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Labour and skills shortages in transport, energy, infrastructure and the digital sector

(own-initiative opinion)

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1. Conclusions and recommendations

1.1. The EESC highlights the increasing challenge of labour and skills shortages in the transport, energy, infrastructure, and digital technology sectors. These sectors are crucial for the prosperity and ecological sustainability of the EU and are central to the European Green Deal as well as to the future competitiveness of the EU. Additionally, the need for skilled workers and reforms in the education, health and care sectors is crucial in order to increase the labour supply and, in the case of education, to lay the foundations for the training of skilled workers.

1.2. The EESC believes that more ambitious measures are needed to ensure a just transition, which includes promoting quality jobs, increasing attractiveness of the relevant sectors, promoting productivity, balancing the labour market, and improving working conditions ([1]). This will also involve, among other things, upward social convergence, ensuring relevant training, introducing conditionalities for the allocation of public funds, strengthening collective bargaining and quality and social criteria, in strict compliance with CSRD standards, embedding the 'human in control' principle in the workplace ([2]), and striving to end precarious work and unpaid internships.

1.3. The EESC recommends that the Commission clearly define labour and skills needs, viewing skilled workers as a subset of the workforce with special qualifications. It is essential to take positive wage development and improved working conditions into account when determining labour and skill shortages. The EESC also suggests considering the normal duration of workforce recruitment by companies, economic fluctuations, short-term shortages, and the assessment of the social partners when defining labour and skills needs.

([1]) Opinion of the European Economic and Social Committee – Towards a just transition legislative proposal and EU policy tools that enable a more social European Green Deal (OJ C, C/2025/772, 11.2.2025, ELI: http://data.europa.eu/eli/C/2025/772/oj).

([2]) Opinion of the European Economic and Social Committee – Pro-worker AI: levers for harnessing the potential and mitigating the risks of AI in connection with employment and labour market policies (ongoing) deals with this in detail.

1.4. The EESC supports integration of underrepresented people in the labour market, acquiring skills, training and education, improving working conditions, and fair EU intra-mobility for workers and learners.

1.5. Many businesses face the problem whereby the workers they have trained often move to competing companies. To reduce disincentives and support businesses in providing on-the-job training, such as apprenticeships, the Member States could implement training funds managed in a tripartite way, respecting the features of different national systems. This fund may be primarily fed by companies and practical provisions shall be laid down by collective bargaining, whenever possible. The companies that train can then benefit by receiving support.

1.6. The EU Member States play an important role in meeting the demand for skilled workers. They should aim to reform education systems. In addition, publicly funded education and qualification measures should focus on economically and societally strategic sectors, identified in cooperation with the social partners and aligned with the EU's goals as articulated in the Green Deal.

1.7. The EESC emphasises that training third-country nationals in the EU and accelerating their integration into the labour market is preferable to recruiting talent from third countries.

1.8. The EESC suggests developing and financing targeted programmes, learner-centric guidance and coordinated learner support measures to facilitate the entry of underrepresented and disadvantaged groups into the labour market ([3]). These include women in STEM (science, technology, engineering and mathematics) professions, people with a migration background, people with a disability, and older workers.

1.9. Focusing on improving basic skills and proposing a STEM Education Strategic Plan could address the lack of qualified teachers in areas linked to science, technology, engineering and maths, and should also bring more girls and women into STEM education and careers. It is also important to give vocational education and training (VET) the prominence it deserves, as it prepares people for work and gives them the skills that companies are looking for, including through the proposed European Strategy for Vocational Education and Training.

1.10. The EESC welcomes the Commission's efforts to respond to the need for labour and skilled workers with an action plan, and calls on the EU institutions and the Member States to elaborate on the following aspects, in close cooperation with the social partners, considering the detailed remarks and recommendations, and to take regional cohesion perspective and economic, ecological and social perspectives into account when designing and implementing the action plan.

