



International
Labour
Organization



► Global Employment Trends for Youth 2020

Technology and the future of jobs

EXECUTIVE SUMMARY



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The continuing decline in young people's engagement in the labour market reflects not only the increasing enrolment in education but also the persistence of the youth NEET challenge, especially among young women

The labour force participation rate of young people (aged 15–24) has continued to decline. Between 1999 and 2019, despite the global youth population increasing from 1 billion to 1.3 billion, the total number of young people engaged in the labour force (those who are either employed or unemployed) decreased from 568 million to 497 million. While this trend reflects growing enrolment in secondary and tertiary education, resulting in a better-skilled workforce in many countries, it also highlights the substantial numbers of young people who are not in employment, education or training (NEET), a large majority of whom are young women.

Although the global youth unemployment rate is 13.6 per cent, there is considerable regional variation, from under 9 per cent in Northern America and sub-Saharan Africa to 30 per cent in Northern Africa. Unemployment is more prevalent among young women in most subregions.

Significantly, young people are three times as likely as adults (25 years and older) to be unemployed. Although this is partly because their limited work experience counts against them when they are applying for entry-level jobs, there are also major structural barriers preventing young people from entering the labour market.

Approximately 41 million young people constitute the “potential labour force”, including those who are either available for work but not actively seeking a job (often owing to discouragement) or those seeking but not available to start work immediately (if, say, they are still completing their studies).

Globally, one-fifth of young people currently have NEET status, which means they are neither gaining experience in the labour market, nor receiving an income from work, nor enhancing their education and skills. Clearly, their full potential is not being realized, though many may be contributing to the economy through unpaid work, which is particularly true of young women. Globally, young women are twice as likely as young men to have NEET status. The gender gap is even more pronounced in regions such as Southern Asia and the Arab States, where social and cultural norms prevent women from pursuing education or working outside the house. The youth NEET rate has not decreased significantly in any region since 2005, suggesting that target 8.6 of the Sustainable Development Goals, namely a substantial reduction in the proportion of NEET youth by 2020, will be missed. All these forms of labour underutilization in the early stages of a young person's career can lead to a number of scarring effects, including lower employment and earnings prospects decades later.

Young workers continue to face high rates of poverty and are increasingly exposed to non-standard, informal and less secure forms of employment

Even among young people who are engaged in employment, their situation is far from satisfactory. Of the 429 million young workers worldwide, around 55 million, or 13 per cent, are suffering extreme poverty (defined as living on an income below US\$1.90 per day), while 71 million of them, or 17 per cent, live in moderate poverty (an income below

US\$3.20 per day). While the incidence of extreme working poverty among young workers decreased by approximately 20 percentage points between 1999 and 2019 globally, it is still very high in certain parts of the world, notably sub-Saharan Africa and the Arab States. In the Arab States, between 1999 and 2019, the rate even increased sharply by 12 percentage points, reflecting the political turmoil besetting some countries in the region. Moderate working poverty, the incidence of which declined by just 8 percentage points between 1999 and 2019 among young workers worldwide, continues to affect millions of young people in Southern Asia and sub-Saharan Africa.

The poor quality of many jobs held by young people manifests itself in precarious working conditions, a lack of legal and social protection and limited opportunities for training and career progression. The fact that three in four young workers worldwide were engaged in informal employment in 2016 points to the scale of the problem. Informality is most pervasive in subregions such as sub-Saharan Africa and Southern Asia, where it affects close to 96 per cent of employed youth. In these and other subregions, own-account work and contributing family work, both of which are characterized by informality and income instability, remain pervasive. Even in wealthier European countries, which tend to have a high share of wage employment, the prevalence of new forms of work – often less secure forms of employment among young people – has increased rapidly in recent years, admittedly from a very small base, as a result of the expansion of the “gig economy”, as discussed in the 2017 edition of the *Global Employment Trends for Youth* report.

Young people across the world are worried that new technologies – particularly robotics and artificial intelligence – may take away their jobs

The current edition of the *Global Employment Trends for Youth* report discusses how the technological advances of the “Fourth Industrial Revolution” present young people with both opportunities and challenges in the labour market. Paradoxically, despite being enthusiastic early adopters of new technologies, young people also tend to worry the most about the possibility of their jobs being replaced by robots and artificial intelligence. In both developed and developing countries, there is widespread concern that such technologies may not lead to the creation of new, better-paying jobs.

