishna</td>
<td>Office to the Advisor to Prime Minister</td>
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<td>Mr. K.S. Gopal</td>
<td>Tata Institute of Social Sciences</td>
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<td>51</td>
<td>Mr. M. Sairam</td>
<td>AGM &amp; Head – Process Consulting</td>
<td>ICRA Management Consulting Services Limited</td>
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<td>52</td>
<td>Mr. Yajurvedi</td>
<td>Director</td>
<td>V.V. Giri National labour Institute</td>
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<td>53</td>
<td>Ms. Piyali Sen</td>
<td>Sr. Manager</td>
<td>PRAYAS Institute of Economic Empowerment</td>
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<td>Mr. Albert Joseph</td>
<td>Executive Director</td>
<td>Functional Vocational Training and Research Society</td>
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<td>Mr. Felix D Souza</td>
<td>Programme Manager</td>
<td>Functional Vocational Training and Research Society</td>
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<td>Ms. Francesca Pessina</td>
<td>Attache</td>
<td>Economic Cooperation</td>
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<td>Mr. Nalin Jena</td>
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<td>Mr. Paul Comyn</td>
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<td>Ms. Olga Strietska-Ilina</td>
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<td>ILO Geneva</td>
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<td>Ms. Anjana Chellani</td>
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<td>Mr. Rit Chandra</td>
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<td>Consultant, ILO New Delhi</td>
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<td>75</td>
<td>Ms. Kusum Chand</td>
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<td>ILO New Delhi</td>
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Appendix B: Workshop Agenda

AGENDA
ILO Forum on Skills Data and Labour Market Information Systems
5 December 2011

Venue: Jacaranda 2, India Habitat Centre, Lodi Road New Delhi.

10.00 a.m. Tea and coffee on arrival

10.30 a.m. Welcome and Introduction – Senior ILO representative and Ms. Anita Rajan, Office of the Advisor to the Prime Minister, National Council on Skills Development

10.40 a.m. The challenge of anticipating the supply and demand of skills – Mrs. Olga Strietska-Illina, Skills Policies and Systems Specialist, ILO Geneva.

11.10 a.m. Discussion – moderated by Dr. Ashok Sahu, Principal Adviser (Labour, Employment & Manpower/Development Policy & Perspective Planning) Planning Commission GOI
Key questions:
▪ What does India want to do with the additional skills data and related LMI?
▪ Is there agreement on how additional skills data and related LMI will improve planning and decision making ie: what decisions require improved data?
▪ Given the huge unorganised sector in India, how can meaningful information be collected on this part of the economy to improve the management and planning of education and training?
▪ Given the limitations of data on future skill demands, what model for identifying and anticipating skill needs might be most suitable for India?

11.45 a.m. Morning Tea

12.15 p.m. An environmental scan of data related to skills in India – Mr. M. Sairam, Senior Consultant, IMACS Consulting.

12.35 p.m. Discussion – moderated by Dr. Santosh Mehrotra, Director General, Institute of Applied Manpower Research (IAMR), GOI.
Key questions:
▪ What are the major gaps in data that is important for the identification and anticipation of skill needs in India?
▪ How might that missing data be best collected in the future?

1.15 p.m. Discussion – Moderated by Mr. Paul Comyn, Senior Specialist on Skills and Vocational Training, ILO Decent Work Team for South Asia, New Delhi

*Key questions:*  
- Which institutional roles necessary for the identification and anticipation of skill needs are not clearly defined and agreed in the current Indian skills ecosystem?  
- What institutions in India can take on the main coordinating role?  
- What steps should be taken to clarify and agree on these new institutional roles and responsibilities?

1.45 p.m. Lunch


2.50 p.m. Discussion – moderated by Mr. Basab Bannerji, Head – Standards and QA, National Skills Development Corporation

*Key questions:*  
- What standard elements or methodology should be used by SSC when preparing sectoral reports on current and future skill needs?  
- How can the NSDC and other key data institutions assist the SSC to prepare sectoral reports?  
- How to make sectoral approaches in India systematic? How to ensure coordination and information exchange across sectors?

3.20 p.m. **The data model of the revitalized labour exchanges** – Mrs. Amarjeet Kaur, DDG (Employment), DGET, Ministry of Labour and Employment, GOI.

3.40 p.m. Discussion – moderated by Mr. Sharda Prasad, Joint Secretary and Director-General of Employment & Training, Ministry of Labour and Employment, GOI.

*Key questions:*  
- What are the timelines for the new labour exchanges to be operational?
- How will the data collected by the labour exchanges be used to assist with identifying and anticipating skill needs

4.10 p.m. **Conclusions and Next Steps**
Mr. Sharda Prasad, Joint Secretary and Director-General of Employment & Training, Ministry of Labour and Employment, GOI and Ms. Ms. Pannuda Boonpala, Deputy Director, ILO Decent Work Team for South Asia and Country Office-India.

4.30 p.m. Close followed by afternoon tea
Appendix C: Workshop Background Note

ILO Forum on Skills Data and Labour Market Information Systems (LMIS)

5 December 2011

Background Note

Introduction

Robust training policies and systems are grounded in the characteristics and institutions of each country. Nevertheless, a number of common building blocks can be identified. A good skills development system will be able to: anticipate skills needs; engage employers and workers in training, including the specific sectors; maintenance of quality and relevance of training; making training accessible to all sections of society; ensure viable and equitable financing mechanisms; and continuously evaluate the economic and social outcomes of training.

A number of methods are used to forecast future skills needs. These include forecasting occupational and skills profiles at various levels of disaggregation; social dialogue; labour market information system (LMIS); and analysis of the performance of training institutions, including tracer studies.

Experience from various countries continues to provide important lessons on the limits of skills forecasting: crucially, that it is equally important to focus on providing adaptable core, transversal skills and building the capacity to learn than on planning training to meet detailed forecasts of technical skills requirements, because these may change before curricula and institutions can adjust. Shorter training courses delivered by responsive training institutions, which build on solid general technical and core skills, can minimize time lags between the emergence of skill needs and the provision of appropriate training. Quantitative analysis based on LMI is important but needs to be complemented by additional qualitative information, especially from employers and workers.

The regional activity of the Japan funded 2010 Programme entitled “Addressing Skills Mismatch through PPP” has clearly indicated that a strong partnership between government, employers and workers is an essential feature of an effective and enduring bond between the world of learning and the world of work. The findings of the 2010 regional activity also included an expression of a strong interest, by the participating countries, for further technical inputs on Labour Market Information Systems (LMIS). It has been agreed that the lack of LMI (and skills data) is one of the reasons behind the skills mismatch (existence of both large number of vacancies and high unemployment) and a major constraint for policy making. The forecasting of skills supply and demand is a complex process which requires understanding of the link between occupations, qualification and skills and requires aggregation of enterprise and training institution data at the national level that accounts for regional variations. The proposed workshop is a national follow-up workshop under the Japan funded 2010 Programme entitled “Addressing Skills Mismatch through PPP”.
Objectives of the workshop

This workshop is designed to provide an opportunity for stakeholders in the Indian skills ecosystem to:

- learn more about the key conceptual and practical challenges of anticipating skills supply and demand;
- be briefed on international examples of how different countries anticipate skills supply and demand;
- consider practical ways of identifying future skills demands in India;
- learn about national, regional, local, sectoral, institutional and enterprise levels linkages and roles in skills needs assessment and anticipation planning;
- consider how future institutional arrangements in India might best contribute to a strengthened LMIS; and
- to review and revise the national strategy developed under the 2011 Japan/ILO program to strengthen LMIS in India.

Workshop structure and methodology

The workshop will consist of a number of technical sessions and panel discussions involving both local and international speakers. The workshop provides an opportunity to present the findings of an environmental scan of the availability of skills data undertaken by the India Country Office. It also provides an opportunity for the Directorate General of Employment & Training (DGET) to brief key stakeholders on their plans to revitalize labour exchanges throughout the country.

Participation

Participants will be drawn from the key tripartite organisations involved in the Indian skills ecosystem. It includes current members of the ILO National Skills Data Reference Group which has been established by the India Country Office to progress work on strengthening the system for anticipating skills supply and demand in India. Organisations to be represented include:

- Directorate General of Employment & Training, Ministry of Labour & Employment;
- Ministry of Human Resources Development;
- National Skills Development Corporation;
- Institute of Applied Manpower Research;
- Planning Commission;
- Central Statistics Organisation;
- employer and worker organisations;
- sector skills councils;
- donors and international organisations with an interest in skills data; and
- select state government representatives.

It is expected that 40-50 people will attend the workshop.
Appendix D: Detailed Workshop Minutes

Workshop Minutes

The participants were welcomed by Ms. Anjana Chellani.

1. The Challenge of Anticipating the Supply and Demand of Skills

Dr. Paul Comyn
He thanked the participants for taking the time to attend the workshop.

Role of the ILO in the Indian skills environment
He informed them that the ILO is part of the skills data and LMI working group with representatives from MoLE, CSO, NSDC, SSC, and state governments.

There have been a lot of developments in the skills system that have implications on the collection, analysis, and reporting of data. Given this context the ILO has commissioned a study done by IMACS on the availability of labour market data. The results of this study would also be shared at this conference.

Mr. Jayant Krishna
Comments on the PM’s Skills Development target
Expanding on the theme of the push for skills development in India, he made reference to the Prime Minister’s skills development target of 500 million people by 2022.

However, he felt that the preparedness to achieve this target was inadequate. The installed capacity of all skills development infrastructure is 4 million pa. There is a need to enhance capacity to 35 million pa.

Furthermore, he reminded the house that there are large data gaps on all indicators with duplicate counting, gaps etc.

Modernisation of Employment Exchanges
Currently the Employment Exchanges are not serving the entire purpose they were meant to be serving. They suffer from a trust deficit with not too many people turning to them when unemployed.

In this context he felt it was heartening to note that the Planning Commission has cleared modernisation of Employment Exchange programme with funding expected to come in the beginning of the 12th FYP (i.e. April 2012).

Need for multi-stakeholder collaboration
He stressed that there was a need to bring public, private, and government sectors together to address these issues collaboratively.

**Ms. Olga Striestka-Ilinia**

**Skills as a way out of the low skills, low wages, and low productivity equilibrium**

Developing country economies are often stuck in a viscous cycle of low skills, low productivity, low wages etc. However, it is important to note that skills development itself can be an important driver of change.

