Skill Development Priority Index
Data driven approach to investing in skills

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Sector Context in India

- Ministry of Skill Development & Entrepreneurship is nodal agency for skill development policies at national level.
- State governments play important role in program implementation through State Skill Devt Missions.
- Skilling programs are funded by various central/ state govt. departments, private sector entities and philanthropic organisations.
- India’s skill market size estimated at $3 bln.

28 States & 8 Union Territories
730+ Districts*
*(Grouped into Clusters by National Statistical Office, for surveys and analysis)
NSDC’s Institutional Context

**Ministry of Skill Development & Entrepreneurship**

- National Skill Development Fund (NSDF)
- National Council for Vocational Education & Training (NCVET)
- Directorate General of Training (DGT)

**Investment Management Agreement (IMA)**

**NSDC envisioned as a private sector led Public Private Partnership**

<table>
<thead>
<tr>
<th>Public (49% share capital)</th>
<th>Private (10 Industry Associations) (51% share capital)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Regulator</strong></td>
<td>Loan, Equity, Grant</td>
</tr>
<tr>
<td>National Council for Vocational Education &amp; Training (NCVET)</td>
<td>Private Sector Training entities</td>
</tr>
<tr>
<td>Ministry of Skill Development &amp; Entrepreneurship</td>
<td>Sector Skill Councils</td>
</tr>
</tbody>
</table>

**Other Stakeholders:** Various central Ministries; State departments; Govt institutes; Schools and Higher education institutions; Corporates; Industry bodies; Development & philanthropic agencies

* Oversees trainings delivered through the network of government and private Industrial Training Institutes (ITIs).
NSDC’s Role in the skills ecosystem

<table>
<thead>
<tr>
<th>Development Financing</th>
<th>Government Schemes</th>
<th>Industry Partnerships &amp; CSR led Skilling</th>
<th>Sector Skill Councils Coordination</th>
</tr>
</thead>
<tbody>
<tr>
<td>International collaborations</td>
<td>Apprenticeship</td>
<td>Digital skilling &amp; Innovations (eSkill India.org)</td>
<td>Learning Standards &amp; Resources (Qualifications, Curricula)</td>
</tr>
<tr>
<td>Market Analytics</td>
<td>Knowledge and Advisory Services</td>
<td>Communications &amp; Outreach</td>
<td>Technology enablers (SMART, SIP)</td>
</tr>
</tbody>
</table>

**Monitoring, Quality Assurance, Capacity Building**
<table>
<thead>
<tr>
<th>Training Models &amp; Achievements</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fee Based Model</strong></td>
</tr>
<tr>
<td>Candidate/ industry willingness to pay (typically for aspirational/ high demand job roles)</td>
</tr>
<tr>
<td>NSDC as a catalyst</td>
</tr>
<tr>
<td>16.6 Mn</td>
</tr>
</tbody>
</table>

**Over 30 mn learners supported through NSDC skill ecosystem**

- Incubated **37** Sector Skill Councils
- Eco-system of **650+** training partners
- Presence in **620+** (86%) districts
- Committed **over $280+ mn** financing (Loans & Equity)

*Pradhan Mantri Kaushal Vikas Yojna*
Introduction to Skill Development
Priority Index
Overview of working age population in India

874.3 mn Working Age Population# (15-59 years)

Labour Force 56.9%

- Agr. 43.5%
- Serv. 31.9%
- Mfg 11.6%
- Non-mfg 13.1%##

Employed 94.8%

- Graduate & Above 12.9%
- Diploma/Certificate 1.7%
- 11th & 12th Std. 9.5%
- 10th Std. & below 52.9%
- Not Literate/... 23.0%
- 15-20 23.0%
- 21-30 66.3%
- 31-40 8.1%
- 41-50 19.8%
- 51-59 12.8%

Unemployed 5.2%

- 15-20 10.1%
- 21-30 32.9%
- 31-40 25.1%
- 41-50 19.8%
- 51-59 12.1%

Out of Labour Force* 27.8%

- 15-20 10.8%
- 21-30 0.6%
- 31-40 9.9%
- 41-50 51.7%
- 51-59 57.6%

Students 14.3%

- 15-20 8.6%
- 21-30 0.9%
- 31-40 32.5%
- 41-50 57.6%
- 51-59 44%

Retirees 1.0%

- 15-20 0.3%
- 21-30 0.2%
- 31-40 0.1%
- 41-50 0.1%
- 51-59 0.1%

*Defined as per Usual Principal Activity status under PLFS 2019-20 survey. Excludes persons – a) in the labour force (employed/unemployed), b) who reported their status as ‘attended educational institution’ (categorized as ‘Students’), and c) rentiers, pensioners, remittance recipients (categorized as ‘Retirees’)

## Note: Weights of PLFS 2019-20 were multiplied by 1.22 to get projected population for 2019.

### Non-manufacturing includes Construction, Mining & quarrying, Electricity, etc.
Need for SDPI

• Multiple drivers for skill development programs. Limited resources available.

