Singapore's 4.0 challenge

By Peter Drucker
23 September 2015

While Industry 4.0, also known as the Fourth Industrial Revolution, presents a great many challenges to traditional economies like the Netherlands and the USA, it poses a threat to the region's high-skill regions such as Singapore, for example, is facing a challenge precisely because of its post-industrialisation.

OECD and CSO report examines 433 occupations across 21 industries and notes that full-time workers (21 per cent) will probably lose their jobs if Singapore's competitors come to other ASEAN countries. Looking at the ASEAN+6 countries (Australia, Indonesia, Japan, Mexico, PRC and Thailand), Singapore had the highest proportion of people between high job displacement rates and an "exceptional" environment for innovation and digital transformation.

In absolute numbers, however, the number of workers expected to be displaced in Singapore (50,000) looks like figures for Indonesia (0.5 million) and Vietnam (7 million), respectively.

While the study claims that more jobs will be created because of the economic growth that comes with improved technology, it certainly also notes that the ASEAN workforce is ready to meet these new roles.

"Our analysis reveals that 4 per cent of the 6.5 million core sector work is at risk," the report states. "Full-time workers in the sector are most likely to lose their jobs to job displacement in 2013 and more than 60 per cent are at risk of being displaced in 2017. For the total workforce, 2 per cent of the 6.5 million core sector workers should be displaced by 2017, while 10 per cent of the 6.5 million core sector workers are at a risk of being displaced by 2017. For the total workforce, 2 per cent of the 6.5 million core sector workers should be displaced by 2017, while 10 per cent of the 6.5 million core sector workers are at a risk of being displaced by 2017.

OECD and CSO report believe that mitigating the negative impact of technological change will require massive policy changes within education systems, adding that there is no easy solution to this issue.

Because of the nature of the ASEAN+6 skills challenge, an integrated effort that all parties will need. This includes government support, businesses, educational institutions, technology providers, and worker groups which will work collectively to provide workers with the necessary tools and skills for the transition.

Job Displacement by 2028 (ASEAN-6)

<table>
<thead>
<tr>
<th>Country</th>
<th>2013 Job Displacement Rate</th>
<th>2028 Job Displacement Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thailand</td>
<td>29%</td>
<td>17%</td>
</tr>
<tr>
<td>Malaysia</td>
<td>47%</td>
<td>38%</td>
</tr>
<tr>
<td>Vietnam</td>
<td>73%</td>
<td>65%</td>
</tr>
<tr>
<td>Philippines</td>
<td>10%</td>
<td>9%</td>
</tr>
<tr>
<td>Indonesia</td>
<td>42%</td>
<td>33%</td>
</tr>
<tr>
<td>Singapore</td>
<td>10%</td>
<td>5%</td>
</tr>
</tbody>
</table>

Fastest growing jobs

Another survey found that the demand for jobs in technology that also require management and communication skills is growing in Singapore. LinkedIn analysed millions of unique, unsourced job titles based on common job titles and counted the number of job titles listed in the top 20 countries in 2013 and again in 2017.

Furthermore, the report, "the top emerging jobs in Singapore are data scientist, cyber security specialist, user experience designer, head of digital and senior specialist. Jobs in e-commerce and logistics are at a rate of 17 times, from 2013 to 2017, indicating the growing trend of digital and mobile. Other jobs include roles of 5.5 times, while jobs in user experience design grew by 6.5 times. Head of digital and senior specialist roles both grew by a rate of 10 times in the same period."

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[Image of job opportunities table]

The Singaporean government is also taking steps to build up total social intelligence (digital intelligence) through new initiatives with an aim to hire at least 12,000 industry professionals and young students.

One of the initiatives, dubbed AI for Everyone, is targeting at least 10,000 social scientists and community workers and introducing them to potential AI technologies. The programme, offered free to the public, would be partly supported by industry funders and government agencies. The platform will contain the latest information from industry and data generated from participants’ learning experiences to create a customized content package that will facilitate the overall learning experience.

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