



International  
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上智大学  
SOPHIA UNIVERSITY



厚生労働省  
Ministry of Health, Labour and Welfare

**Global research webinar**

# **Towards a brighter future of work in the digital economy**

Wednesday, 30 September 2020



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## I. Introduction

1. On 30 September 2020, the International Labour Organization (ILO) and Sophia University of Japan held a global research webinar entitled “Towards a brighter future of work in the digital economy”.
2. The webinar was held with a view to sharing the main findings of ground-breaking research conducted over two and a half years within the context of an ILO development cooperation project entitled “The Future of Work in Information and Communication Technology (ICT)”, which had been funded by the Government of Japan. Participants in the webinar discussed a number of relevant topics, including skills shortages, skills development strategies and the governance of the international labour migration of ICT specialists in Canada, China, Germany, India, Indonesia, Singapore and Thailand. Experts from those countries and from Japan also shared their views and experiences on those topics.
3. The webinar was attended by over 270 participants from all over the world and facilitated a lively exchange of views regarding the aforementioned topics. Those attending the webinar were able to share their views via the chat function and by responding to poll questions.
4. The webinar was supported by the Japanese Ministry of Health, Labour and Welfare, the Japan Business Federation, the Japanese Trade Union Confederation, the ILO Association of Japan, and Global Compact Network Japan.



## List of speakers

### Moderator

- Ms Nozipho Tshabalala, Conversation Strategist and Global Moderator

### Opening remarks

- Ms Alette van Leur, Director, Sectoral Policies Department, ILO
- Ms Chihoko Asada-Miyakawa, Regional Director for Asia and the Pacific, ILO
- Mr Yoshiaki Terumichi, President, Sophia University, Japan
- Mr Kazuhide Okuma, Parliamentary Vice-Minister of Health, Labour and Welfare, Japan

### Keynote speeches

- Ms Nicola Düll, Managing Partner, Economix Research & Consulting, Germany
- Mr Masaaki Iuchi, Senior Assistant Minister, Ministry of Health, Labour and Welfare, Japan

### Panel discussion 1

- Ms Alexandra Cutean, Senior Director, Research & Policy, Information and Communications Technology Council, Canada
- Mr Patrick Tay, Assistant Secretary-General, Singapore National Trades Union Congress
- Mr Toru Harukawa, Director, Policy Making Department, Federation of Information and Communication Technology Service Workers of Japan
- Mr Naotaka Saimei, Senior Director, Human Resources Development Division, Global Human Resources Management Unit, Fujitsu Limited, Japan

### Panel discussion 2

- Mr Partha Banerjee, Director, DEFT Advisory and Research Private Limited, India
- Mr Marian Dünkler, Placement Officer, *Zentrale Auslands- und Fachvermittlung (ZAV)* (International and Specialized Services), Federal Employment Agency, Germany
- Mr Maulahikmah Galinium, Dean, Faculty of Engineering and Information Technology, Swiss German University, Indonesia
- Ms Natalia Popova, Labour economist, Labour migration branch, ILO

### Closing remarks

- Mr Yoshiteru Uramoto, Professor, Sophia University, Japan
- Mr Shinichi Takasaki, Director, ILO Office for Japan
- Ms Maki Omori, President, ILO Association of Japan
- Mr Toshio Arima, Chairman of the Board, Global Compact Network Japan