The role of skill anticipation is very important to introduce a virtuous cycle of high skills, high productivity, high wages etc. Correctly anticipating skills will help reduce skills mismatch, prepare people for technological change etc. The market environment changes and skills development output needs to be abreast of this.

For this the LMIS has to incorporate the signals from labour market and have mechanisms for forecasting.

**Definition of some key terms**

Labour Market Information (LMI) can be defined any information concerning the size, composition of the labour market, the way it functions, its problems, opportunities, and employment-related intentions of its actors. It includes administrative frameworks, job quality etc. It includes skills needs and assessment and anticipation (but is broader than just that).

The Labour Market Information System, on the other hand, is a coordinated process that ensures data flows and is used for information functions (linking administrative records – labour market and education), statistical data collection, guidance services, to satisfy policy functions.

**Components of a robust LMIS**

A robust LMIS will feed into a nimble policy cycle consisting of the following items in an iterative loop:

- Skills needs assessment and anticipation
- Skills development policy, curriculum design, development of competency standards
- Skills delivery
- Monitoring of training relevance
- Evaluation of training outcomes and their relevance to the labour market needs

**Need for developing an LMI intelligence system**

It is also crucial to have a robust LMI intelligence system i.e. the capacity to process, analyse, and make usable LMI for use by various institutions. Both public and private institutions perform these functions and need to be nurtured to ensure they have the analytical capacity to process this info adapting to various user needs. These institutions also need to have the capacity to initiate and perform new research, combine qualitative and quantitative methods, and to translate findings into recommendations about qualifications, training supply, policy recommendations.
Multiple stakeholders in an LMIS
Multiple stakeholders are involved in LMIS functions. These include legislatures (both federal and state), employment and social security services, labour inspectorates, trade unions, statistical services (Labour Force Surveys, census, administrative records, the Central Statistical Organisation etc.), academic and research units, social partners (workers and employers organisations). Beneficiaries of LMI data broadly include policy-making and civil service, administrators, workers, employers, counselling services, education service providers, researchers, individuals

The importance of anticipation of skills needs
To reiterate, anticipation of skills needs is important to inform policy-making (feed strategy, decide funding preferences about which fields and levels of education to support, supply information for migration policy), inform individual decisions, and to avoid imbalances and mismatch. Some governments have chosen to withdraw from the anticipation and policy-making sphere and have left this to market signals. But even they need to ensure real-time delivery of LMI to ensure proper functioning of markets.

The role of skills
Jobs and skills form a feedback loop. Gaps open up when one of them changes and also causes pressures in the other. There is an interaction between demand and supply. Supply includes inflows into the labour market supply and the existing labour market supply. Demand, on the other hand, includes expansion labour market demand (new jobs) and the replacement labour market demand (outflows). The interaction between these factors is complex and subject to many influences such as substitution effects etc.

Addressing structural employment
The conclusions on skills for improved productivity, employment growth and development (ILC 2008) states that:

“A mismatch between skills demand and supply has high economic and social costs and results from and contributes to structural unemployment. Early identification of current and future skills needs is part of a forward-looking strategy that reduces skills gaps.”

Skills shortage may occur even when unemployment rate is high. Over 67% companies in India reported difficulty in filling jobs (ManpowerGroup Survey, 2011) which is second highest after Japan. In comparison, only 14% companies in South Africa reported difficulties.

Low-skills equilibrium and inequality
A consequence of such skills mismatch is that firms often recruit at sub-optimal levels of skills. They then have the choice to either train these recruits internally (at a high cost to themselves) or choose production technologies that require low skills intensity – and this may result in low
productivity, low wages, impacts trade and production patterns, leading to low skills demand equilibrium. Also, companies that find skilled people offer higher-than-usual wages leading to income inequality and allied social dysfunction.

Why the market is unable to solve the supply-demand mismatch
There are imperfections in the labour market that make it difficult for the market to operate optimally. Some other issues include those of externalities (workforce can get skilled at company A and then go to company B), time lag between skills supply and labour market demand, limited geographic mobility (people don't want to move all the time to where the jobs might be), imperfect information on jobs and skills availability, non-rational behaviour by labour market actors. This means that there is room for public policy.

Identification of skills needs
There is no ideal method or system of identification of skills needs. It is an evolutionary process that takes decades. The system, approach, and method to be adopted needs to take into account the present system of education and training, institutional development, decision making structures, data availability, financial, technical, and human resources, tradition and mentality.

They key questions to be kept in mind before undertaking any identification of skill needs exercise include the following:

- What at the policy objectives/needs? (So the information that is required is known and funds are spent in developing systems to obtain only that data).
- What are the research objectives?
- Who will be the primary user of findings?
- Who will perform research/data collection/analysis?
- What are the financial resources at-hand?

The measurement of skills
The most reliable way would be to actually test the skills acquired (competency). But this can be time-consuming and expensive for large numbers. So proxies are used – occupations, jobs/tasks, qualifications, education/training type/subject/level, vacancies.

Challenges to the LMIS system
As indicated earlier, many problems bedevil the creation of a reliable, robust, and comprehensive LMIS. Some major issues affecting most countries include the availability of data, its comprehensiveness, accuracy and robustness, the regularity in analysis of this data, the coverage of the data collection, the coordination of data collection to feed the LMIS, ownership of the data and the LMIS, and the creation of a one-stop shop (an information system that is accessible by all at one location).

Ashok Sahu
Skills development priorities in the 12th Five Year Plan
He thanked Ms. Striestka-Iлина for her excellent and thought-provoking presentation and for highlighting the very important question i.e. what are the policy objectives?
He informed the house that in the 12th FYP the Government of India has identified 12 challenges including enhancing skills and faster generation of employment, improved accessibility to education, improvement of environment (which includes green jobs). One working group in Planning Commission has identified certain employment challenges – the need to provide correct estimates and projections at frequent intervals, expand formal employment opportunities (so we can convert some informal workers to formal workers), expand employment opportunities across the board by encouraging labour-intensive sectors, address issues of productivity, address problems of specific categories (women, youth, minorities, SC/STs, disabled), address issues of working poor, overcoming economic crises through retraining etc.

He felt that there has to be PPP in data collection, and Employment Exchanges will have to play a vital role, and a qualification framework will have to be developed.

**Sharda Prasad**

**The need for an industry-led skills development system**

He opined that experience shows that countries where skills development has been imparted by the industry, there has been much less skills mismatch (eg. Germany, Japan). The need of the hour was to align the national skills development system with the industry and reduce irrelevance and mismatch.

**LMI data collection challenges in India**

However, in Indian conditions, there are different complexities. Skills development is a predominantly government-led activity. There are issues such as:

- Efforts being focussed on mainly the organised sector (which has 6% of the workforce),
- Collection of data from unorganised sector is a herculean task (with its complexities, costs etc.),
- About 98% enterprises have less than 10 workers so the current system that makes mandatory collection of data from enterprises with more than 25 workers is not representative,
- In terms of spread, data collection from 619 districts (and lower units) is very complex and accurate forecasting is also a great challenge.

**Questions from the floor**

**Dr. Santosh Mehrotra, Director IAMR**: Making reference to a graph included in Ms. Striestka-Ilina’s presentation on the difficulty faced by companies in various countries in filling skilled jobs, he felt that it was striking that no pattern emerged from this graph with all types of countries represented at all points in the graph. He felt that this graphic should be analysed more extensively by the ILO. He also requested Mr. Sharda Prasad to provide a reference to his data item that over 98% enterprises in India employed less than 10 workers.

**Mr. Prashant Deshpande, Retail Sector SSC**: He requested Ms. Striestka-Ilina to share her international professional experience, and elaborate on some LMIS best practices that have appealed to her in the countries she has worked in.
Representative of Security SSC: He requested Mr. Sharda Prasad to clarify whether the private sector itself would be made responsible for LMI collection from the large private sector. Would the LMIS be a central initiative and centrally controlled? Or would it be left to each SSC? The costs would be prohibitive in this case.

Mr. Pawan Agarwal, Advisor Planning Commission: Adding to Mr. Deshpande’s query, he requested Ms. Striestka-Iлина to keep in mind the issues of the large unorganised sector while elaborating on global best-practices?

Prof. Amir Sultan, Tata Institute of Social Sciences: He contended that the macro-economic skills needs projections were highly inflated. He did not think that the demand-supply gap was more than 100 million people. He reminded the house that skilling someone was a very expensive commitment. He also felt that the role of labour contractor had been completely ignored in the National Skills Development Policy (NSDP).

Mr. Jayant Krishna: Continuing the reference to the graph earlier highlighted by Mr. Mehrotra, he wanted to know why was there so much difficulty in filling jobs in advanced countries, most of which had a robust LMIS?

Turning to Mr. Sharda Prasad, he requested details of the machinery proposed to be created by the MoLE support the LMIS? He also contended that though 98% of Indian enterprises employed less than 10 people, in fact the remaining 2% enterprises provided bulk of employment. He also wanted to know if the Notification of Vacancies Act will make compulsory the provision of information on new vacancies, employment provided, or both?

Mr. Shamimuddin, Govt. of MP: He commented that there was a need to provide incentive to a person for coming into the LMI system.

Mr. SN Thakur, AITUC: He contended that structural unemployment is being created by government policies and the structure that has been built. He requested Ms. Striestka-Iлина that the rate of informalisation should also be studied and the retraining and redeployment efforts be catalogued.

Ms. Striestka-Iлина: Responding to the queries raised, she stated that countries that had a good LMIS had a coordinated approach that utilise all the information collected at different levels by different actors. The real limitation for a country with a large informal economy was that mentioned by Mr. Prasad – long, standardised, time-series statistical information was needed for proper forecasting; so improvement of statistical system needed to be commenced immediately so that effects can be seen eventually. Best-practices include PPP (such as SSC) in data collection, dissemination etc. She felt it would be beneficial to have a tripartite coordinating body for the LMIS to encourage collaboration and dialogue. A centrally-controlled process would not be able to perform many functions that would need to be done at the micro level.
Mr. Sharda Prasad: He informed the house that the 3rd round of national survey for MSME (2006) gave the figure that 98% of Indian enterprises employ less than 10 workers.

He stressed that the point was that if providing information was considered a burden, then the country needed to plan for that. The figure of 500 million people needing skills development (including re-skilling) by 2022 has been analysed and the expectation is that, by 2022, the labour force would grow to around 500 million.

