



LABOUR DEMAND IN A CHANGING WORLD OF WORK: global megatrends, working conditions and labour market exclusion

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AT A GLANCE:

- ▶ Despite challenges like COVID-19, geopolitical tensions, and structural changes, EU labour markets have shown remarkable resilience, maintaining high employment levels.
- ▶ Demographic ageing, digitalisation, AI, and the green transition are significantly reshaping labour demand, creating new opportunities and challenges.
- ▶ Persistent labour and skills shortages in key sectors such as health and social care, construction, and renewable energy are driving up costs for companies and slowing down technology adoption.
- ▶ The megatrends may improve job quality in emerging sectors, but existing jobs in the most affected sectors, for example in the context of the green transition, often have poorer conditions.
- ▶ Addressing labour and skills shortages, improving working conditions, promoting adult education, supporting vulnerable groups with targeted interventions, and strengthening collective bargaining are essential for sustainable labour demand and economic growth.

► Summary

European Union (EU) labour markets have shown remarkable resilience in the past years, despite facing significant challenges such as the COVID-19 pandemic, geopolitical tensions, and structural changes driven by global megatrends including digitalisation, globalisation, climate change and demographic change. Their adaptability suggests that if the pace of change over the next 20 to 30 years mirrors that of the past decades, EU Member States may maintain high employment levels and mitigate disruptive effects. However, persistent issues like declining profit margins, labour and skills shortages, and low productivity growth could drive down labour demand, affecting future unemployment rates and job creation.

The green transition may accelerate, creating bottlenecks if demand for green skills spikes too rapidly. Demographic ageing will necessitate reallocating workers to health and social care services, potentially holding back productivity growth and exacerbating labour and skills shortages. Digitalisation and AI add uncertainty, as the impact of generative AI on job structures remains unclear. Persistent labour and skills shortages could slow technology adoption and raise costs for companies. Global geopolitical shifts may disrupt supply chains, forcing companies to adapt quickly and reshuffle labour demand across regions.

The impact of the four megatrends on labour demand is, thus, significant. Demographic ageing is already causing shifts in workforce composition, with more people approaching retirement age. Digitalisation and AI are expected to transform occupations further, as intelligent systems perform increasingly complex tasks. The green transition will create new green jobs while phasing out roles linked to polluting industries. Despite high labour demand, widespread labour shortages persist in most Member States. The green transition and advanced AI systems may increase aggregate labour demand, but the overall impact remains uncertain.

Labour demand will continue to change. However, while work is unlikely to disappear, the quality of jobs in demand remains a concern. The COVID-19 pandemic has brought significant attention to working conditions, highlighting job quality issues in key sectors like the health and social care and construction sectors. Similarly, the green transition may result in occupational and sectoral shifts that boost employment in jobs that are currently already characterised by poor conditions. The four megatrends also exacerbate the risk of labour market exclusion, particularly for less educated, middle-aged, and older individuals. Policymakers must address these challenges to ensure sustainable labour demand and economic growth.

Acknowledgements

The authors would like to thank Laurène Thil for her excellent comments.

Legal notice

This project, WeLaR, has received funding under the Horizon Europe programme. Views and opinions expressed are, however, those of the authors only and do not necessarily reflect those of the European Union or the European Research Executive Agency. Neither the European Union nor the granting authority can be held responsible for them.

► Background

Despite being faced with the COVID-19 pandemic, geopolitical tensions, and structural changes driven by demographic shifts, digitalisation and the green transition, in the past years [labour markets across the EU have demonstrated their resilience](#). According to the 2024 Annual Review Report “Labour market and wage developments in Europe”, unemployment rates have been at record lows since 2022, while employment rates continue to rise, and labour market matching has been improving during the past years.

In this context of major transformation, total employment has not only remained stable in the EU, but it has actually increased across many Member States. This track record of adaptability suggests that if the pace of change over the next 20 to 30 years resembles that of the previous decades, most EU Member States may be able to maintain high levels of employment and mitigate the disruptive effects of ongoing transformations.