2. **Background**

2.1. Europe is facing demographic changes, characterised by an ageing population and declining birth rates, which are leading to a significant decline in the labour supply ([4]). Between 2009 and 2023, the working-age population in the EU decreased from 272 million to 263 million, and this is expected to decrease further. Technological developments require new and specialised skills, particularly in the areas of green technologies and digitalisation. Nevertheless, many businesses face difficulties in providing in-house training and professional development ([5]). The percentage of businesses providing training ([6]) varies greatly between Member States; across the EU-27 as a whole it fell from 60,2 % in 2015 to 54,9 % in 2020. Similarly, wages and working conditions ([7]) are causing both low- and high-skilled workers in some cases to migrate to more attractive jobs in other sectors. These developments have already led to increasing labour and skills needs in some areas in recent years, and it is expected that demand will continue to pose a challenge, both in policy terms and for businesses.

([3]) Monitoring and evaluating lifelong guidance systems across Europe, https://www.cedefop.europa.eu/en/publications/9196.
([4]) Decline in labour supply: Eurostat, https://ec.europa.eu/eurostat/databrowser/view/DEMO_PJANGROUP/default/table.
([5]) Enterprises providing training: Eurostat, https://ec.europa.eu/eurostat/databrowser/view/trng_cvt_01s/default/table?category=educ.educ_part.trng_cvt.trng_cvt_00.
([6]) CPD courses, Enterprises providing training as a % of all enterprises. Source: Eurostat.
([7]) Zwysen, Wouter (2023): Labour shortages – turning away from bad jobs. ETUI Policy Brief. Online: Labour shortages – turning away from bad jobs | etui.

2.2. Against this background, the European Commission presented an action plan ([8]) as part of a set of measures put in place during the 2019-2024 EU legislative period to address labour and skills needs. The action plan focuses on five strategic areas: (1) promoting the 'activation' of underrepresented groups in the labour market; (2) supporting the development of skills through education and training to meet current and future labour market needs; (3) improving working conditions and making jobs more attractive; (4) promoting the mobility of workers and learners within the EU; and (5) attracting talent from third countries. In this connection, the action plan stresses the importance of cooperating with the social partners. The EESC welcomes the direction taken by the action plan, but sees a need to define the terms and concepts set out therein more precisely and to ensure that sufficient financial resources are available.

2.3. There are skills mismatches and labour shortages across several sectors and these will continue to grow. In this regard, the Member States have an important role to play in providing proper basic education and labour market policies, as well as in promoting the education and integration of those third-country nationals who are already in the country. Employers have a similarly important role to play in increasing on-the-job training as they compete for workers by offering the most attractive jobs. The EESC believes that business also bear responsibility for meeting their need for labour, including skilled workers, by offering appropriate attractive jobs and job-specific training and qualification. At the same time the EESC is of the opinion that the Member States and the social partners should commit to bringing qualification, including vocational education and training (VET) into line with the need for skilled workers on the labour market ([9]). In this regard, the Member States and employers have an important role to play in financing and incentivising participation in training. Strengthening the social partnership boosts the quality of jobs and thereby helps meet labour demand.

2.4. Debates about labour shortages in the Member States are often lacking in real data and standardised definitions. In order to be reliable and representative, surveys and forecasts of labour and skills should be based on sound methodologies, so as to reveal real trends and challenges and to avoid representing singular perspectives, as in the case of those based only on open vacancies or business surveys ([10]). In order to justify and encourage public expenditure on labour market policy or other state measures, the terms 'labour demand' and 'skills demand' need to be clearly defined, reflect the added value for the public, be identified in cooperation with the social partners, and be focused on structural imbalances ([11]). In this connection, political and strategic objectives, such as achieving the objectives of the European Green Deal ([12]), could serve as the basis for state measures. In addition, clearly defined political objectives provide legal and planning certainty with a view to accurately assessing future need for skilled workers.