He agreed that training of workers supplied by labour contractors was an important issue. The responsibility was given to industry in the NSDP. Maybe gradually, in a sequential manner, the percentage of skilled labour the contractor had to supply could be increased. He informed the house that the MoLE was working on an e-governance model where the keying-in of data by people with login IDs would be an option. Further, in advanced countries, information is obtained by linking it to social security data. This was also being looked into by the MoLE.

He also clarified that the CNV Act covered both vacancies and employment.

2. An Environmental Scan of Data Related to Skills in India

Ms. S. Bhanu (IMACS)
She informed the house that the presentation would focus on the key findings on availability of supply and demand side skill development data. The study conducted by IMACS had focussed on mapping the sources of skills and TVET data (for both organised and unorganised sectors) and assess the availability of specific data sets related to supply and demand. The salient points of the presentation are enumerated below:

Supply side

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Source</th>
<th>Frequency</th>
<th>Criticism</th>
</tr>
</thead>
<tbody>
<tr>
<td>Youth in different age groups</td>
<td>Census NSSO</td>
<td>Decadal Biennial</td>
<td>District level data not easily available, time-lag</td>
</tr>
<tr>
<td>Higher education enrolment, progression, and graduation rates</td>
<td>Dept. of Higher Edu.</td>
<td>Annual</td>
<td>Information not disaggregated by discipline</td>
</tr>
<tr>
<td>Primary/Secondary enrolment, progression, graduation and drop-out rates, and their enrolment in further education/TVET</td>
<td>Dept. of Pri. &amp; Sec. Edu.</td>
<td>Annual</td>
<td>No tracking system exists post-dropout Higher secondary enrolment data is not disaggregated by district and school</td>
</tr>
<tr>
<td>Identify sources, compile available data on TVET etc</td>
<td>DGET, NSDC and individual websites</td>
<td>Ad-hoc</td>
<td>No centralised database available for ITIs and ITCs, or for VTPs, or employer-sponsored training</td>
</tr>
<tr>
<td>Indicator</td>
<td>Source</td>
<td>Frequency</td>
<td>Criticism</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------</td>
<td>-------------------------------</td>
<td>------------------</td>
<td>----------------------------------------------------------------</td>
</tr>
<tr>
<td>Government schemes</td>
<td>As per individual case</td>
<td>As per individual case</td>
<td>Duplication of numbers due to lack of UID, no post-training tracking.</td>
</tr>
<tr>
<td>Employability of graduates</td>
<td>NTMIS</td>
<td>Annual</td>
<td>Sampling errors, information lag of 3 years, survey not done for BA, BSc etc. graduates.</td>
</tr>
<tr>
<td>Annual supply of labour due to closure/sickness of industry</td>
<td>Labour Bureau, BIFR, NSSO</td>
<td>N.A.</td>
<td>Multiple agencies involved (so questionable accuracy), no tracking information.</td>
</tr>
<tr>
<td>Labour force arriving from overseas</td>
<td>MOIA and MHA</td>
<td>N.A.</td>
<td>No consolidated data available</td>
</tr>
<tr>
<td>Unemployment data</td>
<td>NSSO and Employment Exchanges</td>
<td>Regular Annual</td>
<td>No data sorted by education, skills, district Data is not comprehensive.</td>
</tr>
</tbody>
</table>

**Demand side**

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Source</th>
<th>Frequency</th>
<th>Criticism</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data on occupational and qualification structures of economic activity</td>
<td>NCO</td>
<td>N.A.</td>
<td>Time-lag in collection of information. Disconnect with organisation due to changing nature of economy.</td>
</tr>
<tr>
<td></td>
<td>NIC</td>
<td>N.A.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CSO</td>
<td>N.A.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Annual Survey of Industries</td>
<td>Annual</td>
<td></td>
</tr>
<tr>
<td>Demand for annual demand for workers, technicians for overseas employment (outflow)</td>
<td>MOIA</td>
<td>Annual</td>
<td>Lack of regular survey of demand assessment Many possible sources of data not captured</td>
</tr>
<tr>
<td>Labour demand due to demographic replacement and labour turnover</td>
<td>Multiple sources</td>
<td>No regular updates</td>
<td>Problem of time-lag Only 50% of deaths reported in civil register</td>
</tr>
<tr>
<td>Average demand for workforce for new jobs</td>
<td>Department of Industries</td>
<td>Annual</td>
<td>Multiple forecasting data Lack of base data for informal sector</td>
</tr>
<tr>
<td></td>
<td>Ministry of Finance</td>
<td>Annual and Quarterly</td>
<td></td>
</tr>
<tr>
<td>Projections of human resource requirements</td>
<td>Multiple sources</td>
<td>No regular updates</td>
<td>Problems of multiple forecasting methodology, lack of database for the informal sector</td>
</tr>
</tbody>
</table>
Comments from panel on the presentation

Ms. Olga Striestka-Irina: She felt that since the report is still being finalised, she would prefer not to go into much detail.

Dr. Paul Comyn: He informed the house that the actual report presents the findings in more detail along with what the sources of data are. He requested the house to pick up copies at the reception and take a closer look at this report. The ILO thought it would be useful to have this environmental scan since, as developments unfold, our report might provide a snapshot of data that is available that can be used.

Mr. Sharda Prasad: Specific recommendations on data collection: He commented that the MoLE expected recommendations from IMACS. The MoLE wanted to know how to collect the data in a scientific manner which gave accuracy to the extent possible especially on the unorganised sector (which, at the moment, is not being captured).

Recommendations on forecasting: The second aspect would be the forecasting of data. Data needs to be forecasted for both supply and demand sides. For the demand side some economic models can be developed. For the supply side some mechanisms can be developed to collect data. But some forecasting methods are required for better alignment of demand with reality. The MoLE was expecting some recommendations on possible models.

Information on global best-practices: Thirdly, the MoLE also expected information on best-practices that are relevant for a country of the complexity and scale of India.

Recommendations on programming of activities: Finally, the MoLE would like some recommendations on how they should go about these activities.

Mr. Paul Comyn: He acknowledged that how an LMI skills forecasting system evolves should be informed by consensus on the sorts of information required, the forecasting model to be adopted (if at all). All this informs the sorts of data that would be required. However, he clarified that IMACS had been informed that the ILO was not in a position to give this information to them since these consultations had not been done at the local level. The aim, of this report, was only to conduct an environmental scan so one knows what is available and it helps you in decision-making about what system to go for.

Dr. Santosh Mehrotra: Irrelevance of forecasting in fast-changing economies: He sought to point out that India is now a fast-changing economy since the mid 1980s. Developing forecasting models was the purpose for which the IAMR was created 50 years ago. The IAMR stopped developing forecasting models 25 years ago since they are of limited use in a rapidly-evolving economy. Further, India has huge data gaps (as pointed out by the environment scan).

Pilot project by IAMR: He informed the house that IAMR has just done a pilot project for NSDC (in 2 districts) to establish a methodology to determine who the suppliers of vocational training
are. In one district the IAMR is doing it in a census basis and in another in a sample basis – to compare costs and outcomes. And this information will become obsolete very rapidly. Secondly, IAMR is also estimating demand. He stressed that, in his opinion, India should not be developing forecasting models.

*Need for a centralised database:* He felt that a very good point was made that the MoLE does not have a centralised database that is readily available. It was important to ensure that the data was systematised, centralised, and made available online.

*Efficacy of the NTMIS:* He felt that the NTMIS has been run badly since AICTE (the sponsor) had lost conviction in its efficacy. The IAMR is trying to convince them that the NTMIS forms a critical part of the LMIS of the country.

*Representativeness of NSS data at the district level:* He further elucidated that one of the issues that kept coming up was that NSS data was representative at the state level but not representative at the district level. That is a real problem for policy-makers. Each district has at least 2 million people – so how can India have NSS data which is not representative at the district level? He felt that it was important that the NSSO was approached through the Planning Commission. Or, the Parliament passed an Act to ensure that state governments do supplementary surveys to complement the NSS so that the data becomes relevant at the district level. The state governments would require training as well.

**Questions from the floor**

*Mr. Jayant Krishna:* He asked the panel who was taking ownership of plugging the existing data gaps highlighted by the scan?

*Mr. Amitava Guha, CITU:* He appreciated the presentation which had shown the house that a huge amount of limitations remain in data collection in India. He referred to an earlier meeting held on September 21 and reminded the panel that the trade unions had suggested that it would be beneficial to take help from the Planning Commission. He wondered if the MoLE could not create a compulsion for contract worker suppliers to give some minimum data that would be helpful for the system?

*Mr. Prashant Deshpande, Retail SSC:* He wanted to know that since the mandate for the SSCs was to create a sectoral LMIS, given the challenges at the macro-economic level, how could the SSCs contribute in strengthening the LMIS and bridge gaps in their sectors?

*Ms. Sandhya, IT SSC:* She voiced her agreement with Mr. Sharda Prasad that forecasting was a dual-edged sword. However, the IT industry has been successful in presenting accurate forecasts for its industry. She felt that shutting ourselves to forecasting would not be useful. If there was a money constraint, the Government could share the burden with industry and ask them to contribute to forecasting.
Dr. Santosh Mehrotra, Director IAMR: He explained that he was in favour of industries forecasting requirements for their sector. Instead he stated he was arguing against the government against forecasting for the entire economy.

RL Singh, DGET: He sought clarification from Dr. Mehrotra that if the country did not develop a forecasting model, then how would the required training infrastructure be established, especially in the technical/engineering trades? What would be the alternative if forecasting model was not followed?

Mr. Shamimuddin, Govt. of MP: He echoed Mr. RL Singh’s concern about how the government would plan without forecasting?

Ms. Olga Striestka-Illina: One basic comment to this type of scan would be that it required even greater structure and each individual section would need even more focussed discussion. It would be useful to try and enumerate the key outputs that are required from the LMIS, and then to look what it would take in terms of information inputs.

Qualitative forecasting models: She stated that she usually discouraged fast-growing, developing countries, with high informal sector, to implement a forecasting model. But she understood that the house wanted to know what might happen in the future. But this could also be done through qualitative methods. What was required was systematic data collection, examine technological trends, and construct scenarios through deliberations. E.g. In Brazil, they use the technological foresight approach. Information is collected through surveys and scenarios are constructed based on technological development, followed by reflection to evaluate what would be required to achieve these scenarios. She informed the house that the ILO was developing a handbook on such issues and a workshop would be held soon to discuss this. In India, the most practical approach would be to undertake the sectoral or sectoral-regional approach.