However, in spite of the positive trends, Europe’s labour markets are [dealing with persistent challenges](#). These include declining profit margins, persistent labour and skills shortages, declining vacancy rates, low labour productivity growth, among others, which together could drive down labour demand, and thus affect unemployment rates and job creation in the future. According to the ILO’s 2025 World Employment and Social Outlook Report [slow productivity growth is expected to weigh on real wage growth in the EU](#).

In addition, looking ahead to 2040, [the speed and intensity of change becomes less predictable](#). The green transition will likely accelerate, potentially creating bottlenecks if demand for green skills spikes too rapidly. Simultaneously, demographic ageing will require the reallocation of workers towards health and social care services. The ageing of the population may also hold back productivity growth and aggravate labour and skills shortages. Such labour and skills shortages could be [further exacerbated in sectors such as construction, energy, manufacturing and transport, where the green transition is expected to require additional labour and new skills](#).

Digitalisation and AI add another layer of uncertainty, as it is unclear how fast generative AI will alter existing job structures and create or eliminate roles. Also here, persistent labour and skills shortages are detrimental, [by slowing down technology adoption and raising costs for companies](#). According to the World Economic Forum’s Future of Jobs Report for 2025, [87% of employers in Europe expect that AI and information processing technologies to drive transformation in their organisation in the next five years](#). This, moreover, holds for employers across all economic sectors. Global geopolitical shifts, furthermore, may disrupt existing supply chains, forcing companies to adapt quickly and reshuffle labour demand across regions. [High levels of economic uncertainty in a context of geopolitical conflict are expected to disrupt supply chains and discourage investment](#).

In this context, questions are being raised not only about how global megatrends will affect labour demand in terms of the number of available jobs, but also about the quality of these jobs. Digitalisation, for example, is often associated with the rise of new non-standard forms of work, while at the same time it facilitates [working from home](#), which could have positive impacts on workers’ work-life balance and well-being. Similarly, climate change [presents both challenges and opportunities to job quality](#). Against this background, the WeLaR project has investigated the impact of megatrends on labour demand, accounting for both quantity and quality.

► Impact of megatrends on labour demand

Powerful, long-term forces—often referred to as megatrends—are set to alter the economy and influence the future of job demand. Demographic ageing, for example, is already causing shifts in workforce composition, as more people approach retirement age. This process will speed up toward 2040 and beyond, particularly given the fast-rising number of individuals aged 85 and over. At the same time, digitalisation and the rise of AI systems and robotics are expected to transform occupations in demand further as intelligent systems can perform increasingly complex tasks.

Another key trend reshaping is the green transition. Although initial steps have been taken to reduce carbon dioxide emissions, the pace of change will need to accelerate if meaningful climate goals are to be met by 2030, 2040, 2050, and beyond. This transition is likely to create new green jobs while phasing out roles linked to polluting industries. Together, these megatrends will influence labour demand in the coming decades.

WORK WILL (PROBABLY) NOT DISAPPEAR

Labour demand across the EU is currently at an all-time high. More people are employed than ever, and a higher share of the working-age population is active in the labour market. At the same time, widespread labour shortages persist in most Member States. This situation follows more than two decades of demographic ageing, globalisation, digitalisation and automation, and has [further been accentuated by the COVID-19 crisis](#), yet the overall level of employment has continued to grow. The green transition, which is only now starting to accelerate, is also set to increase aggregate labour demand, though the effect of this trend may be relatively small.

The impact of steadily more advanced AI systems on aggregate labour demand is much more uncertain. Some forecasts suggest that [as many as 60% of existing jobs](#) could be *impacted by AI*. However, this term encompasses a wide range of possibilities – from job loss to job transformation. The time frame and, hence, the implied speed of change in jobs and job content are also important. For a comparison, consider the impact of the introduction of personal computers in the workplace. [In the EU15, computer use went from nearly zero in 1980 to 40% in 1995, a span of just 15 years](#). For individuals with tertiary education, the change was even faster [with 56% using a computer in 1995, and another 30 pct. points increase in the period to 2015](#). Although direct comparisons are complex, the experience from that technological wave indicates that jobs can be fundamentally changed by new technology rather than disappearing.