## II. Opening remarks

5. **Ms van Leur** said that the ICT sector was the backbone of the global economy and was transforming jobs and societies. The coronavirus disease (COVID-19) pandemic and the move to remote working and distance learning had underscored the importance of ICT in the world of work and in education. Although digital technologies offered numerous opportunities in those areas, digital transformation could also give rise to significant challenges, including rising unemployment and inequality. Investing in ICT infrastructure and adopting an inclusive and human-centred approach to digital technology would be of utmost importance as stakeholders sought to build back better in a post-COVID 19 world. In that regard, the ILO had implemented “The Future of Work in ICT” project, with the support of the Japanese Ministry of Health, Labour and Welfare. That project had identified two sets of solutions to address shortages of highly skilled ICT workers and advance decent work in the digital economy, namely investing in education, training and lifelong learning for ICT workers, and better governance of international labour migration.
6. **Ms Asada-Miyakawa** emphasized the importance of the project entitled “The Future of Work in ICT”, the main findings of which were based on research interviews with governments, education and training institutions, and employers’ and workers’ organizations in each of the examined countries. The project had analysed current trends and challenges related to skills gaps, skills development and international labour migration both in countries in the Asia-Pacific region and globally. The solutions identified could facilitate efforts by countries to address those challenges while also supporting the work of the ILO. She also underscored how technology and investments in human resource development could help countries build back better in the aftermath of the COVID-19 pandemic.
7. **Mr Terumichi** said that the adoption of ICT was changing the way people worked and how they conducted many other activities in their daily lives. Despite the many benefits stemming from digitalization, it was important to remain vigilant to any potential negative repercussions of the digital economy. For example, the adoption of digital technologies could result in many workers losing their jobs, while digitalization could, potentially, exacerbate inequalities between “those with digital skills and those without”. Addressing the digital skills gaps was critical if countries were to achieve Sustainable Development Goal 8, on decent work and economic growth. He further stressed that universities must provide their students with the best possible education in ICT while also helping them find decent jobs.



8. **Mr Okuma** said that the repercussions of the COVID-19 pandemic had made clear that workers should not seek employment in economic sectors in which they were at high risk of being unemployed, but should instead seek employment in sectors in which they were in high demand, such as the ICT sector. The response to the pandemic in Japan had revealed numerous challenges related to digitalization, including a shortage of skilled ICT workers and the slow adoption of digital technologies by central and local authorities. The Japanese Government was planning to establish a digital agency to tackle those challenges and ensure that people in Japan enjoyed the full benefits of digitalization.

### III. Keynote speeches

#### A. Skills development and the international labour migration of ICT specialists

9. **Ms Düll** explained the main findings of “The Future of Work in ICT” project and underscored that the ICT sector had experienced tremendous growth in recent years, driven largely by the ICT services subsector. The ICT sector was an important contributor to the national economies of the countries examined and generated between 4.1 per cent of Gross Domestic Product (GDP) in Singapore and 7.9 per cent of GDP in India. Although demand for ICT workers was increasingly rapidly in all the countries examined, that demand had not been matched by an equivalent increase in the supply of ICT workers.
10. The educational attainment and wages of ICT specialists were, on average, higher than those of other workers. ICT occupations were male dominated, with the share of women working as ICT specialists being much lower than the average share of women in other occupations across the economy in most of the countries examined. The international labour migration of ICT specialists was increasing. There was a shortage of ICT specialists in many countries and notable gaps in specific ICT skills. It was, moreover, likely that labour shortages and skills gaps in the ICT sector would worsen in the future. The severity of labour shortages faced by companies depended on the types of skills needed, the level of educational attainment required, the pace of technological development and the size of companies, with small and medium-sized enterprises often finding it more difficult to recruit ICT specialists than larger firms.
11. In addition to shortages of specific technical skills, there was also a notable shortage of so-called “soft skills” in the ICT sector, including critical thinking, analytical thinking, creative thinking, the capacity to learn, flexibility, and communication and problem-solving



skills. Soft skills were needed by workers so that they could cope effectively with technological change and adjust to new working environments. There was increasing demand for ICT specialists across all sectors of the economy and more than half of all ICT specialists were now employed in non-ICT sectors. As a result, there was a growing need for interdisciplinary approaches in education and for educational courses that incorporated ICT concepts, such as courses in health technology and fintech. Lifelong learning would prove crucial in the years ahead to address emerging skills gaps.

12. On the basis of research conducted as part of “The Future of Work in ICT” project, 10 potential policy responses had been formulated to address skills shortages, promote continuous training and lifelong learning, increase the participation of women in ICT, better the governance of international labour migration, and strengthen social dialogue.