Mr. Paul Comyn: He stated that it was worth mentioning is that the ILO hoped that its involvement in the skills development and LMIS activities would lead to the raising of certain questions, and that some groups will take responsibility for addressing some of these questions. He reiterated that the ILO’s role was facilitative and technical, and not to determine what data was required, the forecasting models etc.

Dr. Santosh Mehrotra: He sought to try and assess the present situation. Need to deploy a data infrastructure: He noted that Ms. Striestka-Illina contended that there was no problem in having sectoral forecasting at regional level. He sought to stress that she was not talking about macro-forecasting for the whole country. He felt that the government should focus on the top priority – putting in place the data instruments to capture the data emerging from the ground which can be used by people and industry. He hoped that the SSCs would come into place as quickly as possible and that the SSCs would work alongside government to generate and collect the data on supply and demand side.
**Forecasting for what purpose?** Touching on the theme of forecasting to better enable planning, he opined that the key question was what do we want to forecast for? Forecast data would be useful only if it was used meaningfully. He pointed to the AICTE stating that it was continuously approving more engineering colleges despite unfilled seats and unemployment amongst engineers. In his opinion this non-rational behaviour reduced the efficacy of forecasted data.

**Some statistics about enterprise-based employment:** Supplementing Mr. Sharda Prasad's statistics, Dr. Mehrotra informed the house that NSS data displayed that enterprises employing less than 6 workers accounted for 75% of all employees in 2004, moving to 65% in 2009. The 10% shifted to larger enterprises. What he found even more interesting was that the share of employment in enterprises employing more than 20 workers doubled in 5 years to 17% in 2009.

He also stated that the NVEQF framework said very specifically that there must be a system to train adult learners and ensure RPL.

### 3. International Examples of Institutional Arrangements for Identification and Anticipation of Skill Needs and Related LMIS

**Ms. Olga Striestka-Iлина:** She stressed the need to integrate skills into national and sectoral development strategies to meet today’s labour market needs (avoid skill gaps) and more coordination is needed between various spheres (and also within them). To avoid wasted effort, countries are trying to develop institutional methods conducive to exchange of information dialogue around anticipating and meeting skills demands. It is important that these bodies be tripartite and multi-stakeholder.

**Mr. Paul Comyn:** He outlined the salient features of the Australian and Sri Lankan LMIS.

**The Australian LMIS:** In Australia, there was robust data collection by Australian Bureau of Statistics, NCVER etc. ISCs were focused on collecting qualitative data to understand perceptions in the industry. SkillsAustralia took data from all sources and acted as an independent think tank and reported directly to the minister for tertiary education, skills, jobs, and workplace relations.

**The Sri Lankan LMIS:** In Sri Lanka, TVEC collected the LMI. The Department of Census also collected quarterly information. Other ministries (e.g. Labour Relations and Productivity Promotion) also collected information. However, there was poor communication and coordination between various ministries.

**Ms. Olga Striestka-Iлина:** She explained that regional institutional arrangements were conducive to anticipating and meeting skills demands exist globally.
Regional institutional arrangements: Some examples at the regional level included the regional labour market/employment and training observatories (OREF France), regional skills development agencies, regional HRD councils, regional schooling authorities, regional/local branches of PES, national/sectoral analyses disaggregated to the regional level (in this case, some more information needs to be collected to make it useful at the regional level).

Grassroots institutional arrangements: At the grassroots level she enumerated good examples such as school boards, tripartite boards at local employment services, occupational observatories, occupational expert groups (O*NET), education and business cooperation at the level of qualifications (e.g. Dual System in Germany), on-going labour market signalling.

What types of information are collected by PES?
Ms. Striestka-Illina then elaborated the information commonly collected by PES networks. These include:

- Jobseeker – gender, age, location, occupation, desired working conditions
- Vacancies – wages offered and contract and working hours, qualifications and experience required, establishment size, sector and industry location, average time required to fill vacancies.

This helps policy planners deduce the job vacancies per occupation, labour shortages, hard-to-fill occupations, identify areas of mismatch.

LMIS IT platform
Moving onto best practices in IT front-ends for an LMIS, she raised the example of the "Working in Canada" tool. It was a self-service matching system (merged with occupational forecasts), and extended information to people through social networks, and facilitated flow of information to the public. It also had separate targeted sections for different categories of people i.e. job-seekers, youth and students, older workers, researchers, employers, etc.

Expanding on the key components of a generic best-practice IT platform for an LMIS, she contended that these would be the following:

- A career opportunities search engine (by occupation, job offers, possibility of applying online or placing a CV),
- Occupational and sectoral outlook (trends, forecasting, soft indicators),
- Shortage of workers occupations (information for migrant workers),
- Occupational information (tasks, tools and technology to work with, work context, working conditions, wages, expected knowledge, education/training, skills and competencies, previous experience etc.),
- Education and training opportunities including ALMP programmes, education and training institutions ranking (by success of graduates), and,
- Useful links (gateway to other LMI).

From institutional arrangements, she maintained that it was important to have strong tripartite cooperation and social dialogue, PPP, agreed institutional roles and responsibilities, coordination and making sense of what we know.
4. International Examples of Institutional Arrangements for Identification and Anticipation of Skill Needs and Related LMIS: Sectoral Approaches

Ms. Olga Striestka-Illina: She explained that a sectoral approach allowed for prioritization and allowed planning for differing realities across sectors. It also made it easier to facilitate coordination across a sector. A sectoral approach helped in reducing complexity. Furthermore, it allowed a close-up examination of the sector which was useful in addressing certain questions. Tripartite involvement was very important and needed to involve employers and workers organisations. A regional approach remained a good way to foster ownership amongst organisations in the sector.

Sector-level methods
Methods at the sector level could include model-based projections, scenarios, enterprise surveys, case studies, focus groups, Delphi methods, JRA etc. An example of a sector level approach that she elaborated upon was the ILO STED approach (applied in Ukraine, Kyrgyzstan, Macedonia, Bangladesh). At the outset sector selection exercises were carried out, followed by sector characterization and conducting a business environment scan. After this an exercise of envisioning the future (business as usual, upgrading scenario, push on existing products) would be conducted. A two-tier qualitative and quantitative modelling would be done to finally arrive with a plan for the future.

The building blocks of a good sector approach would include mapping the sector (defining the sector boundaries, economic trends, competition etc.), understanding sectoral employment trends (occupational change, gender, age, educational attainment etc.), evaluating the drivers of change, ascertaining the emerging skills needs etc. Globally, there are many approaches to a sectoral approach such as SSCs (UK, Australia, India etc.), PPPs, sectoral working groups etc, Contrat d'Etudes Prospectives and sectoral observatories (France).

Sector level solutions in the UK: It is umbrella body of 25 SSCs formed to reduce skills gaps, improve productivity, increase opportunities to boost skills, and improve learning supply. It is headed by the UKCES and is employer-led, UK-wide, and independent. It is designed to build a skills system that is driven by employer demand. Trade unions are represented in the board of the SSCs. Each SSC is formed in sectors to represent more than 500,000 workers. It is 10% funded by the government with a levy income as well. It conducts both quantitative and qualitative analyses.

Sector level solutions in the Netherlands: In the Netherlands, the tradition of sectoral approaches reaches back to the 19th century. Seventeen KBBs cover mainstream TVET. They are financed by the government. The board has equal representation split between education providers, employers, and unions. Each KBB has a regional structure. It is financed by a levy agreed between social partners at sectoral level. The main task is to support training but other activities include labour market studies, innovation in the sector, skills needs identification, modernisation of curricula etc.
**Sector level solutions in Australia:** In Australia, the 11 ISCs conduct annual environmental scans that are used by SkillsAustralia. These form the ‘early warning system’ for Australia’s tertiary system on skills and workforce needs. Views and evidence from across the country are collected to identify factors impacting on the shape and capability of the workforce, and how the training system is responding. It also informs funding (Productivity Places Program) and identifies National Resource Sector Employment Taskforce.

In conclusion Ms. Striestka-Iliina outlined the key principles of sectoral approaches. These include:
- A bipartite or tripartite organizational structure,
- An action-oriented approach,
- Ownership of the private sector over research objectives, results, resource allocation and implementation,
- Employer-led and representative of the sector,
- Coherence between national and sectoral policies,
- Coordinated across sectors.

**Mr. Basab Banerjee:** He opined that the NSDP, while it has made the NCVT responsible for creating the framework for LMIS, also has very categorically said the following for the SSCs - “establishment of a well-structured, sector-specific LMIS to assist the planning and delivery of training”. In this sectoral approach, the SSCs need to focus on a demand-based approach (demand-side driven). The SSCs need to be conscious of scale (eg. Security skills council represents 7 million people) and of the dynamic nature of their industry. SSCs also need to be conscious of aptitude to ensure that the right people enter their industry. It is important that the SSCs don’t create sectoral LMIS that can’t be back-integrated into a larger, national LMIS.

**Questions from the floor**

**Mr. Jayant Krishna:** He felt that fact that Indian SSCs were nascent was an opportunity. It was important to freeze their data requirements (with respect to LMIS needs) as soon as possible so that systems could be developed to capture these data points.

**Mr. Prashant Deshpande:** As a representative of an SSC, he wanted to clarify what help could the SSCs expect from the NSDC. At the granular level, a blueprint for an output-driven LMIS was required. He wanted clarity on what the outputs are for the key stakeholders care about and what are the inputs that LMIS captures.

**Mr. Dogra, private security SSC:** He informed the house that a practical example from the security industry shows that without a blueprint, the industry ended up creating fragmented information systems that cannot be easily linked up. So a blueprint would be crucial.

**Mr. Shamimuddin, Govt. of MP:** He wanted to know if the SSCs have been given any guidelines about data collection etc to ensure uniformity.
Mr. Basab Banerjee: He urged the SSCs that it was important for them to participate in developing the blueprint for the sectoral LMIS.

Ms. Olga Striestka-Illina: She agreed with Mr. Banerjee that the SSCs should say what the blueprint should be. However, she cautioned that a national LMIS cannot be solved by a sectoral approach alone.

Mr. RL Singh: He asked Ms. Striestka-Illina whether the Expert Group on Future Skills Needs in Ireland was permanent or temporary/ad-hoc. She informed him that the organization was an independent organisation that produced mostly sectoral work. In contrast, the UKCES was not just a technical body; it had a tripartite structure and was also an important decision-making body.