2.5. Surveys of labour and skills needs and the resulting mismatches are complex and produce divergent results owing to the different definitions, methods and data employed. Various studies highlight a marked demand for labour and skilled workers in the transport, energy, infrastructure and digital technologies sectors ([13]). Cedefop 2035 skills forecast suggests that shortages in highly skilled science and engineering occupations and for construction workers will remain substantial in the coming decade ([14]). Similarly, a demand for labour in these areas can already be inferred from statutory projects at national level. The EESC stresses the particular strategic and societal importance of these areas when it comes to implementing the EU's objectives as set out in the European Green Deal.

2.6. A mismatch can be identified between activities in terms of type and level of qualifications ([15]). Gender differences play a key role in this connection, and regional disparities exist. A mismatch among the higher-skilled workforce was witnessed across the middle level (ISCED 3-4), with a surplus of those with a third level completion certificate (e.g. bachelor's degree) and a lack of craft occupations (apprenticeships), i.e. the area in which businesses provide training.

([8]) European Commission, Action plan on labour and skills shortages.
([9]) Opinion of the European Economic and Social Committee – Professional Services in the green transition (OJ C, C/2025/765, 11.2.2025, ELI: http://data.europa.eu/eli/C/2025/765/oj).
([10]) Untangling labour shortages in Europe: unmet skill demand or bad jobs? https://www.cedefop.europa.eu/en/publications/6220.
([11]) This means a sustained surplus supply in specific areas coinciding with sustained demand in other areas.
([12]) The European Green Deal, European Commission: https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal_en.
([13]) Measures to tackle labour shortages: Lessons for future policy, Eurofound (2023): Online: https://www.eurofound.europa.eu/en/publications/2023/measures-tackle-labour-shortages-lessons-future-policy.
([14]) https://www.cedefop.europa.eu/en/tools/skills-forecast.
([15]) EURES (2022): Report on labour shortages and surpluses. Online: https://www.ela.europa.eu/sites/default/files/2023-09/ELA-eures-shortages-surpluses-report-2022.pdf.

2.7. The availability of women on the labour market is linked to a lack of childcare and care services for dependent people, two factors that are essential for women's participation in the labour market, along with many others, such as traditions and habits that often result in violence and harassment e.g. on public transport; the need for more family support, etc ([16]).. The EESC recommends EU-wide campaigns to foster equal access to work, improve working conditions in professions dominated by women, and increase the participation of men in these profession, as well as campaigns to get women to study, train and apply for high-skilled work in sectors where there is a shortage of skilled labour (STEM) ([17]), especially considering there are almost twice as many male STEM graduates as female ones as pointed out by the Draghi report ([18]).

2.8. The EESC calls on the Commission and the Member States to maintain the momentum of the European Year of Youth 2022 and the European Year of Skills by encouraging young people to work in the transport, energy, infrastructure and digital sectors, and sees a major need to refine existing training in key skills for these sectors throughout the value chain, and to tailor it to the specific needs identified.

3. **General comments**

Strengthening the participation of the social partners

3.1. The EESC stresses the need for more ambitious and comprehensive action, at both EU and Member State level, in order to address labour and skills shortages effectively. Improving social dialogue on skills policy, in line with the tripartite Barcelona Declaration ([19]) and the Val Duchesse Declaration ([20]), will support these measures.

Measures to improve working conditions

3.2. The EESC believes that more ambitious measures are needed to ensure a just transition, which includes promoting quality jobs, increasing attractiveness of the relevant sectors, promoting productivity, balancing the labour market, and improving working conditions. This will also involve, among other things, upward social convergence, ensuring relevant training, introducing conditionalities for the allocation of public funds, strengthening collective bargaining and quality and social criteria, in strict compliance with CSRD standards, embedding the 'human in control' principle in the workplace ([21]), striving to end precarious work, and unpaid internships.