## **B. Shortages of IT specialists and human resources development measures in Japan**

13. **Mr Iuchi** said that, although the number of IT specialists had increased in recent years, there were still insufficient IT workers to meet the needs of the Japanese labour market. Shortages were likely to become increasingly severe, with a shortage of some 450,000 IT specialists expected by 2030. Shortages of IT workers were particularly challenging for smaller IT firms. IT specialists accounted for 2.1 per cent of the national workforce in Japan. Approximately 940,000 IT workers were employed by IT companies while some 290,000 IT specialists worked for non-IT companies. Measures were needed to foster the mobility of IT workers among IT and non-IT companies so that they found employment at the most appropriate firms.
14. The Ministry of Health, Labour and Welfare provided a range of ICT-related vocational training courses for job seekers and workers, from courses on basic digital skills to courses that taught workers’ highly-specialized ICT skills. Short-term training courses for workers were often funded by companies, but financial support was made available for small and medium-sized enterprises, which often faced particularly severe skills shortages and found it challenging to providing training opportunities for their employees. The Ministry also provided free vocational training courses for job seekers. In 2018, an expert-led study session was held to formulate a vision for vocational training that could prepare workers for the so-called Fourth Industrial Revolution. Participants in the study session discussed the types of ICT specialists that were most needed, and the subjects that needed to be covered in training courses. On the basis of the outcomes of the study session, a number of policies related to curriculum development were adopted, including policies to encourage



a transition from training based on the passive acquisition of knowledge to training based on problem-solving. Multidisciplinary training was also being encouraged to respond to emerging and complex skills needs. In 2020, a series of innovative vocational training courses were launched at 87 polytechnic centres throughout Japan.

15. The Ministry was promoting education and training to support lifelong learning. That was of particular importance in Japan, which had an ageing society in which many aged persons wished to continue working as long as possible. The Ministry had also formulated a series of ICT human resource development policies targeting mid-career and older workers. The Ministry developed policies on the basis of the national Human Resource Development Plan; the promotion of ICT was one of the core elements of the 11th Human Resource Development Plan, which was scheduled for implementation in 2021.

## IV. Panel Discussion 1: Investing in skills development in the ICT sector

16. The moderator, **Ms Tshabalala**, reiterated that many countries were facing a shortage of skilled ICT workers. The first panel discussion focused on the types and levels of skills required, and measures that could be adopted to address skills shortages. At the beginning of the discussion, audience members were asked to take part in a poll to share their views on skills that were being overlooked at the higher education level. Some fifty per cent of audience members believed that higher education institutions should make greater efforts to teach entrepreneurial skills while a quarter of the audience also felt that soft skills required more attention. Few audience members were of the view that greater attention should be given to teaching technical and interdisciplinary skills.

### A. Skills anticipation – the example of the Information and Communications Technology Council, Canada

17. **Ms Cutean** provided an overview of the activities conducted by the Information and Communications Technology Council, a Canadian digital think tank established in 1992 to investigate labour market and skill needs in the Canadian ICT sector. The Council published evidence-based research on the digital economy and, increasingly, was looking at how the ICT sector intersected with traditional economic sectors, including agriculture, natural resource management and healthcare. It also provided labour market intelligence, including information on in-demand jobs and skills, labour market forecasting and skills



mapping. The Council played a unique role in that it also offered capacity-building programmes designed on the basis of the research it conducted. Those included programmes to encourage young people, women and new job seekers to take up employment in the ICT sector.

18. She highlighted the Council's work in Calgary, where many workers, including highly skilled engineers, had been made redundant as a result of falling oil and gas prices. The Council believed that highly skilled displaced workers could find employment in the ICT sector and had therefore carried out a survey of in-demand jobs and skills in the city's ICT sector. The Council had also mapped the skills of displaced workers in order to deepen understanding of critical skills gaps. On the basis of its research, the Council had offered a series of focused training camps to help displaced workers find employment in the ICT sector.