• Government programs getting increasingly decentralised.

  Growing role of states in successive PMKVY programs. District level approach envisaged under PMKVY 3.0. Formation of District Skill Committees being supported under World Bank’s SANKALP project

• Rise in philanthropic funding for skill development.

  CSR funding has doubled from $1.3 bln to $2.8 bln (2015-20), of which share of Education & Skilling has risen from 31% to 40%.
SDPI Overview

Objective
To identify priority states, clusters and districts with respect to the need for skill development interventions. Enable more optimal allocation of resources for skill development.

Approach
- Based on four indices - (i) Population Index (ii) Industry Index (iii) Labour Supply Index (iv) School & Vocational Education Index.
- The four indices are aggregated using geometric mean, to calculate Overall Priority Index for a state/cluster.
- Each of the four indices is calculated using 2-3 sub-indicators which are scaled to a value of 0 to 100.
- All index calculations are at state and cluster levels. Clusters correspond to the 88 National Sample Survey (NSS) regions as defined by National Statistical Office, Ministry of Statistics and Program Implementation (MoSPI). Index can also be calculated at district level.

Data Sources
1. Periodic Labour Force Survey (PLFS) 2018-19, MoSPI, Government of India (GoI)
2. Reserve Bank of India data (2019-20 Q4) on Bank Credit of Scheduled Commercial Banks
3. State Gross Domestic Product (GDP) 2018-19 (at constant 2011 prices, updated on Feb 1st, 2021), MoSPI, GoI
4. Census 2011, Ministry of Home Affairs, GoI
5. CapEx Database (2017-19), Centre for Monitoring Indian Economy (CMIE)
6. Unified District Information System for Education (UDISE) 2018-19, Department of School Education & Literacy, Ministry of Education, GoI
8. NSDC data on Accredited Training Centres from the Skill India Portal (SIP) (May 2020)
Composition of SDPI

**State Priority Index**
(or Cluster Priority Index)

- Geometric Mean of the following 4 indices

**Population Index**
- No. of persons aged 21-30 years
- No. of migrant persons

**Industry Index**
- GDP at state-level
- Total value of investments

**Labour Supply Index**
- No. of unemployed persons
- No. of employed persons in lowest 10 percentile income slab
- No. of working age persons not in labour force

**School and Vocational Education Index**
- TVET institutes per 1,000 population aged 21-30 years
- Gap in Net Enrolment Ratio at higher secondary school level
- Industrial Training Institute (ITI) seat utilization (%)

Conversion of data to a scale of 0 - 100:

$$Sub - Index = \left( \frac{Value - Minimum}{Maximum - Minimum} \right) \times 100$$

Maximum and minimum values correspond to observed maximum and minimum values across states (or clusters)
SDPI – Results & Insights
Skill Development Priority Index

**State level**

<table>
<thead>
<tr>
<th>Top 5 States</th>
<th>Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uttar Pradesh</td>
<td>79.60</td>
</tr>
<tr>
<td>Maharashtra</td>
<td>67.13</td>
</tr>
<tr>
<td>West Bengal</td>
<td>46.60</td>
</tr>
<tr>
<td>Gujarat</td>
<td>44.55</td>
</tr>
<tr>
<td>Tamil Nadu</td>
<td>42.21</td>
</tr>
</tbody>
</table>

**Cluster level**

<table>
<thead>
<tr>
<th>Top 5 Clusters (NSS)</th>
<th>Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eastern - Uttar Pradesh</td>
<td>58.57</td>
</tr>
<tr>
<td>Coastal - Maharashtra</td>
<td>52.98</td>
</tr>
<tr>
<td>Coastal Northern - Tamil Nadu</td>
<td>46.23</td>
</tr>
<tr>
<td>Northern – Bihar</td>
<td>44.77</td>
</tr>
<tr>
<td>Inland North Western - Telangana</td>
<td>43.50</td>
</tr>
</tbody>
</table>
### Top 5 States