Surveying needs

3.3. The EESC stresses the need for Eurostat to define labour and skills needs as uniformly as possible and emphasises the importance of leveraging surveys and other types of data to produce skills intelligence ([22]). The EESC proposes making the best use of the Corporate Sustainability Reporting Directive (CSRD) indicators in this connection, especially those linked to wage developments, pay equality between men and women within businesses, and plans for the advancement of women. Further indicators that can be observed include take-up rates of workers trained by public employment services and related institutions, average recruitment time, and job vacancy periods. Big data from online job ads can be leveraged to understand skill trends in real-time in occupations and sectors driving the green transition, such as renewable energy ([23]).

([16]) OJ C 443, 22.11.2022, p. 63.
([17]) See OJ C 429, 11.12.2020, p. 77, OJ C 100, 16.3.2023, p. 16, OJ C 75, 28.2.2023, p. 56 and OJ C 443, 22.11.2022, p. 63.
([18]) Report by Mario Draghi on The future of European competitiveness — Part A | Chapter 2, page 35, September 2024.
([19]) Tripartite Statement Barcelona EYS.
([20]) Val Duchesse Social Partners Summit (europa.eu).
([21]) EESC opinion on 'Pro-worker AI: levers for harnessing the potential and mitigating the risks of AI in connection with employment and labour market policies' (ongoing) deals with this in detail.
([22]) https://www.cedefop.europa.eu/en/publications/9190.
([23]) https://www.cedefop.europa.eu/en/publications/9197.

Empowering businesses to take responsibility for their own needs

3.4. Many businesses face the problem whereby the workers they have trained often move to competing companies. To reduce disincentives and support businesses in providing on-the-job training, such as apprenticeships, the Member States could implement training funds managed in a tripartite way, respecting the features of different national systems. This fund may be primarily fed by companies and the practical provisions shall be laid down by collective bargaining, whenever possible. The companies that train can then benefit by receiving support.

Training policy as a basis for qualification

3.5. The EESC welcomes the European Commission's objective, set out in the action plan, to support the development of skills through education and training. The basic ability to complete a specialised training course is laid down in the education system. The EESC recommends that the EU promote education policies that take primary education as their starting point, in order to avoid drop-outs and create equal opportunities.

3.6. The EESC stresses that measures to increase educational mobility can make a significant contribution to raising educational standards. While the EU Talent Pool helps to provide information on training opportunities, it remains very limited in terms of real provision of labour migration opportunities for migrant workers across skills levels and sectors. The EESC recommends that the service be broadened to include information on, and assistance with, applications for scholarships, and that measures be taken to curb 'bogus posting', so that the legal requirements for the cross-border posting of workers are not circumvented. In addition, the EESC recommends that the European Commission provide more European qualification grants for employees and jobseekers, targeted at up- and re-skilling, in order to improve their possibilities for upward career progression. Further, current access barriers that are set by national visa requirements should be tackled through efforts to introduce a single right of entry. There also needs to be more work done on recognising qualifications and skills obtained abroad and/or in non-formal and informal learning environments ([24]).

Qualifications in the area of labour market policy

3.7. The EESC believes that the 'skills intelligence' explained in the Draghi Report ([25]), meaning reliable, granular and comparable information on skills needs, existing stocks and desired flows within and across Member States, must be improved in order to guide investment in a more demand-oriented way and to be able to identify and close gaps.

3.8. In order not to be left behind in the development of AI in the EU, we need cross-border collaboration within the Union and enabling researchers, entrepreneurs, and institutions to work together more effectively which will allow the EU to break down silos between disciplines and sectors, thus promoting the development of new skills for the AI turnaround. This requires the introduction of a fifth freedom as called for by Enrico Letta in his Report ([26]).

3.9. The EESC highlights the role of labour market policy ([27]), as this can be used to train young people before or early on in their working lives, thus making an important contribution to meeting the need for skilled workers. In addition, active labour market policies can create specific measures when it comes to training, re-skilling and up-skilling, as well as attractive opportunities for those looking for a career change. The active involvement of the social partners, the VET sector, and - where relevant - regional players ([28]) is a necessary condition for success.

