Technological innovations such as automation and digitalisation drive productivity growth, increase revenues, generate new jobs and thus 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 workers adapt and take advantage of technology? And, how will these changes occur in different places?

This report shows that geography matters for the future of work. The risk of job automation is higher in some areas than others. Non-standard employment arrangements, facilitated by technology, also show striking differences within countries and they influence opportunities for access to quality employment. National policies aligned with actions by regional and local governments can help promote productivity-enhancing automation and digitalisation that does not come at the cost of less inclusion.

The impact of automation on jobs will be uneven across OECD regions and local communities

The geographic distribution of occupations at high risk of automation varies over ninefold across regions in 21 OECD countries. While there are notable shares of jobs at some risk of automation in all regions, the share of jobs at high risk reaches nearly 40% in some regions (for example, West Slovakia) but can be as low as around 4% in others (region around Oslo). Within countries, the share of jobs at high risk of automation varies. Between the best and worst performing regions in Canada, that share differs by just 1 percentage point, but it reaches 12 percentage points in Spain.

The good news is that since 2011, most regions (60%) have been able to create more jobs at lower risk of automation than those jobs lost in high automation risk sectors. Regions with a lower share of jobs at risk of automation are those that have highly educated workers, a strong tradable services sector and are highly urbanised. Regions that already have low productivity growth and high unemployment are more likely to be further affected by automation in the future, thus exacerbating their underperformance traps. Policy makers are therefore faced with difficult trade-offs between the need to foster automation to increase productivity and the need to manage short or medium-term employment losses from automation.

The uneven impact of automation across regions can potentially widen inequalities in employment conditions across places. To address this divide, policy should consider both worker skills and firm upgrading. Training and reskilling programmes can target people in jobs at high risk of automation, such as food preparation assistants or truck drivers, among others. Engaging employers in skills development is important in identifying the set of skills required for the local labour market. Policies that facilitate the transition to new economic activities with higher value added, particularly in regions relying on high automation risk sectors, are also essential. Creating a business environment conducive to investment in sustainable production processes supports these transitions.

Non-standard work is also rising unevenly and precariously

Technological changes in the nature of work may also be contributing to the increases in temporary and part-time work in most OECD countries. Again, policies need to consider the within-country differences.
For instance, in Greece the share of non-standard jobs grew by 7% in one region but declined by 11% in another from 2010-16.

Temporary work is more frequent among female, young, or low-educated workers, but the characteristics of the local economy are also determinant. For low-skilled workers, the likelihood of being employed with a temporary contract is higher in rural areas than in cities. Regions with a smaller tradable sector tend to employ more workers in temporary contracts. In other words, regions that are already worse off economically tend to see a larger share of jobs in non-standard forms.

While overall the proportion of workers who are self-employed has remained stable in recent years, the share of self-employed workers without employees continues to grow. One contributing factor is the increase in part-time self-employment—which occurred in 25 out of 31 OECD countries during the last decade. The regional differences in the share of jobs in self-employment can vary by 10 percentage points or more in several countries. The digitalisation of the economy, notably its “gig” features, has played a role here. It has contributed to precarious forms of self-employment, with less or no social security coverage. Policies combatting the negative implications of precarious self-employment as well those that improve the business environment locally are important.

Yet productivity and inclusiveness can go hand-in-hand

While technology tends to increase labour productivity for many jobs, some groups may find themselves increasingly excluded from the labour market or stuck in unemployment, low-wage jobs or non-standard work. Policies to integrate disadvantaged groups – such as the long-term unemployed, people with disabilities, and migrants – will be critical for social cohesion and to address inequalities.

Among OECD regions, higher levels of productivity and higher rates of inclusion actually tend to go hand in hand. However, within the same country and for the same level of productivity, some regions appear to be more inclusive than others.

Around 30% of the OECD population is living in regions that have successfully improved both productivity and inclusion (defined as the labour force participation rate) since 2006. But around half of OECD residents are in regions where productivity growth was accompanied by less inclusion. European cities have overall been more effective than cities in the Americas in increasing both productivity and inclusion. Considering a wider range of employment, skill and income variables for a composite indicator of inclusion, similar regional trends are found.

Many areas of policy contribute to both productivity and inclusion, from labour to innovation to transport policy. The evidence reinforces the importance of locally tailored responses across policy areas. This report highlights that labour market inclusion of vulnerable communities and disadvantaged groups can be strengthened by providing pre-employment skills and training, involving the target group in programme design and delivery, and embedding these efforts in community-led development. An example of policy efforts for Indigenous communities is examined.

The social economy can be a complementary pillar to these policies, because it frequently targets the employment of disadvantaged individuals. Supporting social enterprises through better framework regulations, access to mainstream financing (including guarantees), and tailored business support are some of the ways to boost the social economy. Social economy organisations further benefit from public sector support through public procurement, employment subsidies and longer-term funding cycles.