5. The Data Model of the Revitalized Employment Exchanges

History

Mr. Sharda Prasad: Setting the context, he informed the house that Employment Exchanges were the first effort by the Government to establish an LMIS. The Employment Exchange (CNV) Act was enforced from 1960. He stressed that this was the only LMIS that provided information on a quarterly basis. However, the system suffered from a time-lag.

He informed the house that to make Employment Exchanges more relevant and to enable them to provide high quality information to all stakeholders, the government has decided to upgrade the Employment Exchanges under the National e-Governance Plan of GOI. This upgrade would be conducted in 22 months.

Amarjeet Kaur: When these exchanges were established, they were to look after to post-war demobilised WWII veterans. In 1947 they were broadbased to look after the needs of the displaced due to partition. This mandate was universalised in 1948. The Employment Exchanges were transferred to the state governments in 1956.

Functions

Amarjeet Kaur: Employment Exchanges had four main functions – registration and placement, vocational guidance and career counselling, collection of employment market information (EMI) (for the organised sector). The CNV Act compulsorily covers all non-agricultural establishments with >25 employees and voluntarily for those with 10-24 employees.

She informed the house that the EMI programme aimed to provide information at short intervals about the structure of employment in public and private sectors and also monitor the changes in the level of employment. It also aimed to present the occupational composition and educational profile of employees in the public and private sector establishments.
Problems
Coming to problems, she informed the house that the EMI sector doesn't cover unorganised sector, self-employment, part-time employment etc. It also does not capture wage information. The frame of establishments maintained at local Employment Exchanges is not comprehensive in certain areas due to non-inclusion of new and emerging establishments. The data available is also not real-time.

The problem areas in Employment Exchanges are as follows:
- lack of IT-related infrastructure
- low placement of jobseekers (5 lakhs vs. 3.8 crore 'live register')
- non-availability of upated information
- delays in internal communications
- outdated/obsolete vocational guidance material
- inadequate skills to offer services such as vocational guidance and placement services
- lack of motivation and incentives for staff

Upgradation project
Expected outcomes of the upgrade project are as follows:
- Availability of real-time information to bridge demand-supply gap and planning and policy interventions
- On-line data submission by all employers
- Use of IT to enable Employment Exchanges to better deliver services to citizens at the grassroots level
- National Web Portal to ensure availability of all employment-related services on a single window, and also networking with ITIs and ITCs

Ms. Boonpala: She acknowledged the intensive discussions that had taken place. She stressed that PPP and sectoral approaches were areas that stakeholders needed to continue debating. It was important that stakeholders continued to identify priority areas. She thanked all the participants and stakeholders.

Questions from the floor

Jayant Prasad: He wanted clarification if the National Web Portal was envisaged as part of the LMIS itself and not something separate.

Ms. Kaur responded that the portal would inform the LMIS. Mr. Sharda Prasad added that the Employment Exchange will serve their purpose when a real-time skills inventory was in place.

Unknown: He wanted clarification on how data would be entered into the database.

Mr. Sharda Prasad responded that the current mechanism of registration with the Employment Exchange will continue. It was being proposed that applicants could file online without needing to go to the EE. The network of 100,000 CSCs in rural areas would be developed as outreach
centres. The applicants could then get their data verified at the Employment Exchange at their convenience.

**Jayant Prasad**: He wanted to clarify that did the government want the private sector to participate in upgradation of Employment Exchanges? Furthermore, what will be their incentive?

Mr. Sharda Prasad welcomed private sector involvement but conceded that their sustainability would have to be examined since job-seekers needed to be placed free of cost since India had signed ILO convention 80.

**Unknown lady**: She wanted clarification whether the automated Employment Exchange were being considered as the entire LMIS. She also wanted to know who was going to drive the task of initiating the blueprint for the LMIS and where the LMIS would reside. Lastly, what was the role of the SSCs going to be while the Employment Exchanges were being upgraded?

**Mr. Paul Comyn** cautioned that one needed to be careful before going down the path of sectoral LMISs. The National Web Portal that was going to be established would be part of the national LMIS.

**Role of the SSCs**: Where the SSCs plug in and what data they provide and what roles they would play in forecasting had not been determined. At some point this discussion had to happen. With the SSCs one needed to start small and look at the qualitative forecasting-type information that they could get from members without moving directly to a real-time data system that would be a quantum leap for them. The SSCs will have an important input into the design of the national system. He reiterated that it was up to the SSCs and NSDC to figure out what that sectoral LMIS would look like.

**Need to be realistic**: He also opined that one had to be realistic about the international experience about how sectoral forecasts are developed and often they don’t depend on real-time information or enterprise surveys (since there are so many issues with that methodology). So there is always a combination of qualitative and quantitative. But someone has to take the responsibility of pulling it all together.

**Mr. Basab Banerjee** suggested that it would be useful to have one system of data depository at a national level which is accessible at the individual level.

**Mr. RL Singh**: He reminded the house that when the NSDP was drafted, the issue of who will maintain the system was discussed. It is written that maintenance and data dissemination will be done by NCVT. SSCs will not need to invest in establishing a separate system.

**Ms. Olga Striestka-Ilina**: She felt that one should not confuse LMI and LMIS. The Employment Exchange was an LMI, and SSCs would also collect data as part of an LMI. But all this would be part of LMIS – which would be coordinated. Maybe in the next meeting the system could be drawn with the possible agencies that could take charge of the different aspects of the LMIS.
Mr. SK Chaturvedi, Automotive SSC: He contended that skills could be divided into those that are specific to a sector and those that are generic. He wanted to know if internationally SSCs maintained the specific skills and the national LMIS maintained the generic skills?

Ms. Striestka-Iлина felt that, on the whole, such a divide was largely artificial and she did not think that skills could be easily divided into specific and generic. Furthermore, for some sectors generic skills would be as important as specific skills.

6. Conclusions and Next Steps

Mr. Sharda Prasad: All suggestions will be taken up at the next meeting of the Working Group. The objective behind the LMIS was to create a system that catered to the needs of both job-seekers and employers without a high transaction cost. The NTMIS should be able to cater to the needs of the technical fields. ITIs and ITCs have two MIS – MIS for MES and another that will be functional in a few months. Then all the data will be available at one place nationally. All this will be LMI and the LMIS would be developed to integrate this information. At some later date when all the SSCs are in place, an association of SSCs could be created and their data could become part of the national skills database. Another issue that came up was the ownership issue; there were related issues of maintenance and outreach and credibility of the data. While the government owned the system, and provided the funding, and other stakeholders would help in their own way – a PPP. For future data, some kind of forecasting data will have to be developed. The complexities of this job will be immense. Some models could be developed at the district level and refined over time. Existing systems also needed to be integrated into the new ones without making very large changes.
Appendix E: Presentations
Labour market information system
- Collection, processing, storing, retrieval and dissemination of labour market information
- Coordinated process
- Ensuring data flows
- Information function: linking administrative records (labour market and education), statistical data collection, to counselling and guidance services
- Policy function: provision of information to government
- Multiple actors and stakeholders

Who contributes information
- Legislatures
  - National
  - State/provincial
- Executing agencies
  - Employment and social security services
  - Labour inspectorates
  - Trade unions
- Statistical services (of executing agencies, ministries — including administrative records, the national statistical office (LSI, Census etc.))
- Implementing and other agencies
  - Study and research units (of ministries, institutes, universities)
  - Social partners (workers and employers organisations)

Labour market intelligence: making sense of LMI
- Research institutions, universities, analytical departments of ministries, observatories, private consultancy firms. Both public and private. Need to be nurtured.
- Analytical capacity to process this information adapting to various users' needs
- Capacity to evaluate and continuously improve LMI
- Capacity to initiate and perform new research (forward looking research, trends analysis, new and emerging occupations)
- Capacity to combine qualitative and quantitative methods, consolidate and analyse a large variety of information resources
- Capacity to translate findings into qualifications & training supply, produce policy recommendations
- Capacity to initiate discussions with key stakeholders (tripartite), validate research findings, develop political and institutional support

Beneficiaries
- Policy making and civil service at various levels,
- Administrators,
- Workers,
- Employers,
- Counselling and guidance services,
- Education and training providers,
- Researchers
- Individuals and a broader public.

The role of skills
- Jobs and skills form a feedback loop
- Gaps open up when one of the two changes
- Causes pressure for the other to change too
  - Changes in markets create a need and incentive to bridge gaps in skills and capability
  - Skills and capabilities move demand forward, as people seek jobs and opportunities for their skills

Interaction between demand and supply
- Labour market supply: flows
  - New jobs
  - Outflows
- Labour market demand: stocks
  - Expansion
Addressing Skills Mismatch

“A mismatch between skills demand and supply has high economic and social costs and results from and contributes to structural unemployment. Early identification of current and future skills needs is part of a forward-looking strategy that reduces skills gaps.”

Conclusions on skills for improved productivity, employment growth and development, ILO 2008

Structural unemployment

- Form of unemployment resulting from a mismatch between demand in the labour market and the skills and locations of the workers seeking employment
- Skill shortage may occur even when unemployment rate is high

Consequences of skill shortages

- Firms recruit at suboptimal skill levels
- They choose therefore production technologies that require relatively low degrees of skill intensity
- May result in lower wages
- Sub-optimal work organisation
- Low productivity
- High staff turnover
- Impact on production and trade patterns
- Concentrate in regions and may result in low productivity, low wage, low skill demand equilibrium

Why does not market solve the skills supply/demand mismatch?

- Labour market imperfections
- Public goods
- Market externalities
- Time lag between skill supply and labour market demand
- Limited geographical mobility
- Imperfect information on jobs and skills availability
- Behavioural factors: irrational decisions in labour market actors (careers, wages)
- Room for public policy

There is no ideal method or system of identification of skill needs

- Evolutionary process.
- No one size fits all.
- The system, approach and method to be adopted need to take into account:
  - The present system of education and training,
  - Institutional development,
  - Decision making structures,
  - Data availability,
  - Financial, technical and human resources,
  - Tradition and mentality.
### Key questions

- What are your policy objectives / needs?
- What are your research objectives?
- What do you want to find out?
- Who will be a primary user of the findings?
- Who will perform research / data collection / analysis?
- What are the financial resources you have for the study / data collection?

