

OECD Observer Roundtable on local firms and automation

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OECD Observer Roundtable on local firms and automation 1 | A worker in a state-of-the art factory, in Slany, Czech Republic, March 2018.

Roughly 14% of jobs in OECD countries are highly automatable, while another 32% will be transformed by automation. By 2019, it is estimated that 1.4 million new industrial robots will be installed in factories around the world. How can local firms and their workers adapt to this? How can policy help? As policymakers and experts gather to discuss such issues at the 14th OECD Forum for Local Development Practitioners, Entrepreneurs, and Social Innovators in Porto, Portugal 18-19 September, we ask our panel:

How have local firms and their workers been adapting to automation? How can policy help?

Left behind or leapfrogging ahead?

OECD Observer Roundtable on local firms and automation 2 (Kamal-Chaoui)



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Lamia Kamal-Chaoui, Director, Centre for Entrepreneurship, SMEs, Regions and Cities

Many people are worried about their job security today and their job prospects for tomorrow. Some live in places that have experienced long-term decline, and they are looking for answers. Often they think the culprit is globalisation. We have seen this view play out at the ballot box. However, many of the changes people are experiencing are really about technology. It has considerably altered the nature of some jobs and made others entirely obsolete. Such processes have been taking place for decades, even centuries.

Technological innovations such as automation and digitalisation generate new jobs and can contribute to better living standards. But will this new future of work bridge or increase divides among people? Which workers will be replaced by robots and artificial intelligence? How can we adapt to and take advantage of technological change in such a way as to take on quality jobs? And how will these changes play out in different places? The political challenge today is to narrow the gap between those being left behind and those leapfrogging ahead. And there's a geographical dimension to that disparity too: many leapfroggers tend to live in urban centres.

A new OECD report *Job Creation and Local Development 2018: Preparing the Future of Work* shows that automation will have an uneven impact across regions. The share of jobs at high risk surpasses 30% in some OECD regions such as West Slovakia and East Slovenia but is only around 4-5% in other regions, such as around Oslo in Norway and Helsinki in Finland. Wide regional differences can also exist within countries. While the gap between the most and least at-risk region in Canada is just one percentage point, it reaches 12 percentage points in Spain (chart).

The good news is that over the last five years, more than 60% of OECD regions have increased employment by adding more jobs at lower risk of automation than losing jobs because of automation. However, several regions, from the state of Tennessee in the US to Andalusia in Spain and Brittany in France, rely on jobs that are likely to be automated in the medium term. They will have a harder time managing the transition.

How should policy respond?

Regional differences in the impact of automation call for a place-specific approach to policy. Skills training, for example, benefits from this approach. There are many examples of successful local partnerships between training institutions and employers that have produced apprenticeship programmes and

better designed curricula. These not only properly prepare future workers, but also identify new skills that workers need to develop now.

Upgrading the performance of small and medium-sized companies, which account for about 70% of total employment, is another critical step. Automation and digitalisation can definitely create opportunities for smaller firms but they need to have the right skills, organisational practices and innovations to take full advantage of them. Our public policies can help.

OECD work has shown that innovative solutions from social entrepreneurs can help people in the labour market who are vulnerable to the disruption digitalisation and automation bring. For example, Simplon.co in France is a network of learning centres that has been offering free coding classes to the unemployed since 2013. Today, it is in 40 cities in France and around the world. But not all social entrepreneurs have been as successful as Simplon.co in scaling up. To do so, social entrepreneurs need clear and tailored legal frameworks and access to finance.

To face the challenges of automation head on, we need to “go local”. The OECD’s Centre for Entrepreneurship, SMEs, Regions and Cities can help national and local governments take action so that all communities, no matter where they are, can prosper in the new world of work.

From September 18-19, the OECD’s Forum for Local Development Practitioners, Entrepreneurs, and Social Innovators will bring together over 300 participants from the local, national and international level to discuss how automation and other megatrends are impacting jobs, workplaces, and local economic development opportunities. See more at <http://www.oecd.org/leed-forum/>

Reference

OECD (2018), Job Creation and Local Economic Development 2018, OECD Publishing, Paris, <https://doi.org/10.1787/9789264305342-en>

Governments are key enablers of an equitable digital transition

OECD Observer Roundtable on local firms and automation 3 (da Silva)



José António Vieira da Silva, Minister of Labour, Solidarity and Social Security, Portugal

José António Vieira da Silva, Minister of Labour, Solidarity and Social Security, Portugal

Interestingly, when it comes to disruptive transformations like automation, digitalisation and artificial intelligence, countries like Portugal, which have prioritised investment in education, skills, the development of digital infrastructures, and university-business interfaces for knowledge transfer and the like, are catching the wave of these new trends and reaping the benefits.

Even so, much more needs to be done to adapt policies to the needs of knowledge-based and technology-based societies.