BUT LABOUR DEMAND WILL (CONTINUE TO) CHANGE

POPULATION AGEING REQUIRES A SHIFT IN EMPLOYMENT TOWARDS HEALTH AND LONG-TERM CARE PROFESSIONS ...

The share of the population aged 65 and over is expected to rise from 21.7% to 27.1% between 2024 and 2040, with those over 80 accounting for more than half of this increase ([from 6.1% to 8.9% of the population](#)). This is the primary driver of the increase in health and long-term care costs in the baseline scenario of the [European Commission's Ageing Report](#) from 8.3% to 9.1% of GDP. These numbers imply a substantial increase in the share of the working-age population employed in health and long-term care professions, which in [2023 made up 8.5% of employment](#).

New technologies and an improvement in labour productivity can potentially moderate the labour demand effect of an ageing population. However, historically, [labour productivity has been low in the long-term care sector](#), and some tasks related to care may not be desirable to automate or leave to technology from a welfare perspective. Moreover, any new technology adopted typically comes with additional training and reskilling needs, which can raise labour demand in the short and medium term.

The challenge is compounded by the fact that the average [long-term](#) and [healthcare workforce](#) is older than the average worker in other industries, implying that replacement needs are higher than for other occupations. In line with these trends, [Cedefop projects an 11.6% increase](#) in employment in the health and social care professions by 2035. The challenges of an increase in demand for health and long-term care workers are exacerbated by the fact that these occupations have been [in persistent shortages](#) in [many EU countries](#) over the past 5 years. Nursing, for instance, is currently listed as a shortage occupation in 17 EU countries.

... AND SILVER ECONOMY OCCUPATIONS

The silver economy is also expected to grow with population ageing. The term '[silver economy](#)' [refers to the economic activities and opportunities arising from the public and consumer needs of an ageing society](#). This includes everything from age-friendly home modifications and assistive devices that help older adults live independently to new (private) personal services to support retirees' daily needs. Financial and leisure services customised for older customers are also likely to expand. However, the increase in overall labour demand from these activities is unclear since a large part of this growth may come from people shifting existing spending rather than creating an entirely new demand for leisure and financial services.

Where demographic ageing is most intense—often in [predominantly rural areas](#)—the need for health and long-term care workers, as well as for age-friendly housing, will be particularly strong. This can boost local labour demand in so-called periphery regions that may otherwise struggle to generate employment opportunities. At the same time, finding enough workers willing to relocate to more remote locations can be challenging.

Overall, demographic ageing increases labour demand in some sectors, but at a measured predictable pace with a certain amount of reskilling and retraining.

THE GREEN TRANSITION MAY MODESTLY INCREASE OVERALL EMPLOYMENT ...

The green transition is still in its early stages and will need to be accelerated significantly to achieve net-zero emissions by 2050 and the 90% reduction target by 2040. These targets reflect a consensus on addressing climate change more aggressively; however, the necessary policy steps and technological advances are only now beginning to take effect in earnest.

Despite the scale of the challenge of decarbonising the economy, the overall impact on employment [will likely be modest](#). Moving to net-zero carbon emissions will not directly affect most occupations since many tasks and roles in the labour market do not generate significant emissions in the first place. Existing projections suggest a net increase of around [one million jobs](#) by 2030 and [double this](#) by 2050, though these forecasts carry considerable uncertainty and depend on factors such as the pace of innovation, regulatory changes, and consumer demand.

Still, the shift to a low-carbon economy is expected to create new opportunities in specific key sectors, notably construction, renewable energy, sustainable farming, and environmental management already towards 2030. For instance, the renewable energy sector—primarily wind and solar—could substantially expand, requiring a larger workforce to install, maintain, and monitor the latest technologies. While the growth rate in renewable energy employment may outpace that of other sectors, the overall share of these jobs in the wider labour market remains relatively small, limiting the total number of new positions created. Moreover, renewable energy production and construction investment will reduce spending or investments in other parts of the economy limiting net job creation.