## **B. Skills shortages in Singapore and the role of the Singapore National Trades Union Congress**

19. Mr Tay said that Singapore had adopted a nationwide approach to help strengthen partnerships among all stakeholders in the country's digital economy. The COVID-19 pandemic had given further impetus to efforts in that area by the Singaporean Government, which was now striving to ensure that Singaporeans make optimal use of digital technologies and successfully adjusted to the new normal.
20. His country had experienced an exponential growth in demand for ICT talent. As Singapore was an aging society, it was important to help mid-career and older workers find opportunities in the ICT sector. Gig workers also made up a visible proportion of workers in the country's digital economy, and Tech Talent Assembly, an organization for all ICT professionals in Singapore that was affiliated with the National Trades Union Congress, was now making a particular effort to provide assistance to gig workers.
21. The National Trades Union Congress had conducted a national survey to identify job opportunities and skills trends of relevance to ICT specialists. The top five occupations where demand for workers was expected to increase were: IT consultant, software development and IT operations or cloud engineer, data analyst, solution architect and cybersecurity engineer. On the other hand, demand for technical support and helpdesk personnel, traditional project managers without technical skills, hardware engineers, infrastructure engineers and digital marketers was expected to decrease.
22. Turning to the issue of skills trends, he underscored that both technical skills and adaptive



skills were increasingly in demand. The COVID-19 pandemic had helped raise awareness among companies, many of which were transforming and redesigning their functions, of the importance of adaptive skills. In closing, he underscored that ICT employers in Singapore were increasingly striving to recruit workers with relevant experience, including experience outside the ICT sector. That trend meant that job opportunities for mid-career and older workers, many of whom had extensive professional experience and expertise in other economic sectors, could become increasingly common in the country's evolving ICT sector.

### **C. Skills shortages in Japan and the role played by the Federation of Information and Communication Technology Service Workers of Japan**

23. **Mr Harukawa** said that Japan was expected to face a shortage of 430,000 ICT workers by 2025. This was known as the “Cliff of 2025”. Unless Japan successfully promoted digital transformation, it was likely to incur economic losses equivalent to some 12 trillion Japanese yen.
24. Factors impeding the country's digital transformation included the use of outdated “legacy systems” and the fact that, while significant investments continued to be made in existing ICT systems and infrastructure, few financial resources were being invested in the development and roll out of innovative technologies. As a result, ICT specialists in Japan were unable to acquire cutting edge skills. Another challenge impeding the country's digital transformation was the fact that many ICT specialists in Japan preferred to work for ICT companies, thereby restricting the transfer of critical technological expertise to non-ICT firms.
25. Providing an overview of the activities of the Federation, he stressed that the Federation did not directly provide skills training for ICT specialists, but supported efforts by affiliated trade unions to develop frameworks for ICT human resource development on the basis of labour-management consultations. In the light of the increasing importance of ICT workers across the economy, the Federation cooperated with other industrial unions with a view to sharing relevant ideas, best practices and policies.
26. There was fierce labour market competition for ICT specialists and the Federation was therefore encouraging Japanese companies to offer attractive working conditions to their ICT workers. To that end, the Federation facilitated labour-management consultations with a view to promoting work-style reforms, including those to promote diversity, facilitate



remote working, and reduce working hours and harassment. Long working hours in the ICT sector prevented ICT specialists from investing sufficient time in skills development. Furthermore ICT specialists often faced challenges related to subcontracting. The Federation therefore lobbied companies to adopt fair business practices. The Federation also communicated with non-unionized ICT workers through its website, and provided counselling services for non-unionized ICT workers, including freelancers, as part of its efforts to improve their working conditions.