### How to measure a skill?

- Testing a skill (competencies)
- Proxies:
  - Occupations
  - Jobs / job tasks
  - Qualifications
  - Education / training type / subject / level
  - Vacancies
- Matrices
  - E.g. Sector / occupation
  - E.g. Sector / level of qualification

### Challenges

- Data availability
- Data comprehensiveness
- Data accuracy and robustness
- Regularity in analyses / up-to-date information
- Coverage
- Coordination
- Ownership
- Use
- One-stop shop

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**Questions?**
Institutional arrangements for anticipation of skill needs and related LMIS

ILO message
- Integrate skills into national and sectoral development strategies
- To meet today’s labour market needs (avoid skill gaps) and
- To attract jobs and thus drive economic growth and social development tomorrow

More coordination is needed between
- TVET
- World of Work
- Skills policy
- Industrial, trade, technology, environment policies
- TVIs in sectors & localities
- Businesses in sectors & localities
- Government
- Social partners

National institutional arrangements conducive to anticipating and meeting skill demand
- Councils / Commissions (Employment and Skills, HRD, TVET) – tripartite, multistakeholder – and their secretariats
- Interministerial committees, working groups, coordination bodies etc.
- National employment and training / HRD authorities / boards etc.
- Expert groups (on future skill needs)
- Alliances of SSCs to support SSCs in cross-sectoral work
- Networks (e.g. FreQueNz)
- National observatories

Australia
- Minister for Tertiary Education, Skills, Jobs and Workplace Relations
- Commonwealth Department of Education, Employment & Workplace Relations
- Skills Australia
- National Centre for Vocational Education Research (NCVER)
- Industry Skills Councils
- Australian Bureau of Statistics
- Employment Services
- State Department of Skills Education & Training

Financing flows
- Data flows
And up to grass-roots level ...

- school boards,
- tripartite boards at local employment services,
- occupational observatories
- occupational expert groups (OP'NET)
- education and business cooperation at level of qualifications (Denmark, Germany)
- on-going labour market signalling

What types of information are collected by PES?

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To what extent can we use this information??
One stop shop information channelling

Where different pieces meet together and become useful:

- US O*NET http://www.onetonline.org
- JobNet Sri Lanka http://www.jobnet.lk
- CareerLink Singapore http://www.careerlink.com
- Jamaica Labour Exchange http://www.jla.gov.jm
- Barbados LMI website http://www.lmi.gov.bs
- Czech Skills Future http://www.skillsfuture.cz

Key components of an IT platform

- Career opportunities search engines by occupation, by job offers (possibility to apply on-line or to place a CV)
- Occupational and sectoral outlooks: trends, forecasts and soft indicators
- Shortage of workers occupations – linked to information for migrant workers
- Occupational information tasks, tools and technology to work with, work context, working conditions, wages, expected knowledge, education / training, abilities, skills and competencies, previous experience
- Education and training opportunities, including ALMP programmes
- Education and training institutions ranking (by success of graduates)
- Useful links – a gateway to other LMI

From ‘shared diagnosis’ to shared commitments

- STRONG TRIPARTITE COOPERATION AND SOCIAL DIALOGUE IN ALL CASES!
- PUBLIC PRIVATE PARTNERSHIPS
- AGREED INSTITUTIONAL ROLES AND RESPONSIBILITIES
- COORDINATION AND MAKING SENSE of what we know!

Questions?
Why sectoral approaches?
- Prioritization: binding constraints may differ across sectors
- Facilitate coordination among all relevant stakeholders
- Reduce complexity and scope of interventions (can’t do everything at the same time)
- Promote structural transformation in accordance with development objectives
- Most practical skills questions need the sort of close up examination that sectoral research enables

Sectoral studies
- Vary in nature, objectives, users, scope and therefore methods
- Could have both qualitative and quantitative elements
- The approach much depends on institutional structures, and channels for social dialogue and coordination at sectoral level
- Tripartism is very important, involve employers and other organizations at an early stage of analysis
- Feeling of ownership on the side of the labour market representatives

Methods at sectoral level
- Model-based projections
- Scenarios
- Forecasts / technology forecasts
- Enterprise surveys
- Skills audits / THAs
- ‘Sector scouting’/ trendsetting companies
- Case studies
- Focus groups, expert workshops
- Delphi methods
- JRA
- Holistic and combined methods
- On-going social dialogue through decision making and technical bodies (e.g. Sector Skills Councils, Sectoral Observatories)

An example: ILO STED approach
- So far applied in:
  - Ukraine
  - Kyrgyzstan
  - Macedonia (FYROM)
  - Bangladesh

Building blocks of sectoral analysis
- Mapping the sector (definition of boundaries, economic trends, output and prices, consumption trends, foreign trade, international competition)
- Sector’s employment trends (occupational change, gender, age, educational attainment, training in companies)
- Drivers of change and changing the value change
- Changing and emerging skill needs
- Scenarios for the sector
- Impact on skills requirements
- Required HRD action
Sectoral institutional arrangements conducive to anticipating and meeting skill demand

- Sector Skills / Training Councils / Organisations (UK, Australia, Canada, Russia, New Zealand, Czech Republic, setting up in India, Bangladesh etc.).
- PPs
- Dutch National Centers of Expertise (17 but represent 40 industries)
- SETAs (Sector Education and Training Authority) in S Africa
- Sectoral Observatories (France, now over 20)
- Branch working groups or committees (social partners and education representation)
- Contrat d’Etudes Prospectives (France)

Contrat d’Études Prospectives (France)

- Contract between Government (Minister or regional prefect, professional branches (>60 have CEPs) and trade unions
- Implemented since end of the 1980s
- Could be implemented at macro or regional level
- Finance: government 50%, private sector 50%
- Implemented by an external service provider
- Action oriented diagnosis complemented by contract of objectives (political response and commitments)

Sectoral Observatories (France)

- Over 20 in France
- Monitor future trends in occupations and qualifications
- Totally voluntary
- No budget, no institutional structures
- Tripartite
- Strong participation of research institutes and universities
- Based on discussions – shared diagnosis and shared commitments

UK SSCs (established in 2003-2006)

- Alliance of SSCs – an umbrella for 25 SSCs
  - Representation and support function
  - Transversal issue (employability, low carbon)
- Headed by UKCES
- Employer-led, UK-wide, independent
designed to build a skills system that is driven by employer demand
- TUs represented in the Board of SSCs
- SSCs formed in sectors to represent >300 thous workers
- Funded by the government (~10%) and a levy income
- Quantitative and qualitative analyses

Key objectives of UK SSCs

- to reduce skill gaps and shortages
- to improve productivity, business and public service performance
- to increase opportunities to boost the skills and productivity of everyone in the sector workforce
- to improve learning supply including apprenticeships, higher education and national occupational standards.

SSCs produce Sector Skills Agreements
Netherlands

- Long standing tradition (goes back to 19th Cent)
- 17 KBB – Centres of Expertise on Vocational Education and Training and the Labour Market – cover mainstream TVET
- Based on legislation
- Financed by govt (110 million €)
- Boards 1/3 education, 1/3 employers and 1/3 unions
- Each KBB has regional structures
- Advise minister on qualification profiles as basis for VET curricula
- Quantitative and qualitative match between demand and supply

NL - Continuing training: (average investment about 2% of wage-bill)

- About 100 sectoral training and development funds
- Financed by a levy, agreed between social partners at sectoral level (ranges between 0.5% to 1% of the wage-bill)
- Main task is to support training
- Other activities: labour market studies; innovation in the sector; information on the sector for students in high schools

Cooperation between training funds and centres of expertise on skill needs identification and modernising curricula

Czech Republic

- New 20 SSCs - cover roughly half of the labour force, including 1 transversal
- Coordinated by a Coordinating Council
- Composition: employers' organisations and E&T
- Rely on management by a consulting company
- At the initial stage funded through a project
- Functions:
  - Monitoring the structure of occupations in sectors, trends and skills implications for the National System of Occupations
  - Monitoring new and emerging qualifications
  - Qualifications and assessment standards
  - Recognition of prior learning

Australia

- 11 Industry Skills Council Annual Environmental Scans
- The 'early warning system' for Australia's tertiary system on industry's skill & workforce needs
- Views and evidence from across the country to identify factors impacting on the shape & capability of the workforce, and how the training system is responding
- Informs funding: Productivity Places Program
- Also priority sector initiatives: National Resources Sector Employment Taskforce

Sri Lanka

- TVET Plans have been developed for 17 industry sectors by TVEC and are in development for two more. Static and limited implementation.
- Sector Policy and Training Advisory Councils (SPTACs) operate within TVEC but with a narrow role.
- Biannual Labour Market Bulletins with sectoral data but limited resources for LMIA & research.
- Wider provincial development planning occurs but not well integrated with skills.
- Sector Skills Councils now being established to enhance sectoral planning.

Key principles of sectoral approaches

- Bipartite or tripartite
- Action oriented
- Ownership of the private sector over research objectives, results, resource allocation and implementation
- Employer-led and representative of the sector (subsectors, types of enterprises, regions etc.)
- Coherence between national and sectoral policies
- Coordinated across sectors / transversal issues
DATA MODEL
of the Revitalized Employment Exchanges

December 5, 2011
MINISTRY OF LABOUR AND EMPLOYMENT
DIRECTORATE GENERAL OF EMPLOYMENT AND TRAINING

ROLE OF EMPLOYMENT EXCHANGES
- National Employment Service started in 1945
- Control of Employment Exchanges transferred to states in November, 1958
Functions of Employment Exchanges:
- Registration and Placement
- Vocational Guidance and Career Counseling
- Collection of Employment Market Information (EMI)

EMPLOYMENT MARKET INFORMATION PROGRAMME
- Employment Market Information means information concerning the employment market
- The system of collecting information on the employment market situation in the country is known as the Employment Market Information (EMI) Programme

EMI PROGRAMME
- EMI programme initiated in 1956 on pilot basis in Delhi
- Based on success achieved, implemented in metros and throughout the country
- Provided statutory basis by enacting the Employment Exchanges (Compulsory Notification of Vacancies) Act, 1959 and Rules made there to following the recommendations of the Sheh Raja Committee
- Government of India ratified the ILO convention No. 88 which calls for providing a free employment service as well as collecting employment and occupational information. National Employment Service and its EMI programme to continue.

