

Executive summary

At the time of writing, the EU is grappling with the impacts of the Covid-19 pandemic, which has shown the world that labour markets can be transformed in a short period of time. While it is not yet clear how long the recovery will take, or whether there will be permanent changes to the structure of labour markets from the crisis, this report considers longer-term transformations of the European labour market. These changes will likely play out over years rather than months, and their full implications are uncertain, but policymakers will need to respond to these developments, just as they are presently trying to protect people and businesses from the effect of Covid-19.

The EU's new growth strategy, the Green Deal, sets a pathway for at least EUR 1 trillion investment over the next ten years and a just transition to a prosperous climate neutral economy by 2050. This transition will have significant impacts on the labour market across all sectors of the economy. It has the potential to create millions of new jobs in renewable energy, the circular economy and low carbon technologies. At the same time, some industries and sectors of the economy will contract, decline or disappear, resulting in employment losses.

Alongside the transition to a climate neutral economy, **Europe will be impacted by other transformative forces - known as megatrends.** Many of these changes will occur regardless of policy intervention, and their impacts on the scale, competitiveness and stability of the European economy and labour markets over the next 30 years are likely to be substantial. However, a proactive

and well-designed policy framework can help mitigate the most disruptive impacts of these megatrends and enable the harnessing of synergies between the megatrends and the climate transition. To manage multiple transitions, policymakers have a critical role to play supporting companies, workers and communities to respond to the changing nature and structure of the labour markets.

Seeking to inform policy and business actions in response to changes in employment and skills demand, this report describes the labour market impacts of the transition to a climate neutral Europe in the context of four key megatrends. The report explores how climate action interacts with these trends, how climate policies can provide direction on the future shape of the economy, and how the other megatrends may either facilitate or impede progress towards climate neutrality.

The four megatrends covered in this report are:



These megatrends will shape the demand and supply for labour in Europe in the next 30 years. The scope and direction of the effects on employment and skills demand will be affected by policies and actions at local, regional, national and EU levels – including climate policies. While simultaneous and overlapping transitions will create new paths to prosperity, they will also disrupt existing work arrangements. Managing these disruptions and the associated impacts will present a crucial challenge to a successful transition to a fair and prosperous climate neutral economy.

Modelling the economic and environmental impact of the megatrends suggests that many of the megatrends – and in particular technological and demographic change – are likely to have far bigger impacts on the economy and the labour force than the low carbon transition.⁶ Thoughtful and effective policy responses can mitigate the negative outcomes and maximise the benefits of each megatrend and are essential to avoid large scale disruption.

The impact of well-designed policies is highlighted when comparing the outcomes for the modelling scenarios that combine the effects of all of the megatrends. In the best-case scenario, featuring an aligned and effective policy framework, Europe could maintain employment levels in the face of the combined impact of the megatrends, whereas without that strong policy response it could see job losses of up to nearly 10 per cent by 2030 and 30 per cent by 2050 (compared to a baseline).

The modelling also indicates that well designed and implemented climate policies can help improve how Europe manages these megatrends. When the best-case scenario is combined with 1.5 degree compatible decarbonisation policies, it improves employment projections, leading to a scenario of around 1 per cent growth in employment.⁷ Yet policy makers must keep in mind that even though the labour market impacts of the low carbon transition are relatively minor, the aggregate figures hide substantial sectoral differences, and with major significance for particular communities or countries with a high dependence on a declining sector. Financial support and inclusive policies will be essential to ensure that the negative impacts of low carbon transition do not disproportionately disadvantage specific communities, or exacerbate the negative impacts of the other megatrends.

The employment and economic impacts associated with **technological change**, primarily developments in AI and automation, could lead to substantial job losses, reduced household income, and decreased consumption but at the same time improving productivity. These effects have the potential to polarise the labour force, driving inequality between workers. **Globalisation**, while smaller scale in impact, is also likely to drive significant economic inequality and polarisation within domestic labour markets – supporting job creation and benefitting some workers, while disadvantaging others.

Demographics add to the complexity and challenge of coping with other trends as the European workforce is shrinking and ageing, making it less flexible and putting pressure on public resources. The impacts associated with globalisation and resource scarcity are relatively minor in comparison. Finally, **resource security** and environmental sustainability create a source of volatility and change – both creating pressures that will undermine existing industries but also opportunities for new approaches.

