



KINGDOM OF THE NETHERLANDS—THE NETHERLANDS

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SELECTED ISSUES

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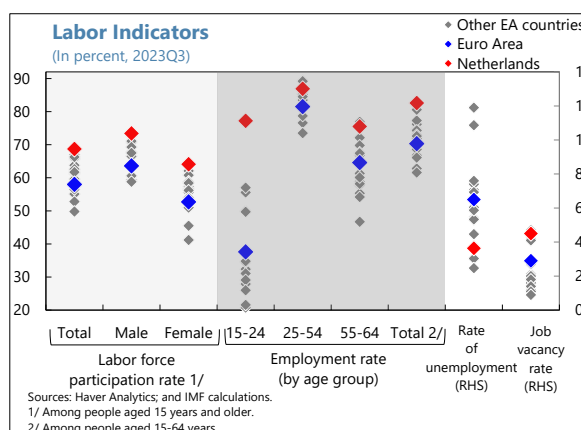
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LABOR MARKET SHORTAGES IN THE NETHERLANDS

The Dutch economy has long benefited from substantial openness to achieve high living standards and provide employment opportunities. However, the labor market has become exceptionally tight recently, with cyclical and structural factors contributing to the tightness. Rapid population aging and an ambitious climate agenda call for more efficient use of resources and productivity growth to maintain economic growth. A comprehensive approach is needed to address labor shortages, promote a more inclusive, flexible, and efficient labor market, and support economic growth. Policymakers should target measures that help increase market flexibility, activate the unemployed, incentivize longer working hours of part-time employees, promote longer working lives, restore the balance between different types of employment, secure adequate social protection of all groups, ensure a smooth transition from one job to another, and encourage innovation and technology adoption.

A. Market Overview

1. The Dutch labor market is strong, with record-high labor participation. At 68.7 percent as of 2023Q3 (among people aged 15 years and older), the Dutch labor force participation rate was the highest in the EA overall and among women, and the second highest among men (after Malta, text chart). Historically, the increase in the participation rate was primarily driven by women entering the labor force, which increased significantly over the last two decades, from about 54 percent in 2000 to 64.1 percent in 2023Q3. Labor force growth picked up notably in 2022, following post-Covid-19 recovery, with significant contributions from men and women, and accross broad age cohorts (Figure 1).



2. Amid high employment, the unemployment rate is at the lowest level in recent history (Figure 1). The Dutch employment rate has been on an upward trajectory since 2014, reaching a historically high level of 82.6 percent (among people aged 15–64 years) by 2023Q3—the highest in the EA overall and among the highest within broad age groups. The employment rate among women is the highest in the EA (79 percent as of 2023Q3 for 15–64-year-olds), albeit about 7 percentage points below that for men. Despite some marginal increase in 2023, the unemployment rate (3.6 percent as of 2023Q4) was at a historical low and among the lowest in the EA (only after Malta, Germany, and Slovenia).¹

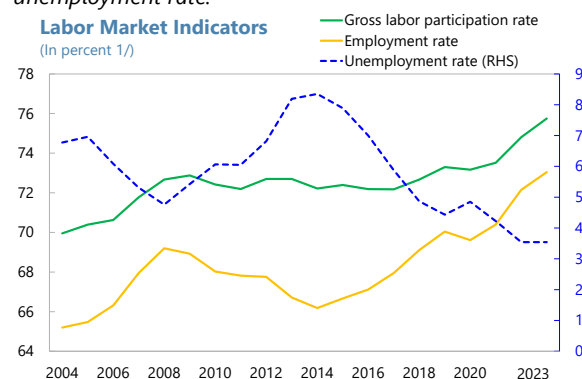
¹ Harmonized unemployment rate, seasonally adjusted quarterly figures.

Figure 1. Labor Market Indicators

The Dutch labor market registered record-high labor participation and employment rates, and a historically low unemployment rate.

