

## LCQ6: Support for nurturing of local technology talents

Following is a question by the Hon Charles Mok and a reply by the Secretary for Innovation and Technology, Mr Nicholas W Yang, in the Legislative Council today (December 12):

Question:

In the World Talent Report 2018 published by the International Institute for Management Development in Lausanne of Switzerland, Hong Kong's ranking has fallen from the 12th place of last year to the 18th of this year, and Singapore, which ranks the 13th, has replaced Hong Kong as becoming the highest ranking economy in Asia. There are comments that in order to enhance Hong Kong's international competitiveness and to ensure the diversification of its economy, the Government needs to strengthen its work in the areas of "talents investment and development", "appeal to and retention of talents" and "readiness for talents", step up its efforts to promote the upgrading and transformation of various industries through application of innovation and technology, and enhance the training of local technology talents. In this connection, will the Government inform this Council:

(1) whether it will formulate a comprehensive strategy for training of talents, and conduct studies on the impacts of artificial intelligence, including studying the impacts of the technological development in areas such as artificial intelligence, machine learning and robotics on various industries in the next decade, as well as draw up specific targets in respect of training of talents;

(2) whether it will provide tuition fee subsidies and other incentives (e.g. providing employers with a double tax deduction for training expenditure) to encourage local technology talents to enroll in local and overseas technology training courses and massive open online courses and obtain recognised professional qualifications; and

(3) whether it will analyse the competitive strengths and weaknesses of various major industries, as well as their needs for and challenges in undergoing upgrading and transformation; whether it will formulate corresponding support strategies to assist enterprises (especially small and medium enterprises) in increasing investment in the application of digital technologies for upgrading and transformation, and to assist practitioners in the industries in acquiring the required skills?

Reply:

President,

Having consulted relevant Government bureaux and departments, our reply

to the three parts of the question is as follows:

(1) With the wave of innovation and technology (I&T) sweeping through the world, robotics, artificial intelligence and machine learning etc. are undergoing rapid development and revolutionising the traditional business models. Automation is also expected to bring about certain degrees of transformation in industry structures and job requirements. To compete in such a rapidly evolving environment, the local labour force should continuously update and enhance their knowledge and skills through education, retraining and up-skilling, etc., in order to keep abreast of the latest technology development and enhance their digital literacy, such that they can work complementarily with technology and grasp the opportunities brought by technology development.

In recent years, various international institutions and enterprises have published research reports on the impact of artificial intelligence. A research report pointed out that more routine tasks, such as data processing and machinery operation, have a higher chance of being automated. On the contrary, less routine tasks, such as those involving communication, management, decision-making, planning and creation, have a lower chance of being automated. The Human Resources Planning Commission chaired by the Chief Secretary for Administration has initially examined and discussed the impact of automation on human resources and the labour market.

Government bureaux and departments will, through various measures, facilitate industries to capitalise the opportunities brought by technology development, as well as encourage and assist workers of different industries in receiving training and improving skills to embrace the challenges of automation.

(2) The Government has been nurturing local technology talent through different measures. The Innovation and Technology Bureau (ITB) has earlier briefed the University Grants Committee (UGC)-funded universities on the trends and development of manpower requirements in the I&T sector. In view of the demand of the industry, the UGC-funded universities have responded positively in their Planning Exercise Proposals for the 2019/20 to 2021/22 triennium by, inter alia, proposing more cross-disciplinary programmes, such as those relating to artificial intelligence and financial technology, with a view to providing industries with more technology talent.

In respect to self-financing post-secondary education, the Government launched the Study Subsidy Scheme for Designated Professions/Sectors (SSSDP) in the 2015/16 academic year on a pilot basis to subsidise about 1 000 students per cohort to pursue designated full-time locally-accredited self-financing undergraduate programmes in selected disciplines, with a view to nurturing talent for specific industries with keen manpower demand. The SSSDP has been regularised from the 2018/19 academic year and the number of subsidised self-financing undergraduate places has been increased to about 3 000 per cohort. Current students of the designated programmes may also receive the subsidy from that academic year. In the 2018/19 academic year, there are a total of 37 programmes offered under the SSSDP, including five

computer science programmes and four financial technology programmes which provide 306 and 265 subsidised first-year intake places respectively.

The Government has recently announced a series of enhancement measures of the Continuing Education Fund (CEF), including increasing the subsidy ceiling from \$10,000 to \$20,000 per person, re-activating closed CEF accounts to also benefit relevant holders and expanding the scope of CEF courses to all eligible courses (including technology courses) registered in the Qualifications Register. The related measures will be implemented from April 1, 2019.

On the other hand, the ITB launched the Reindustrialisation and Technology Training Programme in August this year to subsidise local companies on a 2:1 matching basis to train their staff in advanced technologies, especially those related to "Industry 4.0", thereby encouraging companies to arrange technology training for their staff. As at the end of last month, there have been 67 open courses registration under the scheme in just three months. The technology areas involved included "Industry 4.0"-related technologies, information technology, textiles and clothing, biomedicine and medical care, automotive technology and environmental protection etc. The scheme has approved 90 training grants applications, involving 148 trainees and a funding amount of around \$1.2 million.

(3) Government bureaux will actively review the competitive advantages and challenges of various industries under their policy purview, and take appropriate measures as necessary to assist enterprises in enhancing their competitiveness through upgrading and transformation. The ITB will provide assistance from the technological perspective, such as encouraging enterprises to conduct more R&D activities, subsidising companies in using technologies to upgrade and transform, etc.

In regard to the manufacturing industry, the Government actively promotes re-industrialisation to develop high-end manufacturing based on new technologies and smart production without occupying much land. The latest Policy Address proposed to create the \$2 billion Re-industrialisation Funding Scheme to subsidise manufacturers to set up smart production lines in Hong Kong; and allocate an additional \$2 billion to the Hong Kong Science and Technology Parks Corporation for building dedicated manufacturing facilities in Industrial Estates required by advanced manufacturing sector, thereby promoting re-industrialisation.

In addition, the ITB rolled out the \$500 million Technology Voucher Programme (TVP) in November 2016 to subsidise local small and medium enterprises in using technological services and solutions to improve productivity, upgrade and transform. We have relaxed the eligibility of TVP since February this year, including allowing applications from non-listed enterprises of all sizes, in order that more enterprises could benefit from the scheme. After implementation of the enhanced measures, the numbers of applications and approved projects have increased substantially. As at the end of last month, the scheme has approved 939 applications with a total funding amount of \$130 million.