Industry 4.0 for Inclusive Development
Comments on Issues paper

Fernando Santiago, UNIDO
CSTD 2021-2022 Inter-sessional Panel
Three core topics from the discussion and recommendations:

Importance of industrialization and industrial policy
- Foster economic diversification and manufacturing competency
- Facilitate an enabling digital infrastructure
- Develop National Strategies for Industry 4.0
- Foster multi-stakeholder collaboration to create Industry 4.0 ecosystem
- Build workforce skills for Industry 4.0
- Raise awareness of the private sector
- Foster innovation in Industry 4.0 technologies
- Build international partnerships
- Promote technological up-gradation in manufacturing

Invest in government capabilities
- Conduct foresight exercises
- Help design and implement national policies, strategies and programmes related to Industry 4.0
- Collect and share success stories
- Exchange of knowledge and experiences
- Promote infrastructure development
- Pilot programmes
- Scale-up capacity building activities
- Network
- Knowledge and technology transfer / Technological upgrading
- Create joint programmes
- Increase investment in STEM education
- Ethical frameworks and guidelines

Strengthen international collaboration:
The importance of Industrialization: the missing dimension of resilience

Estimated output loss by región, 2021

Source: UNIDO elaboration based on IMF World Economic Outlook (October 2019 and October 2021 editions).

Note: a. Excluding EU. b. Excluding LDCs and SIDS. c. Excluding SIDS. The figure shows simple averages. Projected output losses by 2021 is defined as the difference between the pre-pandemic projection of the level of GDP (October 2019) and the latest available projection (October 2021) and presented as a share of the pre-pandemic projection. Economy groups are based on Annex C of the full report.

DeIEs: developing and emerging industrial economies; EU: European Union, GDP = gross domestic product; IEs = industrialized economies, LDCs = least developed countries, SIDS = Small Island Developing States.

Digitalization: a key factor of resilience

Expected change in profits 2020 by level of digitalization across firms and regions

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Average change in yearly 2020 profits (percent)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Digitally advanced</td>
<td>-17</td>
<td>-28</td>
<td>-18</td>
<td>-24</td>
</tr>
<tr>
<td>Rest</td>
<td>-20</td>
<td>-15</td>
<td>-18</td>
<td>-29</td>
</tr>
</tbody>
</table>

Expected change in monthly sales relative to same month in 2020, by level of digitalization across firms and regions

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Av. change in monthly sales, compared to 2020 (percent)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Digitally advanced</td>
<td>-6</td>
<td>-20</td>
<td>-22</td>
<td>-32</td>
</tr>
<tr>
<td>Rest</td>
<td>-2</td>
<td>-14</td>
<td>-17</td>
<td></td>
</tr>
</tbody>
</table>

Source: UNIDO. 2021.
Investing in government capabilities

- Decide on roles and responsibilities:
  - Enabler (infrastructure, energy, financing...)
  - Consumer
  - Regulator
  - Information provider/awareness raiser
  - Facilitator/co-generator of innovation

- Different levels of government capabilities: what is needed?
  - Individual
  - Organizational
  - Systemic
A call to strengthen international collaboration

Common challenges, require agreed and coordinated solutions:

- Knowledge sharing
- Peer-learning
- Improving global coordination
- Enabling global institutional environment
Thank you