#### **D. Digital transformation in a private company – the example of Fujitsu Limited**

27. **Mr Saimei** explained that, in order to promote digital transformation, Fujitsu Limited was working to ensure that all 130,000 Fujitsu employees worldwide received training in digital technologies by 2022. To that end, a digital college had been established within the company. To promote design thinking, a key requisite for digital transformation, a cultural transformation was also needed, including at the level of senior management. Fujitsu therefore planned to hold intensive training courses in that area for senior managers. Other employees would be invited to take part in those courses at a later stage.
28. Design thinking should also be included in job descriptions and used as an important criterion when evaluating staff for promotions. The application of design thinking was also crucial in work processes. Fujitsu therefore planned to create templates to encourage employees to use design thinking in the workplace.
29. Rapid digitalization had made it clear that Fujitsu should strive to transform all areas of its clients' businesses, rather than focusing primarily on their ICT departments. Sales personnel at Fujitsu needed to act as "business producers" who could transform the business models of their clients through the use of design thinking. Fujitsu was therefore providing training to reskill its sales teams so that they could successfully perform that new role.

#### **E. Q&A and discussion**

30. **Ms Tshabalala** reminded audience members that digitalization was making many workers redundant and that it was crucial to reintegrate those workers into the digital economy. **Mr Harukawa** underscored that the creation of digital platforms could help displaced workers find new job opportunities. Providing support to mid-career and older workers was also important in that regard. **Mr Tay** said that that Singapore had launched the Jobs Growth Incentive scheme and amended its employment legislation to promote employment among



mid-career and older workers, and he emphasized that digitalization offered many new job opportunities for workers. In that connection, **Mr Harukawa** said that digitalization had facilitated telework, which could help persons with disabilities access the labour market.

31. Questions from the audience led to a discussion on integrating women into the ICT sector. **Ms Cutean** highlighted the importance of raising awareness of non-conventional ICT careers. She observed that many more women could find employment in non-conventional ICT occupations, such as those related to visual effects, animation and game design. **Mr Saimei** added that it was crucial to highlight the work of female ICT specialists, who could serve as role models for women and girls considering careers in ICT.
32. During a discussion on skills gaps, **Mr Saimei** said that that joint research projects involving universities and companies could promote the circulation of knowledge and the development of skills needed by businesses. A member of the audience commented that a large proportion of highly-skilled ICT workers were recruited by large companies with the financial resources to offer them high salaries. That was a major challenge for start-ups, which were often unable to offer comparable salaries.

## V. Panel Discussion 2: Better governance of labour migration in the ICT sector

33. The moderator, **Ms Tshabalala**, explained that the second panel discussion would focus on the international migration of ICT specialists and the ways in which that phenomenon could help address skills shortages in the ICT sector. To start the discussion, audience members were invited to participate in a poll to share their views on the barriers impeding the migration of ICT specialists. Most of the audience felt that the local language in the destination country, visa regulations and employees' working and living environments were important factors to consider. Most participants in the poll did not think that salary levels had a significant impact on the migration of ICT specialists.

### A. Global migration trends and the concept of “brain circulation”

34. **Mr Banerjee** agreed with the majority of audience members that the languages of destination countries had an impact on international labour migration patterns. Indian ICT specialists mostly migrated to English speaking countries. The migration of ICT specialists was also shaped by the adoption of “global delivery models” which often required a geographic distribution of ICT teams. Another trend was that ICT specialists needed to



acquire innovative and in-demand skills.

35. The so-called “brain drain” and the concept of “brain circulation” were of particular importance for origin countries, including India. Many companies had established global in-house centres in India and there were now more than 1,500 such centres in the country. Global in-house centres could help offset the so-called “brain drain” as they tended to promote “brain circulation”. That was because global in-house centres provided opportunities for start-ups, increased the scope for skills transfer and fostered the establishment of knowledge networks.
36. Turning to the governance of the international migration of ICT specialists, he stressed that costs and benefits stemming from the migration of highly-skilled professionals were enjoyed and incurred by migrants, origin countries and destination countries. Unilateral immigration liberalization and bilateral cooperation in that area were likely to become increasingly common. To streamline and promote the migration of ICT professionals, action must be taken to strengthen institutional mechanisms in both origin and destination countries.
37. With regard to the demand and supply aspects of skills development, he said that more effective demand-driven systems were needed to facilitate skills forecasting and matching. Financial incentives could further improve those systems. Supply-led systems also required rethinking. Educational institutions needed to encourage students to acquire “hot” skills. The promotion of lifelong learning and the training of trainers were also important in efforts to strengthen supply-led systems.