<table>
<thead>
<tr>
<th>State</th>
<th>Population Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uttar Pradesh</td>
<td>99.19</td>
</tr>
<tr>
<td>Maharashtra</td>
<td>78.53</td>
</tr>
<tr>
<td>West Bengal</td>
<td>54.86</td>
</tr>
<tr>
<td>Bihar</td>
<td>47.41</td>
</tr>
<tr>
<td>Tamil Nadu</td>
<td>42.38</td>
</tr>
</tbody>
</table>

### Cluster level

<table>
<thead>
<tr>
<th>Cluster Name</th>
<th>Population Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eastern – Uttar Pradesh</td>
<td>100.00</td>
</tr>
<tr>
<td>Northern – Bihar</td>
<td>80.18</td>
</tr>
<tr>
<td>Southern Upper Ganga Plains – U.P.</td>
<td>65.71</td>
</tr>
<tr>
<td>Inland Western – Maharashtra</td>
<td>58.60</td>
</tr>
<tr>
<td>Coastal – Maharashtra</td>
<td>56.55</td>
</tr>
</tbody>
</table>
Index Results (2/4)

### Industry Index

<table>
<thead>
<tr>
<th>Top 5 States</th>
<th>Industry Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maharashtra</td>
<td>100.00</td>
</tr>
<tr>
<td>Uttar Pradesh</td>
<td>55.69</td>
</tr>
<tr>
<td>Gujarat</td>
<td>52.97</td>
</tr>
<tr>
<td>Tamil Nadu</td>
<td>50.23</td>
</tr>
<tr>
<td>Andhra Pradesh</td>
<td>39.66</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Top 5 Clusters (NSS)</th>
<th>Industry Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delhi – NCT Of Delhi</td>
<td>91.99</td>
</tr>
<tr>
<td>Coastal – Maharashtra</td>
<td>87.92</td>
</tr>
<tr>
<td>Coastal Northern – Tamil Nadu</td>
<td>52.11</td>
</tr>
<tr>
<td>Inland North Western – Telangana</td>
<td>37.45</td>
</tr>
<tr>
<td>Inland Western – Maharashtra</td>
<td>31.63</td>
</tr>
</tbody>
</table>
## Labour Supply Index

### Top 5 States

<table>
<thead>
<tr>
<th>State</th>
<th>Labour Supply Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uttar Pradesh</td>
<td>98.95</td>
</tr>
<tr>
<td>West Bengal</td>
<td>56.78</td>
</tr>
<tr>
<td>Maharashtra</td>
<td>43.54</td>
</tr>
<tr>
<td>Tamil Nadu</td>
<td>40.00</td>
</tr>
<tr>
<td>Bihar</td>
<td>39.78</td>
</tr>
</tbody>
</table>

### Top 5 Clusters (NSS)

<table>
<thead>
<tr>
<th>Cluster</th>
<th>Labour Supply Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eastern – Uttar Pradesh</td>
<td>89.26</td>
</tr>
<tr>
<td>Northern – Bihar</td>
<td>55.92</td>
</tr>
<tr>
<td>Southern Upper Ganga Plains – U.P.</td>
<td>38.63</td>
</tr>
<tr>
<td>Northern Upper Ganga Plains – U.P.</td>
<td>30.64</td>
</tr>
<tr>
<td>Southern Plains – West Bengal</td>
<td>30.34</td>
</tr>
</tbody>
</table>

### State level

#### Uttar Pradesh

#### West Bengal

#### Maharashtra

#### Tamil Nadu

#### Bihar

### Cluster level

#### Eastern – Uttar Pradesh

#### Northern – Bihar

#### Southern Upper Ganga Plains – U.P.

#### Northern Upper Ganga Plains – U.P.

#### Southern Plains – West Bengal
Additional insights on Unemployed Segment

**Unemployed persons**

Top 3 States
1. Uttar Pradesh
2. Bihar
3. Maharashtra

**Unemployed graduates**

Top 3 States
1. Uttar Pradesh
2. Tamil Nadu
3. Rajasthan

* Includes those with graduate & higher degree

**Unemployed females**

Top 3 States
1. Kerala
2. Tamil Nadu
3. Maharashtra
## Top 5 States

<table>
<thead>
<tr>
<th>State</th>
<th>TVET Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bihar</td>
<td>87.52</td>
</tr>
<tr>
<td>Telangana</td>
<td>85.41</td>
</tr>
<tr>
<td>West Bengal</td>
<td>75.92</td>
</tr>
<tr>
<td>Andhra Pradesh</td>
<td>74.77</td>
</tr>
<tr>
<td>Gujarat</td>
<td>74.42</td>
</tr>
</tbody>
</table>