Governments have an important role to play and a unique ability to mobilise multiple stakeholders—by connecting them and helping to match the needs and interests of workers, large and small businesses, as well as other relevant actors and institutions. Local actors also gain in engaging with the policy process since they are a valuable source of knowledge and expertise, and can help to anticipate future challenges that can be addressed in a more timely and effective manner.

Building on social dialogue, governments therefore have an important role as both facilitators and enhancers of change, by prioritising investments in education and lifelong learning, while modernising and adapting education and training programmes to current and emerging needs. Creating flexible pathways for reskilling and upskilling throughout people’s lives is particularly important.

Governments also have key roles as regulators. These changes require us to look closely at our national legal frameworks: do they address the new realities that are emerging? What changes are needed? Is better enforcement of existing laws required? The costs of inertia in this field may include increasing inequalities and gaps in social protection, unfair competition, privacy issues relating to data protection, unaddressed health and safety risks and new forms of social exclusion.

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Turin: A city laboratory for innovation

OECD Observer Roundtable on local firms and automation 4 (Pisano)



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Paola Pisano, Deputy Mayor for Innovation, Smart City, Demographic and Statistical Services and Information Systems, City of Torino, Italy

Paola Pisano, Deputy Mayor for Innovation, Smart City, Demographic and Statistical Services and Information Systems, City of Torino, Italy

The advent of automation will inevitably lead to a radical change in cities and society. We must develop a new model and organisation for work, and public administrations must take into account the social impact of automation.

The City of Torino is particularly focused on autonomous cars and artificial intelligence. This has translated into the development of new skills in our region, new job opportunities and new inclusive services for children, people with disabilities, and the elderly.

Our goal? A shared public mobility that will eventually supplant privately owned cars.

And with it, zero congestion, zero crashes and zero pollution.

We are in a crucial moment in history: administrations that do not understand innovation will be held responsible for any technological gap.

We have to work with citizens to prepare them for these new technologies and improve their expertise. In the future, this may need to start in schools as the workplace will continually require new skills, new innovative platforms and new technologies.

This innovation project is part of the Torino City Lab: Turin aims to be an open-air laboratory where experiments in every area of the city with products and services based on new, unprecedented technologies will improve our lives.

The basic idea is simple: innovative products and services prove their value when used in a real environment. New products and services not only attract funding, create jobs, and develop skills, but improve our cities and consequently our lives.

Will cutting-edge innovation in cities help relaunch the economy and inclusiveness? We believe so, but only if both technology and social impact are the distinctive features of every tested innovation.

Visit www.comune.torino.it

Our responsibility is to make the future inclusive and sustainable

OECD Observer Roundtable on local firms and automation 5 (Hazard)



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Nicolas Hazard, Founder and President, INCO

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Will all workers be displaced by machines? As history has shown, when jobs are destroyed, many others are created. The future lies in a closer collaboration between humans and machines.

Agriculture, for instance, is a sector in which automation and other forms of technology have brought considerable advances. But much farming still requires back-breaking work to prepare soil, pull weeds, harvest crops and transport heavy loads.

To help fruit and vegetable farmers, a local French firm, Toutiterre, invented the Toutilo. It is a robot or, better yet, a “cobot”, for collaboration between robots and humans. It combines farm work, task automation and robotics into one technology, making the process faster, safer and more efficient. It shows how robots can supplement, not supplant, humans.

Toutiterre is not the only company seeking to supplement human workers with automation. OECD estimates show that while 14% of jobs overall are at high risk of automation, around a third of jobs today will significantly change, with between 50% to 70% of tasks becoming automated.*

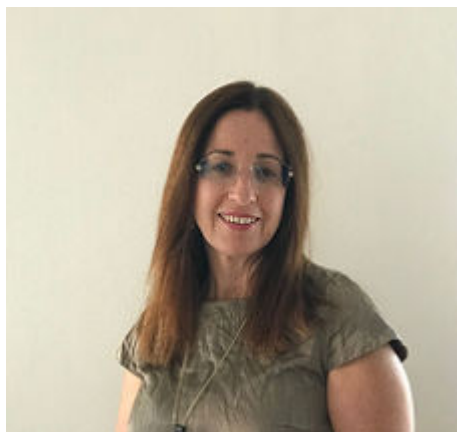
How do we prepare for this? Many people will need new skills and this kind of training should begin early, in schools. Our education, training programmes and public policies must adapt to the new realities of automation. In the workplace, employees will need to beef up their training as many of the skills of workers today will become obsolete tomorrow. Companies will need to function as academies, teaching their employees how to work hand-in-hand with algorithms, artificial intelligence and robotics. Public authorities such as metropolises, regions, states, and national and international institutions; economic stakeholders like firms and entrepreneurs; and civil society must encourage this dynamic in order to create a new economic paradigm that is inclusive and sustainable.

*OECD (2018) Future of Work: Putting Faces to the Jobs at Risk of Automation, Policy Brief March

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Preparing the SME workforce for the fourth industrial revolution

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Iris Arbel, Innovation Management Expert, Innovation Consultant for SMEs and Lecturer, Technion and Bar-Ilan universities, Israel

The globalisation of the world's economy, jointly with the digitalisation and automation of traditional production, has become both an opportunity and a challenge for smaller companies and nations—a particularly “human” challenge.