([24]) EESC opinion on 'Talent Mobility package', OJ C, C/2024/4067, 12.7.2024, ELI: http://data.europa.eu/eli/C/2024/4067/oj.
([25]) Report by Mario Draghi on The future of European competitiveness — Part A | Chapter 2, page 35, September 2024.
([26]) Enrico Letta's Report on the Future of the Single Market, April 2024.
([27]) OJ C, C/2023/870, 8.12.2023, ELI: http://data.europa.eu/eli/C/2023/870/oj.
([28]) https://www.cedefop.europa.eu/en/landing-page/EYS2023/message2.html.

3.10. The EESC points out that rapidly placing unemployed people on the labour market is at odds with labour market policy measures to ensure high-quality skills. To meet the need for skilled workers in the future, it is necessary to balance the objectives of labour market policy by tending away from rapid labour market placement towards the acquisition of long-term skills. The EESC calls on the European Commission, the Member States and the social partners to strengthen adult learning policies to make quality and inclusive adult learning for life skills a right for all adults, in order to meet and exceed the target of 60 % of adult learning participation per year. […] It is also important that investments, necessary reforms and effective social dialogue aimed at fostering skills development, in line with the first principle of the European Pillar of Social Rights on the right to training and lifelong learning, are embedded in the context of the European semester.

3.11. The EESC recognises the potential of the European Youth Guarantee, but points to the need for action to be taken in order to tap this potential. The European Commission should monitor the implementation of the Youth Guarantee by the Member States and assess their compliance with standards, ensuring sufficient funding and involving the social partners and public employment services in the Member States more effectively in its implementation.

Increasing the labour supply

3.12. The EESC supports the labour market integration of those furthest removed from the labour market. However, it considers that the concept of inactivity should also take into consideration structural factors such as discrimination against people with a disability, older people and those who are long-term unemployed. Additionally, those partially fit for work are often overlooked. The concept of participation and integration, on the other hand, places emphasis on the structural barriers to rapid entry into the labour market. These include the lack of sought-after skills, as well as, for example, occupational and age-related health restrictions, financial constraints, lacking career guidance skills, unawareness of one's own skills potential, distrust in institutions, and limited access to information. Participation-oriented labour market policies address the issues of recruitment discrimination, age-appropriate work, disability-friendly workplaces, and the necessary infrastructure, such as childcare places, etc., in order to support labour market integration.

3.13. The EESC sees age-appropriate work and a reduction in sick leave and drop-outs as further essential measures that can serve to increase the labour supply in the context of an ageing population.

3.14. In addition to boosting workers' qualifications, the European Commission's action plan also includes measures aimed at increasing the labour supply. The EESC welcomes measures aimed at ensuring sustainable participation in the labour market. Together with making the best of the Talent Pool, the EESC recommends increasing the potential of workers and professionals from third countries who are already in the EU. To this end, it is necessary to create opportunities to shift away from applicants for international protection (e.g. asylum procedure) towards a newly-created European residence permit for professionals ([29]). In addition, there is a need to invest in education and qualifications, to seriously clarify existing skills, and to ensure standardised recognition of qualifications. Last but not least, people in the asylum procedure must be given the opportunity to participate in the labour market and in training measures in those areas in which a need for training has been identified according to the criteria set out here, instead of being left in the asylum procedure for far too long, as is currently all too often the case.

3.15. The possibility for young asylum seekers and those granted asylum to undertake initial vocational training, with a view to remaining as long-term residents after completing their training, must be promoted.

([29]) Hinterberger (2023): *Regularisations of Irregularly Staying Migrants in the EU*: Regularisations of Irregularly Staying Migrants in the EU - 978-3-7489-1279-8 | Nomos Online-Shop (nomos-shop.de).

3.16. European funding should ensure that, in all Member States, the necessary language skills are properly and quickly acquired, that the host countries' basic education standards are attained, and that the possibility of further specialised training is available.

Brussels, 5 December 2024.

The President
of the European Economic and Social Committee
Oliver RÖPKE