Labor Market Indicators

(In percent 1/)

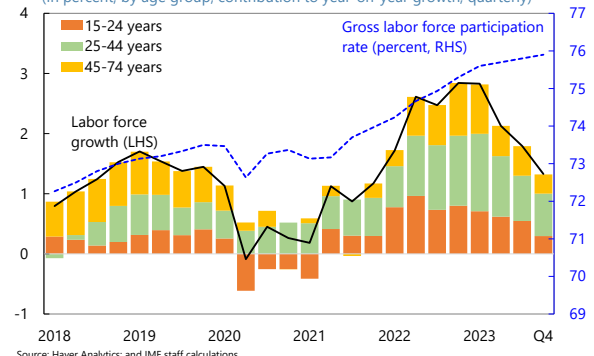


Sources: Haver Analytics; and IMF staff calculations.
1/ Labor force survey; ILO definition.

Labor force increased substantially in 2022, following the COVID-19 pandemic, with growth registered in all broad age groups, and decelerated in 2023.

Labor Force Growth

(In percent, by age group, contribution to year-on-year growth, quarterly)

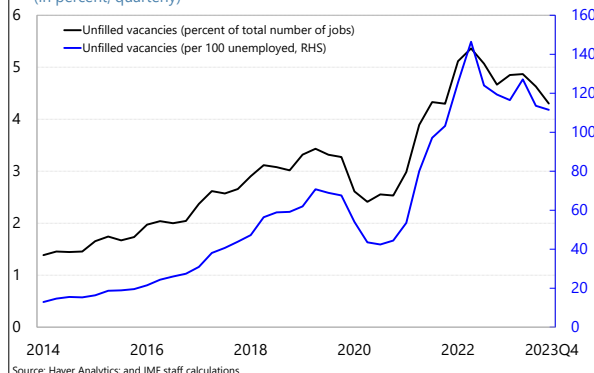


Source: Haver Analytics; and IMF staff calculations.

3. The labor market has become increasingly tight, with job vacancies at record levels. Several indicators point to a tight labor market, including the historically low unemployment rate and a high job vacancy rate (text chart). At 4.5 percent as of 2023Q3, the Dutch job vacancy rate was the second highest in the EA (after Belgium with 4.7 percent) and well above the EA average of 2.9 percent.² Relative to the number of unemployed, this was equivalent to about 113 vacant jobs per 100 unemployed, only exceeded by Germany in the EA (Figure 2).

Unfilled Vacancies

(In percent, quarterly)



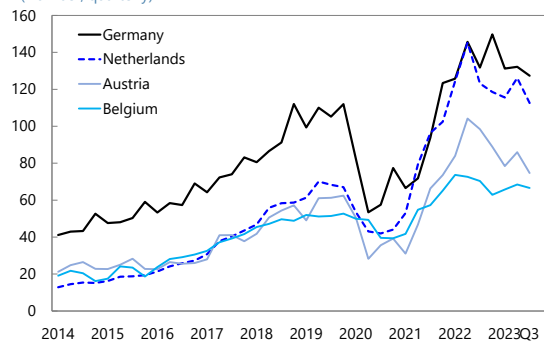
Source: Haver Analytics; and IMF staff calculations.

Figure 2. Job Vacancies per 100 Unemployed

Similarly to some peers, the Dutch job vacancies per 100 unemployed ratios have continued to increase steadily for over a decade,...

Vacancies per 100 Unemployed

(Number, quarterly)

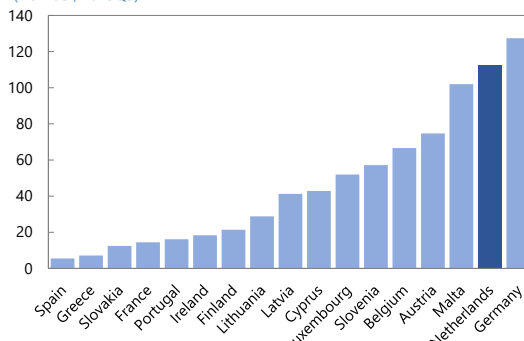


Sources: Haver Analytics; and IMF staff calculations.

...and is now among the highest in the EA, only exceeded by Germany.