Employees in small and medium-sized enterprises (SMEs) must learn to operate in an innovative digital environment that is increasingly dependent on automation. The very ability of these smaller firms to maintain a competitive advantage requires understanding this change in the rules of the game and adapting skills accordingly, many of which stem from computer science and require training.

For small countries like Israel, national regulation must continue to support the transition from traditional skills to more advanced, technology-based skills. They can accomplish that task by adopting and integrating five complementary strategic directions: first, establishing infrastructures and providing knowledge through consultations and training; second, assisting and supporting factories (“smart money”); third, supporting and funding the assimilation of technologies; fourth, developing skilled human capital such as converting the army’s technological units to the labour force; and finally, restoring the image of Israel’s productive industries as a growth engine, which will help SMEs break into new markets. An example of the latter is expanding exports through online trade.

As a start-up nation, Israel enjoys a high rate of entrepreneurship with 10.7% of the working-age population involved in relatively new businesses and 7.4% of the population in long-term entrepreneurial business ventures. To keep SMEs globally competitive, it is particularly important to find and integrate a skilled and professional labour force with the required technological knowledge as well as providing employees with on-the-job training.

SMEs can successfully carry through a fourth industrial revolution. To achieve that goal the government should provide the platform, the knowledge and the budget while companies develop appropriate procedures and management tools to adapt to the national programme.

Visit www.technion.ac.il and www1.biu.ac.il

Towards local job creation in an automated world

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Sally Sinclair, CEO, National Employment Services Association (NESAS), Australia

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The three industrial revolutions that have so far shaped the world of work by introducing the steam engine, mass production and electronics each resulted in an average 9-10% increase in the labour demand for new jobs. It is likely that the current digital revolution, also called Industry 4.0, will not just automate jobs, but create new ones. In Australia, 1 in 5 employers responding to digitisation expect to grow their staff within the next two years and more than half plan to retain their staffing levels. Recent global perspectives are also starting to paint a less gloomy picture than that of “robots taking over everyone’s work”. According to McKinsey, about half of paid activities worldwide can be automated but these only form part of the job market; just 5% of professions can be fully digitalised. Work will change, not disappear.

However, this change requires immediate action to adjust the skills of workers, especially for small and medium-sized enterprises (SMEs). Three points seem particularly relevant in the context of local businesses and their staff.

First, policy can help frame and implement job retraining, and enable individuals to learn marketable new skills, not just the straightforward digital ones. Those that will be increasingly needed in an automated world are problem-solving, empathy and navigation.

Second, policy can provide locally tailored responses and transition support for people whose skills have been displaced and devaluated by automation.

Entrepreneurial endeavours, no matter how small or remote, should be encouraged and showcased.

Finally, the digital and global world of work requires mobile and digital mind-sets in smaller municipalities to be the same as those in cities. Policy should improve business and labour market dynamism in order to help people manage transitions between jobs and gigs more fluidly and with adequate social security. Skills education should be better and more quickly matched with real needs.

Targeted skills' training, support of the most vulnerable, and flexible labour markets can form a stable bridge to the next generation of work.

Visit the NESAs website at <https://nesa.com.au>

Rethinking citizen-centred policy design and delivery

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Sunil Johal, Policy Director, Mowat Centre, University of Toronto

Individuals, governments and business alike have a role to play in ensuring successful transitions through skills training. “Badging”, or focused skills upgrading, like learning how to install doors instead of a full apprenticeship, or an online coding tutorial, is one way to bridge workers into new opportunities. Government investments in infrastructure can be leveraged to boost skills training and development opportunities for local communities through the deployment of benefit agreements, the L.A. Live! neighbourhood revitalisation and Vancouver’s 2010 Olympic Village being good examples of this. Partnerships between government and business that include incentives or subsidies to ensure workers are getting appropriate skills training are worth exploring, as are initiatives to smooth out layoffs in sectors affected by automation, such as reduced hours or work-sharing agreements.

Policymakers also need to assess the adequacy of the social supports they provide for workers in a world where wages are stagnating, the nature of work for many is becoming more precarious and income inequality persists. Enhanced support for workers and families facing more temporary spells of unemployment, whether

affordable housing supports, mental health services or better access to childcare, would help.

Most importantly, policymakers need to assess the effectiveness of various active labour market policies and other policy interventions with more rigour. In a world of constrained resources, better data about which programmes are working well will become more important. The very nature of how we design and deliver policies and programmes needs a re-think for the age of automation. Services will be increasingly citizen-centred. Data will better target outcomes-based approaches to funding. We can't predict which sectors will be affected by disruptive technologies or when, but we can design approaches that will be nimble, effective and durable for any future we face.

The Mowat Centre is an independent public policy think tank at the University of Toronto.

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