## **B. Public employment services for ICT migrants – the example of Germany**

38. **Mr Dünkler** said that German companies sought to recruit experienced workers and that workers with more work experience had a higher chance of obtaining a job in Germany than less experienced workers in all economic sectors. According to German residency law, ICT specialists who were not from a European Union country did not need to hold a recognized degree but needed to meet certain requirements regarding their years of experience and salaries to be eligible to work in Germany. Knowledge of the local language was not needed to perform most ICT jobs. It was, however, an asset that could help workers in their day-to-day lives and also increased workers’ chances of finding employment.
39. *Zentrale Auslands- und Fachvermittlung (ZAV)* (International and Specialized Services), which was part of the Federal Employment Agency, provided guidance and placement



services to overseas applicants seeking employment in Germany, applicants in Germany on job seeker visas and German employers wishing to hire skilled workers from abroad. Within the context of the “Your first EURES job” programme, ZAV also provided financial support to help immigrants to Germany improve their local language skills. Only citizens of European Union countries were eligible to take part in that programme, however. Financial support was also made available to companies wishing to provide language training for their non-German employees.

40. One challenge that ZAV faced was matching the skills of foreign workers with the needs of companies. Skills gaps and mismatches were often due to differences between the education system of the origin country and the education system in Germany. Another challenge was the time it took to process visa applications. Indeed, inflexible bureaucratic procedures within the public sector meant it often took considerable time to process a work visa and, in some cases, applicants had to wait for a year or more to receive an appointment at the German embassy in their countries.

### **C. Recognition of foreign qualifications – initiatives by the Swiss-German University, Indonesia**

41. **Mr Galinium** provided examples of how the Swiss-German University was seeking to address the issue of qualification recognition. The University had established double degree and internship programmes with partner universities in Germany and Switzerland to facilitate the recognition of students’ skills in foreign labour markets. It was also possible for students to work on their theses with partner companies and universities abroad. The University had established partnerships with more than 15 partner universities overseas and was keen to foster knowledge sharing among all relevant stakeholders.
42. Elaborating further on the University’s internship programmes in Germany and Switzerland, he said that students were offered counselling services and received information about their internship programme before starting their internships. As local language skills were important for working and living abroad, cultural and language courses were integrated into the curriculum. The University also provided assistance with all administrative procedures, including with the submission of applications for visas and health insurance. The University had drawn up a list of approved companies to which students could apply for internships. Requirements for participating in the internship programme included passing exams in core subjects, good German language skills and passing an interview with a Swiss-German University panel that was conducted in German. He emphasized that adequate technical skills and knowledge of the local language were



critical for a successful internship.

#### **D. Barriers impeding, and opportunities stemming from, international labour migration**

43. **Ms Popova** said that migration was affected by both economic and non-economic factors. Economic factors included wage differentials, opportunities for career development, the possibility of acquiring new skills, opportunities to work in well-established companies, an enabling environment for entrepreneurs and access to venture capital. Non-economic factors were equally important. Those included the overall quality of life, access to healthcare and education, and cultural proximities. Challenges to international labour migration included the time required to apply for visas and the cost and complexity of visa regulations, the existence or otherwise of formal qualification recognition mechanisms, and national regulations regarding specific occupations. Relevant language skills could be beneficial and weak language skills were sometimes a barrier to employment.
44. Outlining how relevant stakeholders could facilitate migration, she said the governments of both origin and destination countries should take steps to ensure coherence among their labour migration, employment and education and training policies. One way to improve labour migration governance was to conclude labour migration agreements that provided strong protections for migrant workers and facilitated skills recognition, skills matching and training. Efforts should also be made to foster cooperation with diaspora communities to address concerns regarding the so-called “brain drain”. Cooperation with diaspora communities facilitated the movement of human capital and financial resources and benefitted both origin and destination countries.
45. Workers’ and employers’ organizations also played an important role in providing information to education and training institutions regarding skills needs and gaps. It was important to strengthen social dialogue to promote decent work in the ICT sector. Education and training institutions had a crucial role to play in aligning national qualifications in the ICT sector with global job market needs. Those institutions should endeavour to strengthen international cooperation so as to promote student mobility further. It was also important to encourage employment exchanges for teaching professionals, and the sharing of research and knowledge among educational institutions. Diaspora communities could play a key role in facilitating exchanges and knowledge sharing.
46. The ILO had also played a vital role in labour migration governance, particularly through its formulation of the International Labour Standards. In addition, the ILO had developed