Vacancies per 100 Unemployed

(Number, 2023Q3)

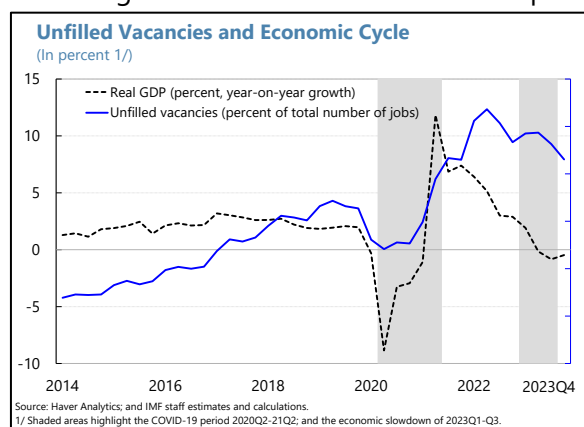


Sources: Haver Analytics; and IMF staff calculations.

² Total refers to industry, construction, and services (except activities of households as employers and extra-territorial organizations and bodies).

4. Cyclical factors of robust post-pandemic recovery further exacerbated the already tight labor market.

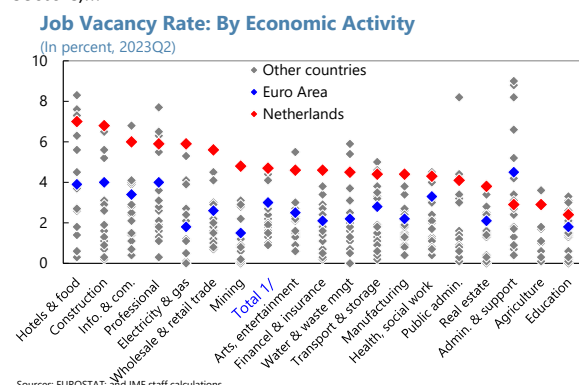
The Dutch labor market has been strong and resilient in the face of multiple—at times overlapping—shocks, including the COVID-19 pandemic, the energy shock and the inflow of refugees following the war in Ukraine, and the economic slowdown observed in 2023 (text chart). Before the COVID-19 pandemic, the Dutch labor market had already begun to experience labor shortages, and the pandemic had a relatively subdued effect on the labor market as the unemployment rate increased from 3.3 percent in late 2019 to 4.9 percent in 2021Q1 (among population aged 15–64 years). Following COVID-19, however, the remarkable post-pandemic recovery prompted labor market shortages in many countries. In the Netherlands, however, the post-pandemic recovery further exacerbated already existing labor shortages. Furthermore, following the war in Ukraine, about 30 thousand Ukrainian refugees had found work in the Netherlands by early 2023 (Gonne, 2023b). With workers challenging to find, firms resorted to hoarding labor, which helps explain why vacancies and unemployment only marginally changed during the economic slowdown in 2023.



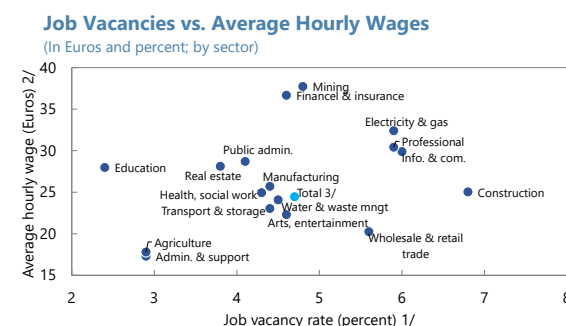
5. After the COVID-19 pandemic, labor shortages have become widespread across regions, sectors, and pay scales. Before the COVID-19 pandemic, most labor shortages were cited in occupations related to the information and technology sector and, to a lesser extent, in the care and well-being sectors, technical and pedagogical occupations (Gonne, 2023b). Lately, however, labor shortages have become widespread across industries, as the reported sector-level vacancy rates were among the highest in the Netherlands relative to other EA countries in mid-2023 (Figure 3). Labor shortages also became more widespread across pay scales, with no apparent strong correlation between the wage level and vacancies (Figure 3).