... BUT RETRAINING AND RESKILLING WILL BE KEY

Retraining and reskilling will be key both for any expected net job gains to materialise and for a larger part of the labour force to have the right skills conducive for the green transition. Some sectors expected to increase in importance (e.g. construction) are already facing shortages within EU member states, and transitions into green jobs are hampered by a lack of the right skills. However, occupation mobility is also expected among occupations not directly affected by the green transition due to indirect effects coming from relative price changes. Hence, labour demand will change due to the direct and indirect impact of the green transition. By one estimate, in 2040, around 40% of the labour force will see changes in some aspects of their tasks due to the green transition. Not everyone will require additional retraining, but a significant portion may, even if they remain in the same occupation. The European Green Deal, aimed at decarbonising the economy, will significantly impact rural areas, especially in industries like mining, agriculture, and energy. However, many new jobs are expected to arise in rural areas in construction, renovation, and renewable energy projects.

DIGITALISATION, AUTOMATION AND AI

It is too early to say if AI will up-end the labour market in unpredictable ways. However, there are recent indications (based on US data) that disruptions to the labour market are likely to increase in intensity from AI. If this is the case, the change in demand (positive and negative) for different occupations will be (markedly) faster than in the recent past. The speed of change matters, as EU labour markets have, in aggregate, been able to absorb changes resulting from digitalisation and automation relatively well. In fact, although uncertain, total employment may have increased due to digitalisation and automation, with only a slight, if any, change in earnings inequality.

As evidenced by the COVID-19 crisis, digital infrastructure allows for remote work. This opens the possibility that labour demand can be more diverse in geographical spread, potentially reaching underused talent with a strong geographical preference. Teleworking, in particular, could implicitly increase demand for people living in rural areas by allowing workers to access jobs in urban centres remotely. The evidence for this happening is mixed up until now.

A study on the impact of the COVID-19 pandemic on labour market participation in the EU conducted as part of the WeLaR project, reports that despite the strong post-pandemic labour market performance, certain socio-demographic groups may face long-lasting impacts. In 2022, significant effects were observed on the employment and activity rates of immigrants and women with low education levels, particularly in the accommodation and food services sector. Zooming

in on post-pandemic developments in remote work, another WeLaR study finds that [its widespread adoption did not result in an increase in cross-border work or self-employment](#) at EU level. Additionally, the movement of digital nomads and remote workers has resulted in noticeable, yet limited, inflows into some EU countries, according to these authors.

... AND THE ROLE OF LARGE LANGUAGE MODELS (LLMS)

The trajectory of generative AI adoption remains uncertain, and studies thus far offer contrasting visions of how quickly these technologies might reshape the labour market. On the one hand, one study identifies [a surprisingly fast uptake](#), with nearly 40% of working-age individuals in the US already using GenAI tools at least occasionally, and over 20% using them regularly at work. Another study, meanwhile, suggests that [worker well-being could benefit in certain occupations but warns that job security concerns could dampen these gains in highly exposed roles](#). Similarly, other authors document [widespread—if uneven—patterns of GenAI use](#) across a broad range of tasks, further underscoring the challenge in predicting whether adoption will plateau or continue accelerating.

Others emphasise the historically measured pace of labour market transformation. One recent study compares present-day anxieties over AI to similar fears about computers in earlier decades, noting that [sweeping changes often unfold only gradually](#). Moreover, [European-focused research](#) highlights significant variations in GenAI's potential impact depending on the nature of tasks, worker education levels, and the availability of reskilling programmes. Finally, research shows that certain freelance professions—particularly those involving writing or coding—[are already experiencing a decline in postings after the release of cutting-edge AI tools](#). Taken together, these findings reinforce that while generative AI is poised to influence the workforce in profound ways, the exact speed and breadth of its impact remain far from certain.