OBJECTIVES OF EMI PROGRAMME
- To provide information at short intervals about the structure of employment in the public and private sectors at the area, state and national levels and also to monitor the changes in the level of employment
- To present the occupational composition and educational profile of employees in the public and private sector establishments
- To identify the occupations which are characteristic to a given industry
- To assess the manpower shortages in the organized sector
- To make available information required to improve and add to the services offered by the National Employment Service

COVERAGE UNDER THE EMI PROGRAMME
- All establishments in the public sector except Defence Forces irrespective of their size.
- Non-agricultural establishments in the private sector employing 25 or more persons.
- The information from non-agricultural establishments in the private sector employing 25 or more persons is collected under the provisions of E(E-CNVI) Act, 1959.
- Data from non-agricultural establishments in private sector employing 10-24 persons is also collected on voluntary basis
**ESTABLISHMENT REPORTING (ER) SYSTEM**

- All establishments in the public sector and selected establishments in the private sector engaged in non-agricultural activities give details regularly on number of persons employed, vacancies that have occurred type of persons in short supply.
- The information is collected from all establishments in Public Sector and those employing 25 or more persons in the Private Sector under the provisions of (ECN) Act, 1959
- Collected through Employment and Occupational (ER-1 and ER-2) returns prescribed under the Employment Exchanges (Compulsory Notification of Vacancies) Act, 1959

**LIMITATIONS OF EMI DATA**

Data collected under EMI Programme does not cover:

- Employment in the un-organized sector
- Self Employment
- Part-time employment
- Employment in agricultural and allied establishments which furnish employment returns only on voluntary basis
- Employment in household sector and non-agricultural establishments employing less than 10 workers in private sector
- Employment in Defence forces.
- Employment in Indian Embassies and Missions abroad.
- Employment on sub-standard wages.
- Employment for total duration less than three months.

**LIMITATIONS OF EMI PROGRAMME**

- The frame of establishments maintained at local employment exchange is not comprehensive in certain cases due to non-inclusion of new and emerging establishments
- There is an element of estimation of employment in respect of non-responding establishments
- Employment created under various employment/beneficiary oriented schemes/programmes might be erroneously reported under the EMI Programme

**PRESENT CHALLENGES**

- Progressive erosion of Role of Employment Exchanges - Public Sector Undertakings having their own recruitment process
- Non coverage of large number of private firms having less than 25 workers under Employment Exchanges (Compulsory Notification of Vacancies) Act, 1959
- Supreme court judgment in 1998 directing vacancy notification through wider circulation and/or through electronic media and employment news, besides Employment Exchanges
- Gap between employers/institutions and trainers or job seekers
- Non-availability of real time data on Labour Market

**KEY DRIVERS OF CHALLENGES FOR EEs**

- Increasing Citizen Expectations
- Increase in the size of labour force
- Growth in the service sector
- Employment opportunities mainly in the unorganized sector
- Successful private initiatives & technology possibilities
- Delivery Channels - IT & Telecommunications open up new channels to provide Employment Services
EMPLOYMENT EXCHANGES MISSION MODE PROJECT (EEMMP)

- Modernization and Upgradation of Employment Exchanges as one of the Mission Mode Projects under National e-Governance Plan of Government of India
- Transformation of Employment Exchanges to make them more demand responsive
- Improve the quality of service to all stakeholders – Jobseekers, Employers and Central/State Govts.

PROBLEMS AREAS IN EMPLOYMENT EXCHANGES

- Lack of IT-related infrastructure
- Low placement of Jobseekers
- Non-availability of updated information
- Delays in internal communications
- Outdated/Obsolete Vocational Guidance (VG) Material
- Inadequate skills to offer services such as VG & Placement services
- Lack of motivation and incentives for the staff
- Look ‘n’ feel of EEs is less conducive

EXPECTED OUTCOMES OF EEMMP

- Enabling Employment Exchanges to better deliver its mandated services to the citizens through Information Technology (IT) – extending reach to the grass root level
- National Web Portal based application to ensure availability of all employment related services on a single window
- Web Portal to be storehouse of information on skilled persons – requirement and availability and also networking with Industrial Training Institutes/ Centre
- On line data submission by all the employers and use of real time basis for providing employment opportunities to job seekers/skilled persons and meet the demand of employers
- Availability of data on real time basis which would help Government both at Centre and States to plan desirable policy interventions

KEY TECHNOLOGY INTERVENTIONS

- On line Registration of job seekers & Employer Vacancy Information
- Skill matching solution - Interface for Job Seekers & Employers
- Availability of on line Vocational Guidance Materials
- Talent Assessment for Job seekers through IT tool
- On line filing of returns by employers (EMI)
- On line MIS at various levels for Policy & Management decisions

THANKS
Objective of this presentation

- To present our key findings on availability of supply and demand side skill development data
Objective of this study

Objective
Mapping of Available Data - to map the sources of skills and TVET data and assess the availability of specific data sets related to supply and demand

Key tasks in engagement
Describe the data element
Diagnose the availability of data; the data collection processes; and regularity of the data collection
Identify key issues

Terms of Reference of the study...

(A) Mapping of Available Data:

(i) Demand for trained and educated workforce:
- Identify sources and data standards used to classify occupational and qualification structures of economic sectors (organised and, if possible, unorganised economies) at the national and state levels;
- List available data on the occupational and qualification structures of economic sectors (organised and, if possible, unorganised economies) at the national and state and district levels;
- Identify sources and list available occupational data on the annual demand for semi-skilled, skilled and high-skilled workers, and technicians for overseas employment (ie: labour outflow);
- Identify sources and provide samples of data on the annual local demand for skilled and semi-skilled workers and technicians due to:
  - Demographic replacement needs (due to sickness, death, retirements, etc.);
  - Labour turnover when exiting skilled workers are changing their occupational profiles through skills retraining to accept different jobs;
Terms of Reference of the study...2

- Identify sources and produce samples of data available on the average demand for skilled and educated workforce for the new jobs created annually (emerging from new investments, company registrations, etc.) in both the organised and unorganised economies;
- Identify other sources and produce samples of other data used to forecast the demand for skills in different economic sectors.

(B) Supply of the trained and educated workforce:
- Identify sources and compile available data on general education, including:
  - numbers of youth in different age groups;
  - enrolments in general education, progression and graduation rates;
  - graduations from the primary and secondary school and dropouts and their shares enrolled in further education including TVET and skills training establishments (public and private institutions including NGOs, ITIs, polytechnics, etc.);
- Identify sources and compile available data on TVET and skills training providers (public and private institutions, schools, NGOs and others) including their numbers, location, average annual enrolments and graduates, types and duration of courses trade-wise, and learning outcome-wise;

Terms of Reference of the study...3

- Identify sources and compile available data on formal apprentices enrolments and graduations per year, trade-wise;
- Identify sources and compile available data on the employability of the recent graduates from different programmes, occupational qualification-and trade-wise;
- Identify sources and compile available data on the annual supply of skilled and educated workforce due to massive retrenchments, company closures, etc., trade-wise;
- Identify sources and compile available data on the annual arrival of the skilled and educated workforce returning from overseas, trade-wise
- Identify sources and compile available data on the rates of unemployment and underemployment of the educated and trained persons, trade-wise where it exists;
- Evaluate the availability, regularity and reliability of sources for the above and identify gaps where they exist.
**Approach**

- Identification of data elements/points related to demand and supply
- Mapping of data sources
- Mapping of data collection process and key interfaces
- Mapping of frequency of data collection

**Methodology & Deliverable**

Data mining of demand and supply data points – based on published reports, statistics etc.,

**Deliverable**

- Present and evaluate the types of skills development data outlined above as well as the listings of sources, agencies, and reports consulted
- Identify key issues in data collection process
- Annexed tables with samples of data available on data outlined above
Mapping of supply side data

- Map available data on general education
- Enrollment and outturn from skill training providers
- Formal apprentices enrolments and graduations per year, trade-wise
- Employability of the recent graduates from different programmes, occupational qualification-and trade-wise
- Annual supply of skilled and educated workforce due to massive retrenchments, company closures
- Annual arrival of the skilled and educated workforce returning from overseas, trade-wise
- Rates of unemployment and underemployment of the educated and trained persons, trade-wise where it exists

Key issues in supply side data...1

Supply Side Data

- Map available data on general education

<table>
<thead>
<tr>
<th>#</th>
<th>Data Element</th>
<th>Source</th>
<th>Frequency</th>
<th>Data Available</th>
<th>Reliability</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply Side</td>
<td></td>
<td>National</td>
<td>State</td>
<td>District</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Identify sources and compile available data on general education, including</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Numbers of youth in different age groups</td>
<td>Census</td>
<td>Once in 10 years</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NSSO</td>
<td>Biennial</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

District level information is not readily available.
### Key issues in supply side data...2

<table>
<thead>
<tr>
<th>#</th>
<th>Data Element</th>
<th>Source</th>
<th>Frequency</th>
<th>Data Available</th>
<th>Reliability</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Supply Side</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Enrolments in general education, progressions and graduation rates;</td>
<td>Dept of Education</td>
<td>Annual</td>
<td>Yes</td>
<td>Yes</td>
<td>High&lt;br&gt;Discipline wise enrolment, progression and graduation rates for&lt;br&gt;University (including&lt;br&gt;Open Universities) and&lt;br&gt;colleges is not available in&lt;br&gt;the public domain.&lt;br&gt;However, we observe&lt;br&gt;that the data is available at the&lt;br&gt;University level.&lt;br&gt;University wise number&lt;br&gt;and type of colleges are&lt;br&gt;available for select reputed&lt;br&gt;universities only.</td>
</tr>
</tbody>
</table>

### Key issues in supply side data...3

<table>
<thead>
<tr>
<th>#</th>
<th>Data Element</th>
<th>Source</th>
<th>Frequency</th>
<th>Data Available</th>
<th>Reliability</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Supply Side</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Graduations from the primary and secondary school and their shares enrolled</td>
<td>Dept of Primary &amp; Secondary Education</td>
<td>Annual</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>
### Key issues in supply side data...4

<table>
<thead>
<tr>
<th>#</th>
<th>Data Element</th>
<th>Source</th>
<th>Frequency</th>
<th>Data Available</th>
<th>Reliability</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Supply Side</td>
<td></td>
<td>National</td>
<td>State</td>
<td>District</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Identify sources and compile available data on TVET and skills training providers (public websites and private institutions, schools, NGOs and others) including their numbers, location, average annual enrolments and graduates, types and duration of courses trade-wise, and learning outcome-wise</td>
<td>Adhoc</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Medium</td>
</tr>
</tbody>
</table>

- No centralized database available for ITIs and ITCs for enrolments, pass and dropout rate and placement data.
- Lack of learning outcome information for all training providers.
- No centralized database for vocational training providers outlining the enrolments, pass and dropout rate and placement.
- No centralized database available for employers sponsored vocational training programs under their Corporate Social Responsibility (CSR) initiatives.