tools and guidelines on fair recruitment practices, policy coherence, labour migration agreements and skills forecasting.

## E. Q&A and discussion

47. In the poll conducted at the start of Panel Discussion 2, audience members had indicated that migrants' knowledge of the destination country local languages was a major determinant in international labour migration. **Mr Galinium** reiterated that local language courses were included in the curriculum of the Swiss German University to facilitate the integration of students in the overseas partner universities. **Mr Dünkler** said that a willingness to learn the local language and adapt to the culture of the destination country was part of a successful mindset and key to establishing a career overseas.
48. One of the audience members asked whether ICT specialists could work for companies located in another country via remote work rather than by migrating to that country. **Mr Banerjee** responded that although that was possible, it was still difficult for individual gig workers to do so. He stressed that a sound institutional structure was needed to promote gig work. **Ms Popova** said that she had noted with considerable interest that the governments of migrants' countries of origin were now providing incentives and opportunities for migrant workers in the ICT sector to facilitate "brain circulation".
49. The moderator, **Ms Tshabalala**, concluded the panel discussion by emphasizing that, although international relations were becoming increasingly nationalistic, the adoption of nationalistic policies that impeded international labour migration should be resisted. **Mr Banerjee** also pointed out that, at a time when many countries were adopting protectionist policies, bilateral migration agreements that covered working conditions and visa regulations were critically important.

## VI. Closing remarks

50. **Mr Uramoto** noted that migration was one of the most practical solutions to the challenges posed by a shortage of ICT specialists. International competition for ICT specialists was fierce. Developed countries had several advantages in that regard, as they were attractive destinations and had well established migration frameworks. Developing countries risked being left behind, which could result in wider income inequality. The webinar had highlighted the importance of developing a fair and equitable basis for the migration of ICT specialists and the role that multilateral organizations could play in that regard.



51. **Mr Takasaki** said that digitalization could lead to automation and major labour market displacements. Concerns regarding the negative impact of digitalization had sparked discussions about a basic universal income. ICT workers were of vital importance in digital transition and persistent shortages of ICT specialists could have very negative repercussions. It was important to ensure that students were equipped with the most up-to-date skills. Employing foreign ICT specialists could also be helpful. He hoped that the webinar had encouraged all stakeholders to take action to address skills shortages.
52. **Ms Omori** stressed that shortages of ICT specialists had important implications for women. The participation of women in the labour market often remained limited if there were sufficient numbers of suitably-qualified men to fill existing job vacancies. Past trends had shown that demand for female workers tended to increase only when there were insufficient numbers of men to meet labour market demand. Although the ICT sector was still characterized by significant gender gaps, she hoped that the webinar would help stakeholders find solutions to address that challenge. She further hoped that the webinar would help promote decent work in the digital economy.
53. **Mr Arima** said that digitalization could help improve lives. He noted, however, that digitalization itself was sometimes regarded as an end in itself rather than the means through which development objectives could be achieved. For example, the establishment of digital remote working systems was, by itself, not enough. Instead, robust oversight, investment in human resource development and effective social dialogue were all needed if those systems were to have a successful impact. In closing, he reaffirmed the importance of so-called “soft skills” in the digital economy.