Such anxieties are understandable given that the risk of job automation peaks among young workers, who are more likely to be in occupations with a greater proportion of automatable tasks. The growing use of industrial robots in the manufacturing sector, in particular, threatens to reduce not only the employment share of middle-skilled workers but also the rate of hiring young jobseekers because firms may not create new vacancies when they experience natural turnovers.

There is a considerable digital divide between generations and regions

In general, younger people (aged 18–35) are more likely than older people (aged 36+) to use the Internet or own a smartphone, which reflects a “digital divide” between generations. Furthermore, younger people in developing countries are less likely to have access to such technologies than their contemporaries in developed countries. In the United Republic of Tanzania, for example, just 30 per cent of those in the 18–35 age group report using the Internet and/or owning a smartphone, compared with 100 per cent in several advanced economies.

Despite the transformations brought about by the Fourth Industrial Revolution, employers' and jobseekers' occupational preferences have remained quite stable ...

The relative stability of occupational preferences among both employers and jobseekers indicates that tasks within occupations are changing and becoming more technology-intensive instead of entire jobs being replaced. The share of entry-level jobs has increased significantly in several developed countries in recent years, suggesting that the destruction of jobs in some sectors due to automation has been offset by a net increase in jobs in other sectors, though the quality of these jobs may not always be high. Across all age groups, jobseekers' preferences have changed, albeit with a time lag, in response to changes in the occupations most sought after by employers.

... though applicants for jobs in most sectors are now expected to have digital skills

The lack of suitable openings for graduates reflects, to some extent, the hollowing-out of middle-skilled jobs in recent years – a trend to which technological change has contributed. On the other hand, survey data from several developed countries indicate that employers are currently seeking to fill more entry-level vacancies in health and social care than in the information technology sector. However, even for these and other non-technical roles, such as customer services and sales, applicants are expected to have computer literacy and a good knowledge of office software. Promoting the acquisition of digital skills alongside lifelong learning can help unemployed workers of all ages to take up new occupations in which more jobs are available.

Vocational training is more likely to lead to employment in jobs that are at risk of automation ...

Young people with vocational training are more likely to be working in an automatable job than those with a university degree. As there are few safe skill-related alternatives to occupations at high risk of automation, young people with lower skills and a vocational background may find themselves having to switch from one precarious job to another and may ultimately end up NEET. This reflects how the occupation-specific skills imparted by vocational training tend to become obsolete faster than the more general problem-solving skills taught at higher education institutions. Vocational training programmes need to be modernized so that young trainees are better able to adapt to the changing demands of the digital economy.

... while young graduates are having trouble finding entry-level jobs that match their qualifications

Although higher education does not provide immunity against the loss of one's job to automation – especially as young people are willing to work in jobs below their qualification level for a while to gain experience – those with degrees are certainly better placed to embark on further studies or training to find a job in a different field.

On the whole, there is a lack of adequate decent jobs for young people

Encouraging young women and men to go to university will not solve alone the problem of youth unemployment. It is important to ensure that university curricula are of high quality and also that there is sufficient demand for graduates' skills.

In recent years, however, the increase in the number of labour force participants with a degree has not been matched by a similar increase in the number of high-skilled jobs. This imbalance between the demand for and supply of university graduates is one of the main factors behind the trend that has seen private financial returns to tertiary education decrease in many countries since the Great Recession of the late 2000s. It is critical to promote policies that generate decent jobs for young women and men.

The falling returns to tertiary education have dampened wages at the top for youth, influencing wage inequality among them

In most countries, wage inequality is higher among young workers than among prime-age workers, although it has been declining since the global economic and financial crisis. The lessening of wage inequality can be explained by a reduction in the returns to tertiary education, especially among the young. The positive effect of technological change on returns to education has been dampened by the rapid expansion of the graduate labour force, which in most countries has outpaced the demand for graduate labour.

The increase in the demand for skills caused by the emergence of new technologies is welcome, as are the rising levels of educational attainment among young people. Both can drive increases in productivity. However, policy measures are necessary to promote the expansion of job opportunities for highly educated young people so as to balance the expanding supply of graduates. Evidently, markets alone will not do this.

