
For Immediate Release

Singapore Faces Skills Challenges in ICT, Electronics & Engineering Manufacturing and Fintech: J.P. Morgan-SMU Study

The education system should place greater emphasis on curiosity, creativity, and adaptability to bridge the skills gaps as the country develops its innovation-driven economy.

November 1, 2016 – Despite Singapore’s low unemployment rate, skills challenges exist in a number of key growth industries as a result of the ongoing structural changes in the economy, the impact of disruptive technologies and the shortage of students enrolled in certain critical fields.

These are among the key findings from a year-long study conducted by the Singapore Management University (SMU) in partnership with global financial services firm J.P. Morgan, on the skills challenges faced by the economies of Singapore, Malaysia, Indonesia, the Philippines and Thailand.

According to the study, the industries in Singapore most in need of skilled workers include the information and communications technology (ICT) sector, which currently employs about 150,000 workers. The government projects that by 2017, the industry will require an additional 15,000 workers, particularly in the areas of cyber security, data analytics and development and network infrastructure – a number that could rise to 30,000 by 2020.

The electronics and electrical engineering manufacturing – the largest component of Singapore’s manufacturing base – also faces a skills gap, the study shows. A lack of necessary work experience and specialist skills, and the perceived uncompetitive pay are the main reasons why engineers are shunning the industry. The skills gap is set to widen as Singapore moves towards an innovation-driven economy, especially in newer engineering fields like robotics and digital manufacturing.

The rapid adoption of Fintech could render a number of jobs obsolete, but that also means more workers are needed in niche areas like IT development and programming, according to the study. The increased use of mobile banking and web-based wealth management service Robo-Advisers could also require talent possessing both technical and entrepreneurial skills.

“Clearly the ICT sector, which is a key driver of Singapore services sector, needs support in meeting relatively pressing skills gaps. At J.P. Morgan, we are supporting 14 workforce-readiness programs across the Asia Pacific region focused on this sector, including in Singapore,” said Edmund Lee, Senior Country Officer for Singapore at J.P. Morgan. “J.P. Morgan has a longstanding commitment to the communities where we live and work and we are constantly looking for ways to contribute towards a better-trained and better-skilled workforce in Singapore.”

The study attributes the skills gaps to the rapid changes in the country's key growth industries, which it states are partly encouraged by the frequent changes in the government's industrial policy. This has perpetuated the need for foreign workers to make up for the shortage of new skills that are in demand. Despite some tightening of the foreign workers policy in recent years, the total number of foreign workers continues to increase, and was comprised of 38 percent of the workforce by the end of 2015, according to government data.

Meanwhile, more mature PMETs (Professionals, Managers, Executives and Technicians) – who have not upgraded their skills with appropriate training – are finding themselves vulnerable to job displacement as Singapore focuses on innovation-driven industries for growth. In the latest labor market report, 71 percent of those retrenched in 2015 were PMETs of whom 65 percent were 40 years and above.

To mitigate the skills challenge, the study recommends focus on three areas in the coming years. First, the economy should reduce its heavy reliance on foreign workers, especially for low-skilled roles. Jobs should be redesigned to better harness technology and tap into the vast work experiences of mature PMETs, retirees and homemakers. This would increase productivity and help workers stay meaningfully employed beyond the official retirement age.

The study also urges the government to consider moderating the pace of change in targeting new sectors for growth. Industries should be given time to mature to gain scale and depth, and achieve international competitiveness. This would also allow time for skilled workers to keep up with changing demands.

Finally, given the dynamic nature of Singapore's economy, the emphasis on education and training should also include promoting soft skills and adaptability.

“With an educated and skilled workforce, Singapore needs to continuously innovate, make better use of technology to increase productivity and reduce reliance on low-skilled foreign workers. Its education system could also place greater emphasis on curiosity, creativity, adaptability and risk-taking, to encourage the right mindset for an innovation-driven economy,” said Arnoud De Meyer, President, SMU.

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