GLOBALISATION

The future trajectory of globalisation is in flux. On the one hand, the trend towards increasing international trade could unravel in the coming years. In such a scenario, some jobs would be re-shored back to the EU, but the shock to many exporting sectors would likely outweigh any positive employment effects from re-shoring. On the other hand, if the current system persists, [AI and digitalisation could interact with globalisation in causing renewed outsourcing of jobs](#) from the EU to more low-cost destinations. In that case, rather than manufacturing and low-value service jobs (e.g., call centres), employment in more traditional, high-earning sectors, such as paralegal work, programming, and analytical work, could potentially be outsourced. Between these two scenarios – a breakdown of longstanding trade practices and renewed AI-enabled trade intensification – a moderate business-as-usual scenario is also possible. In such case, the overall impact on labour demand and re-allocation of employment, based on past trends, is likely modest.

The [question of offshoring, technological change, labour market institutions and labour demand](#) was also investigated in the WeLaR project. The project examined the impact of offshoring and technological change on employment in the EU, by assessing how global supply chains and new technologies influence employment patterns as well as the role of employment protection legislation and labour market institutions like trade unions. While offshoring is found to increase the demand for atypical employment in the service sector, it reduces typical employment in man-

ufacturing. Technological advancements, especially in communications equipment, tend to boost atypical employment, while robotisation displaces typical employment across the short, medium, and long term.

WeLaR research further highlights the key role of [technology adoption in predicting changes in involuntary atypical employment](#). Women and young workers are particularly vulnerable to increases in involuntary atypical employment due to technological change. Strong trade unions can mitigate the negative impact of industrial robots, but sudden changes in labour protection might decrease overall employment rather than shift workers to standard contracts. Finally, labour protection for routine workers can accelerate routine-biased technological change by compressing wages between routine and non-routine jobs.

► Changing labour markets, labour market exclusion and inequality

WILL GOOD JOBS BE IN DEMAND?

Although work will likely not disappear, the question remains whether the jobs that are in demand are good jobs. Especially in the aftermath of the COVID-19 crisis, there has been a lot of attention for working from home opportunities, and how these affect employment structures and job quality. As concerns its contribution to better jobs for workers, the impact of working from home, however, initially was [difficult to disentangle from other effects](#), such as lockdowns. More recently, as new data have now become available, [both the positive and the negative consequences of working from home became clearer](#), as is its impact across various socio-demographic groups. Looking to the future, ensuring that working from home opportunities are further developed [in an equitable way is expected to generate better outcomes for job quality and organisational practices](#). Although working from home arrangements bear potential for higher levels of autonomy, this [does not translate into a rise in self-employment](#). One reason could be that working from home arrangements instead make regular forms of employment more attractive.

Turning to the green transition, a recent Eurofound study explains how [climate change and climate policies](#) affect jobs, tasks and working conditions. Both climate change and climate policies will shift labour demand towards green jobs and sectors. At the same time, the current workforce in the sectors that are expected to be most affected by climate change is mostly composed of men, seasonal, migrant and self-employed workers. The study also reports that while the existing jobs that will see an increased demand tend to be physically demanding and come with overall poorer conditions, new and emerging green jobs do perform better in terms of jobs quality.

With the ageing of the population, labour demand in the health and social care sector increases further, in that way exacerbating already existing labour and skills shortages. However, many jobs in this sector are characterised by [poor working conditions, with detrimental effects for workers' physical and mental health and their overall well-being](#), such as high work intensity, low levels of pay, shift work, and having to deal with difficult clients. The health and social care sector's workforce, moreover, is female dominated and ageing as well. More attention is, therefore needed to help improve working conditions, accounting for the diversity of the workforce, as well as paying

particular attention to the home-based care sector, where the risks are even higher.

Finally, as for globalisation, WeLaR research finds that offshoring and information and communications technology, particularly communications technology, significantly [drive the growth of atypical employment](#). Robotisation, while causing labour displacement, leads to a higher reduction in total employment compared to atypical employment. As a result, the proportion of atypical and involuntary atypical employment rises, with women and the youngest age cohort being the most affected.

WHICH WORKERS ARE AT HIGHER RISK OF LABOUR MARKET EXCLUSION?

Labour market exclusion represents a major concern in the EU. With this in mind, the WeLaR project has investigated whether the four megatrends in scope of the project – namely, digitalisation, globalisation, climate change, and demographic change – have exacerbated the risk of exclusion. This analysis helps to understand how changes in labour demand affect different socio-demographic groups, and how these contribute to labour market exclusion.