Effective policies are required to ensure that new technologies have a positive impact on youth employment

New technologies are disrupting labour markets across the world by both destroying and creating jobs. An integrated policy framework to support young people in securing decent jobs in this context is critical for future socio-economic progress.

Policies are required to generate a sufficient number of decent jobs to equip young people with the skills required for those jobs, to ensure that they enjoy social protection and have rights at work and to encourage them to join workers' and employers' organizations so that they are represented in tripartite dialogue. Failure to act would mean growing numbers of discouraged young people in many countries, ultimately undermining the socio-economic development of these countries.

Such policies should be part of an integrated strategy to create decent jobs for young people

An integrated policy framework should include interventions at the macro, meso and micro level. For instance, macroeconomic and sectoral policies are required to promote investment in key sectors, as well as in research and development for fostering innovation and creating jobs in new sectors, while raising productivity. This can spur aggregate demand and absorb new labour market entrants. It is also essential to update educational and vocational curricula so that they take into account labour market trends such as the growing importance of digital and soft skills. This would improve the school-to-work transition for young people. Employers' organizations play a key role in this transition because they know which qualifications and competencies young people need to have if they are to be attractive to employers. At the micro level, incentives should be created for young people to engage in technological entrepreneurship.

Prioritizing and sequencing policies for youth employment is critical

While developing the educational attainment and skills of young workers is key to progress, unless such supply-side measures are complemented or matched with demand-side measures for job creation, discouragement among youth can grow.

An integrated approach that includes macroeconomic and sectoral policies for job creation along with redistributive policies would be an effective way of promoting growth. Large-scale active labour market programmes for disadvantaged young people, which are likely to have an expansionary effect on labour demand above and beyond the direct effects on participants, are important in this context.

As is the need for better organization, voice representation and collective bargaining to ensure appropriate wages and working conditions for young workers ...

As technological change continues to unsettle the labour market, policy-makers must ensure that young people are protected. This is important not only in developing countries, which tend to have large numbers of young people working in the informal economy, but also in high-income and emerging countries, where an increasing number of young people are engaged in new forms of work, especially in the gig economy. Workers' organizations could play a critical role in supporting young people in diverse employment relationships to organize and bargain collectively so that their rights are respected.

... along with gender-responsive approaches

Labour market policies introduced to harness new technologies for young women and men should also be sensitive to gender imbalances; young women comprise the lion's share of young people who find themselves in the NEET category.

Digital technologies present an excellent opportunity to strengthen employment services and job matching ...

Public employment services, a crucial intermediary between employers and jobseekers, are also being shaken up by new technologies. Globally, such services are increasingly being delivered through digital channels, particularly to young people. Because of the high penetration of mobile phones even in developing countries, digital technologies allow public employment services to overcome limited resources and provide access to hard-to-reach areas, including those living in remote areas.

However, in both developed and developing countries, it is essential to ensure that the digitally illiterate are not excluded: these are often people with little attachment to the labour market, such as the long-term unemployed and NEET youth. Moreover, surveys have found that young jobseekers still greatly value face-to-face contact with career advisers. Therefore, public employment service institutions should combine digital service delivery with traditional counselling based on regular meetings between caseworkers and jobseekers.

... which can help young people to cope better with the demands of the digital economy

The digitalization of public employment services includes the use of “deep learning” techniques and “big data” to make job matching more efficient, which is important not just to cater to the rapidly changing employer demands but also to tailor the services provided to the individual needs of jobseekers, particularly those from vulnerable groups. Digitalization, for example, enables more granular matching on the basis of competencies rather than qualifications. The valuable data collected by public employment services on gaps between jobs and skills among young people can feed into education and training programmes.

Digitalization also facilitates partnerships with private providers of employment services and collaboration with social welfare institutions to integrate hard-to-place young people and the long-term unemployed into the labour market. The adoption of digital technologies by public employment services in advanced economies and some emerging ones has, on the whole, increased the efficiency, transparency and inclusiveness of labour market intermediation. Public employment services are a key partner in helping young people to prepare for the volatile world of digital work.

Social dialogue must include the voices of young people

Tripartite consultation remains the basis of sustainable progress and social justice. It is essential that young people are included and represented in tripartite dialogue on the future of work, ideally as members of decision-making bodies. Young people must have a voice in current policy decisions that are shaping their future.