To help illustrate both how the climate transition is likely to impact jobs, and the interaction of these concurrent transformational trends, this report features **five case studies** that examine the impact of selected megatrends on sectors that will play a key role in achieving climate neutrality by 2050: offshore wind in the UK, automotive manufacturing in Germany, coal mining in Romania, steel manufacturing in Sweden and agriculture in Spain. These demonstrate the potential impact of national and regional policy on the jobs and skills in relation to each sector.



Offshore wind in the UK has significant future employment potential (including as alternative employment for offshore oil and gas workers), with skills required across engineering, science and specific to the sector.



Technological change, including the shift to electric vehicles, implies significant changes and job losses in the **German automotive sector** and its supply chains. It may also lead to net employment gains in other sectors, including electricity, infrastructure development, services and manufacturing. Adapting to new technologies will be essential to maintain the competitiveness of the industry.



In the **Romanian power industry**, the renewable sectors can provide new opportunities for highly skilled engineers and technicians from the coal workforce (more than gas), but this will need to be bolstered by a focus on labour-intensive energy-efficiency programmes.



Decarbonised steel production in Sweden will generate a high demand for STEM graduates, and a shift towards digital skills and competences in new production methods. It takes place in the context of a shift towards the circular economy that will drive demand for expertise in resource efficiency, material reutilisation and recycling.



Similarly, to successfully exploit the opportunities offered by innovation in **agriculture in Spain**, farmers will need a multidisciplinary skillset, including the ability to control machinery as well as knowledge of informatics, robotics, meteorology, chemistry and biology. In ageing and shifting workforces this will be challenging and require attention.

The report finds that decarbonisation policies can help build a European labour market that is more resilient to economic change and sustainable, as long as these policies are sufficiently tailored to manage the types of negative impacts described above. The findings of this report can also inform governments who need to design and implement recovery plans in the face of Covid-19.

Policymakers have started to grasp the range and depth of actions they need to take, and the EU already has experience and initiatives it can build on. However, greater coherence and resolve is required – some instruments will need to be adapted and strengthened, key approaches should be joined up to exploit synergies and avoid fragmentation, and new policies will need to be developed through a strong social dialogue.

Our recommendations for policymakers are as follows:

1 Commit to the European Green Deal and a clear and managed transition to a climate neutral economy

Action to mitigate climate change is not optional. New jobs in the low and zero carbon economy can help to mitigate the otherwise negative impacts of technological change on the labour markets. The future of the European labour market will depend on the EU's ability to remain competitive at a global level and achieve leadership in growing international markets for the design, production, assembly and marketing of clean products.

2 Develop a comprehensive vision to scale up skills and adaptability

It will be critical to support the European workforce to be as adaptable as possible to a changing work environment. Learning skills and lifelong learning approaches will be key to this, especially given the ageing demographic. The other important area for both future competitiveness and the climate transition is digital skills. The EU should bring together a comprehensive vision across policy areas, potentially through the industrial strategy.

3 Establish an inclusive economy through a just transition framework

The economic impacts of change will not be evenly distributed. Policymakers will play an essential role in ensuring that businesses and workers that are negatively impacted by the low carbon transition and the other megatrends receive sufficient support through investment in reskilling, redeployment and economic diversification. Regions with a high dependence on a single declining sector (such as coal) should be a priority for support as should sectors likely to face disruption in the near future, such as the automotive industries and agriculture.

4 Define a shared European agenda for the future of work

EU and member state policymakers will need to show leadership by working with businesses, educational establishments and social partners to identify sectors that will thrive in the future, and what skills gaps and shortages there are likely to be. Working together they can develop a regulatory framework for the future of work, including educational and vocational training programmes to equip workers with the skills that are likely to be in demand in the future. The EU and its member states should seek to share guidance and best practice.

5 Implement green and equitable Covid-19 recovery plans, while urgently addressing which skills will be needed for the future

Recovery plans will need to address both public spending, and policies that can incentivise business investment. It is essential that these recovery plans also consider the broader impacts of the changes covered in this report, and that they are aligned with longer-term goals including climate neutrality.

Well-designed and implemented climate policies can help improve how Europe manages megatrends and offsets some negative impacts.