To shed light on this issue, the WeLaR project studied the [relation between the probability of individuals to fall in labour market exclusion \(measured by long-term unemployment and inactivity\) and the four megatrends](#). Between 2009 and 2019 especially less educated, as well as middle-aged to older individuals, experienced higher risks of labour market exclusion. Of the four megatrends, on average, digitalisation has had the more significant effect on labour market exclusion. Specifically, automation-related innovations resulted in a higher probability of long-term unemployment, while the adoption of automation technologies significantly increased the chances of becoming inactive. Also in this case, male, less educated and older individuals appeared to be the most affected. Finally, although the effect of other megatrends – demographic change, climate change and globalisation - on average, do not seem to be significant, these trends still do affect some groups more than others.

These effects, moreover, should be considered in light of the COVID-19 pandemic and its impact on the labour market outcomes and prospects of various groups of workers. [Young and less-educated individuals](#) were more affected by than pandemic than others, but that the impact of the pandemic appeared to be long-lasting especially for [immigrants and women with low levels of educational attainment](#).

► Policy options supporting labour demand

Enhancing productivity growth and tackling labour and skills shortages. Strategies to boost labour productivity growth in the European Union are essential for sustainable wage growth, skill development, and overall economic competitiveness. Further efforts are, therefore, also needed to address persistent labour and skills shortages in sectors such as construction, energy, manufacturing, and transport, which will likely gain in importance in the future under the impulse of the four megatrends. Labour and skills shortages drive up costs for companies, slow down technology adoption, and contribute to economy uncertainty, thus lowering labour demand.

Improving working conditions. Research on the consequences of the four megatrends has highlighted that their impact on working conditions must be taken into account (e.g., in light of occupational and sectoral shifts, growing labour and skills shortages), and that more efforts must be made to ensure that all workers have high-quality jobs that support their health, safety and well-being. With the ageing of the workforce, ensuring good working conditions becomes even more relevant, as a strategy to support the extension of working lives and increase labour market participation of excluded groups. Although working from home arrangements, developed along by digitalisation, can have positive impacts on workers' well-being, the downsides of such arrangements should not be overlooked. In addition, the four megatrends have been associated with a decline in standard employment and a rise in atypical employment, which could result in poorer working conditions for the affected workers. Policymakers should account for this issue.

Encouraging adult education. Policymakers should prioritise offering flexible learning opportunities for workers. Enhancing adult education can improve worker's bargaining power. As the labour market evolves, there is a growing demand for new skills while obsolete competencies decline. The AI revolution will benefit workers with complementary skills, necessitating educational policies to enhance digital skills. By equipping current and future workers with adaptable skill sets, EU Member States can enhance resilience and flexibility. This will help mitigate the effects of sudden labour market changes and maintain high employment levels despite the unpredictability of future shifts. Active labour market policies need to better target low- and middle-educated workers to improve the training participation. Additionally, fostering a positive learning culture in workplaces and involving trade unions in company strategies can increase training rates among the low-skilled. This is particularly important in the context of atypical employment.

Supporting vulnerable groups through targeted interventions. Research into the impact of digitalisation, globalisation, demographic change and climate change on labour demand has identified several socio-demographic groups that run the risk of facing labour market exclusion and/or poorer labour market outcomes. This required targeted interventions to protect the most vulnerable groups. While the megatrends appear to have a limited direct impact on long-term unemployment, individual characteristics and other labour market factors play a significant role. Industrial policies promoting advanced automation technologies and trade policies enhancing global value chain connections can reduce labour market exclusion for some groups, but may disadvantage the least educated workers. Therefore, these policies should be complemented by robust educational and capacity-building initiatives to ensure inclusive growth and mitigate adverse effects on weaker strata of the population.

Strengthen collective bargaining. Collective bargaining can further promote adequate working conditions, contribute to the extension of working lives, and help ensure that workers can benefit from productivity gains. The current situation of labour and skills shortages may contribute to the bargaining power of workers, resulting in higher levels of job security and better prospects. Finally, collective bargaining can contribute to labour market matching and efficiency.

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