## Top 5 Clusters (NSS)

<table>
<thead>
<tr>
<th>Cluster Description</th>
<th>TVET Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northern – Bihar</td>
<td>93.08</td>
</tr>
<tr>
<td>Inland North Western – Telangana</td>
<td>89.27</td>
</tr>
<tr>
<td>Coastal Southern – Andhra Pradesh</td>
<td>88.90</td>
</tr>
<tr>
<td>Northern Upper Ganga Plains – U.P.</td>
<td>88.81</td>
</tr>
<tr>
<td>Central Plains – West Bengal</td>
<td>87.56</td>
</tr>
</tbody>
</table>
SDPI - Use and Way Forward
Use of SDPI indicators to allocate training targets under PMKVY 3.0

PMKVY 1.0 (2015-16) & PMKVY 2.0 (2016-20)
Targets allocated to TPs

PMKVY 3.0 (2020-21)
Targets distributed to District level & then allocated to TPs

Total targets at all-India level were disaggregated to state, cluster and district-level using select SDPI indicators.

Indicators Used

- **Population Index**
  - Youth Population (Persons aged 21-30 years)

- **Industry Index**
  - GDP for state
  - Investment for cluster

- **Labour Supply**
  - Unemployed persons
  - Persons not in Labour Force

**Top 5 States**

<table>
<thead>
<tr>
<th>State</th>
<th>Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>UTTAR PRADESH</td>
<td>23,925</td>
</tr>
<tr>
<td>MAHARASHTRA</td>
<td>15,754</td>
</tr>
<tr>
<td>BIHAR</td>
<td>13,310</td>
</tr>
<tr>
<td>TAMIL NADU</td>
<td>11,845</td>
</tr>
<tr>
<td>MADHYA PRADESH</td>
<td>11,608</td>
</tr>
</tbody>
</table>
Shift in training distribution

Numbers trained under PMKVY 2.0 (2016-20)

Top 5 states –
1. Uttar Pradesh (16%)
2. Madhya Pradesh (9%)
3. Rajasthan (8%)
4. Haryana (7%)
5. Bihar (6%)

Training targets allocated under PMKVY 3.0 (2021)*

Top 5 states –
1. Uttar Pradesh (12%)
2. Maharashtra (8%)
3. Bihar (7%)
4. Tamil Nadu (6%)
5. Madhya Pradesh (6%)

6. Rajasthan (5%)
7. West Bengal (5%)
8. Gujarat (5%)
9. Maharashtra (4%)
17. Gujarat (2%)

Underlined states are Top 5 in priority as per SDPI scores

*Scheme implementation in progress. Final trained figures may differ.
Sectoral focus can also be integrated

Higher score may be given to proposals for training in sectors/job roles having greater potential for employment in the district (Piloted in PMKVY 2.0, based on estimated labour demand using CMIE’s investment data and RBI’s credit data).

Total Investments (2014-17)

- Transport & Logistics
- Healthcare
- Retail Trade
Way Forward

• Scope for use of SDPI in future central and state **government programs** to guide resource allocation and identify focus regions for new initiatives.

• Can help inform allocation of **CSR / philanthropic funds** for skilling interventions in different regions

• **Modular index structure** enables use of select indices/ sub-indices **for targeted interventions** e.g.
  - Skilling for graduate unemployed youth
  - RPL / upskilling interventions targeted at migrant workers
  - Upskilling / reskilling of employed persons earning low levels of income/ facing job losses
  - Skilling priority from a gender lens
  - Sector-specific interventions (using priority index along with information on sectoral investments)

• Index will be **periodically revised** for data updates
Thank You

Detailed report accessible at -
https://skillsip.nsdcindia.org/knowledge-products/skill-development-priority-index

SDPI Dashboards accessible at -
https://public.tableau.com/app/profile/nsdc.india/viz/NSDCDashboardSkillDevelopmentPriorityIndex/Introduction

State & District Indicators Dashboard accessible at -
https://skillsip.nsdcindia.org/plfs-dashboard

Contact – SkillsIP@nsdcindia.org