### Key issues in supply side data...5

<table>
<thead>
<tr>
<th>#</th>
<th>Data Element</th>
<th>Source</th>
<th>Frequency</th>
<th>Data Available</th>
<th>Reliability</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Supply Side</td>
<td></td>
<td>National</td>
<td>State</td>
<td>District</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Identify sources and compile available data on formal apprentices enrolments and graduations per year, trade-wise</td>
<td>DGET</td>
<td>Annual</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes High</td>
</tr>
</tbody>
</table>

- No tracking mechanism for pass out rate, placement and training outcome.
- Double counting of numbers trained under different schemes.
### Key issues in supply side data...

#### Supply Side Data

- Employability of the recent graduates from different programmes, occupational qualification, and trade-wise

<table>
<thead>
<tr>
<th>#</th>
<th>Data Element</th>
<th>Source</th>
<th>Frequency</th>
<th>Data Available</th>
<th>Reliability</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Identify sources and compile available data on the employability of the recent graduates from different programmes, occupational qualification, and trade-wise</td>
<td>NTMIS for technical educational</td>
<td>Annual</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>5</td>
<td>Identify sources and compile available data on the annual supply of skilled and educated workforce due to massive retrenchments, company closures, etc., trade-wise</td>
<td>Labour Bureau, BIFR, NSSO</td>
<td>NA</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

- Employability information is as per the candidate information and qualitative information
- Information lag of more than 3 years
- Prone to sampling error due to poor response
- Lack of information about general education (BA, BSC, B.Com, etc.)

#### Supply Side Data

- Annual supply of skilled and educated workforce due to massive retrenchments, company closures

<table>
<thead>
<tr>
<th>#</th>
<th>Data Element</th>
<th>Source</th>
<th>Frequency</th>
<th>Data Available</th>
<th>Reliability</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Identify sources and compile available data on the annual supply of skilled and educated workforce due to massive retrenchments, company closures, etc., trade-wise</td>
<td>Labour Bureau, BIFR, NSSO</td>
<td>NA</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

- Multiple agency involved
- Inadequate information about service industry, informal economy, temping companies
- No tracking mechanism for retrenched workforce company wise, level wise, skill wise, area wise for Private sector enterprises
- Limited data available on the sick companies however, data on the workforce is not available
### Key issues in supply side data...6

**Supply Side Data**

- Annual arrival of the skilled and educated workforce returning from overseas, trade-wise

<table>
<thead>
<tr>
<th>#</th>
<th>Data Element</th>
<th>Source</th>
<th>Frequency</th>
<th>Data Available</th>
<th>Reliability</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>Identify sources and compile available data on the annual arrival of the skilled and educated workforce returning from overseas, trade-wise</td>
<td>MOIA, MHA,</td>
<td>NA</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
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<td></td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>Lack of consolidated view of skilled and educated workforce returning from overseas and trade-wise</td>
</tr>
<tr>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>Lack of occupation wise skilled information</td>
</tr>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>However the same can be reconciled with Ministry of External Affairs data based on various visa types</td>
</tr>
</tbody>
</table>

### Key issues in supply side data...7

**Supply Side Data**

- Rates of unemployment and underemployment of the educated and trained persons, trade-wise where it exists

<table>
<thead>
<tr>
<th>#</th>
<th>Data Element</th>
<th>Source</th>
<th>Frequency</th>
<th>Data Available</th>
<th>Reliability</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>Identify sources and compile available data on the rates of unemployment and underemployment of the educated and trained persons, trade-wise where it exists</td>
<td>NSSO</td>
<td>At regular intervals</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Employment Exchange</td>
<td>Annual Exchange</td>
<td></td>
<td></td>
<td></td>
<td>Medium</td>
</tr>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>No data on education wise, skill wise, district wise unemployment</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Available data in employment exchange might not be comprehensive, due to the following:</td>
</tr>
<tr>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>It is not mandatory procedure</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Even an employed person may register for government jobs</td>
</tr>
</tbody>
</table>
Mapping of demand side data

- Data standards used to classify occupational and qualification structures of economic sectors
- List available data on the occupational and qualification structures of economic sectors
- Identify sources and list available occupational data on the annual demand for semi-skilled, skilled and high-skilled workers, and technicians for overseas employment
- Annual local demand for skilled and semi-skilled workers and technicians
- Demand for skilled and educated workforce for the new jobs created annually
- Mapping of data used to forecast the demand for skills in different economic sectors

Key issues in demand side data...

- Data standards used to classify occupational and qualification structures of economic sectors
- List available data on the occupational and qualification structures of economic sectors

<table>
<thead>
<tr>
<th>#</th>
<th>Demand Side</th>
<th>Source</th>
<th>Frequency</th>
<th>National</th>
<th>State</th>
<th>District</th>
<th>Reliability</th>
<th>Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Identify sources and data standards used to classify occupational and qualification structures of economic sectors (organised and, if possible, unorganised economies) at the national and state levels</td>
<td>NCO 2004</td>
<td>NA</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>High</td>
<td>Time lag in information collection; Disconnect with organisation level due to changing nature of jobs and business needs</td>
</tr>
<tr>
<td>2</td>
<td>List available data on the occupational and qualification structures of economic sectors (organised and, if possible, unorganised economies) at the national and state and district levels</td>
<td>CSO</td>
<td>NA</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Medium</td>
<td>Time lag in information collection; Disconnect with organisation level due to changing nature of jobs and business needs</td>
</tr>
</tbody>
</table>
### Key issues in demand side data...2

<table>
<thead>
<tr>
<th>#</th>
<th>Demand Side</th>
<th>Source</th>
<th>Frequency</th>
<th>National</th>
<th>State</th>
<th>District</th>
<th>Reliability</th>
<th>Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Identify sources and list available occupational data on the annual demand for semi-skilled, skilled and high-skilled workers, and technicians for overseas employment (i.e. labour outflow);</td>
<td>Based on Annual MOIA data</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Low</td>
<td></td>
<td>Lack of regular survey of demand assessment</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Lack of linkage between demand and supply</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Lack of linkage with placement agencies involved in overseas employment</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Lack of regular updation and linkage with overseas employees</td>
</tr>
</tbody>
</table>

### Key issues in demand side data...3

<table>
<thead>
<tr>
<th>#</th>
<th>Demand Side</th>
<th>Source</th>
<th>Frequency</th>
<th>National</th>
<th>State</th>
<th>District</th>
<th>Reliability</th>
<th>Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Identify sources and provide samples of data on the annual local demand for skilled and semi-skilled workers and technicians due to:</td>
<td>Multiple sources</td>
<td>No regular update</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Low</td>
<td>* Time lag and regular update of demographic replacements due to death by State, Age, Sex and Occupation.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>* We observe that only 50% of the deaths are reported and registered in civil registration systems.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>* Demographic replacement needs (due to sickness, death, retirements, etc.);</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>* Labour turnover when exiting skilled workers are changing their occupational profiles through skills retraining to accept different jobs</td>
</tr>
</tbody>
</table>
Key issues in demand side data…4

- Demand for skilled and educated workforce for the new jobs created annually
- Mapping of data used to forecast the demand for skills in different economic sectors

<table>
<thead>
<tr>
<th>#</th>
<th>Demand Side</th>
<th>Source</th>
<th>Frequency</th>
<th>National</th>
<th>State</th>
<th>District</th>
<th>Reliability</th>
<th>Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Identify sources and produce samples of data available on the average demand for skilled and educated workforce for the new jobs created annually (including from new investments, company registrations, etc.) in both the organised and unorganised economies</td>
<td>Department of Industries</td>
<td>Annual</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Medium</td>
<td>Data available with leading industrialised states</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Disconnect in aggregation of national and state level data</td>
</tr>
<tr>
<td>6</td>
<td>Identify other sources and produce samples of other data used to forecast the demand for skills in different economic sectors</td>
<td>Ministry of Finance, National Accounts, Census</td>
<td>Annual and Quarterly</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Medium</td>
<td>Multiple forecasting data</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Lack of base data for informal sector</td>
</tr>
</tbody>
</table>
Annexe F: 2011 ILO/Japan Workshop on ‘Addressing Skills Mismatch through PPP’ National Action plan for India

ILO/SKILLS-AP/JAPAN/Regional Workshop and Study Programme on Addressing Skills Mismatch through PPP, 14 – 18 February 2011

<table>
<thead>
<tr>
<th>Objectives / activities</th>
<th>Brief description</th>
<th>Outputs/outcomes</th>
<th>Time frame &amp; resources 2011–2012 resources</th>
</tr>
</thead>
</table>
| Setting up of industrial training institutes | These institutes are proposed to be set up through PPPs, with infrastructure by private partner, VGF by Government and courses to be decided by employers and Sector Skill Councils                                                                                                                                                                                                                                                                                                                                                                                                         | ▪ New institutes  
▪ New programmes  
▪ Employable skills as per market demand                                                                                                                                                                                                                                       | Three years WEF 2011–2012 |
| Setting up of SDCs                   | Proposed to be set up in PPP mode and expected to serve service sector, unorganized sector and women                                                                                                                                                                                                                                                                                                                                                                                                         | ▪ New institutes  
▪ New programmes  
▪ Employable skills as per market demand                                                                                                                                                                                                                                       | Three years WEF 2011–2012 |
| Setting up Sector Skills Council (SSC) | To be set up by NSDC, a private company, with a self-sustainable model to be developed but with Government supporting the initial funding                                                                                                                                                                                                                                                                                                                                                                                                                              | Four SSCs are expected to be constituted this year                                                                                                                                                                                                                           | Start functioning from next year. SSCs have been given general mandate; they will make their own action plan, including skill demand analysis. |
| Establishment of NVQF                | Framework for vocational education and training would be established, taking technical assistance from the EC                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Competency standards and skill requirement and resources would be allocated                                                                                                                                                                                                 | Consultation is expected to start this year. |