Figure 3. Job Vacancies: by Sector

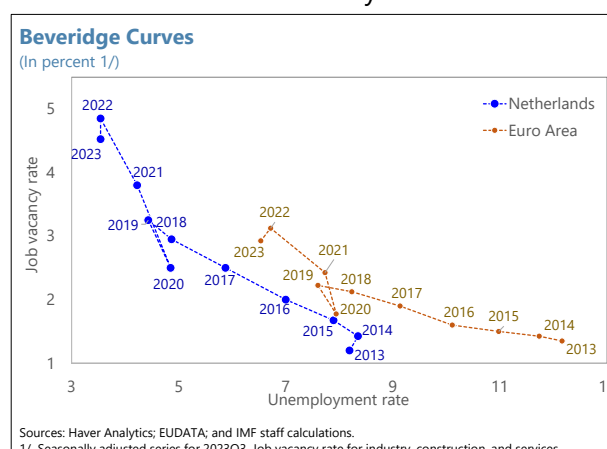
Job vacancy rates are among the highest in the EA in most sectors,...



...without strong correlation with wages.



6. **Following the COVID-19 pandemic, the imbalance between labor demand and supply has continued to widen, with further reduction in unemployment requiring larger increases in job vacancies.** The Dutch Beveridge curve shows a movement characterized by a faster increase in vacancies than the decline in the unemployment rate (text chart). Without a simultaneous rise in unemployment and job vacancy rates, there is no apparent evidence to suggest market inefficiencies in aggregate. Some steepening (or a shift of the Beveridge curve) may have occurred since the pandemic, indicating that more and more vacancies are needed for a slight decline in the unemployment rate to occur. Relative to the EA average, the Dutch curve is positioned leftward, indicating that a given level of vacancies is associated with higher unemployment rate in the EA, on average.



B. Structural Factors

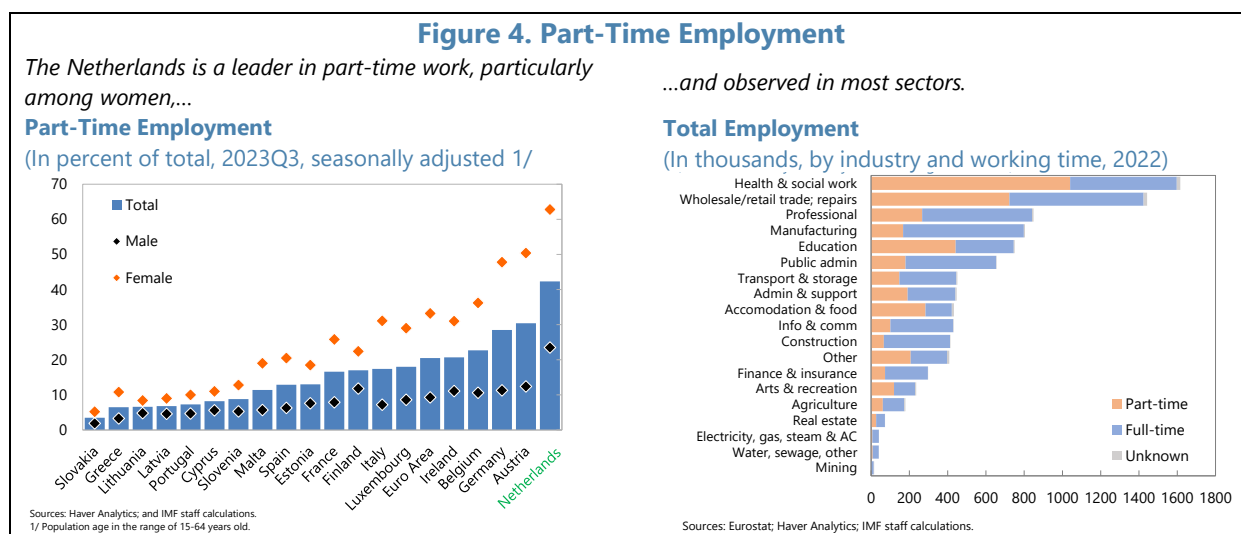
7. **The prevalence of non-standard employment helps explain labor shortages in the Netherlands.** Apart from the cyclical factors of the business cycle, structural factors, such as the prevalence of non-standard employment and skill shortages in key sectors, continue to shape the Dutch labor market.

Part-Time Work

8. **The Netherlands is a global leader in part-time work, particularly among women, contributing to the overall tightness in the labor market** (Figure 4). In 2023Q3, about 42 percent of all employed worked part-time in the Netherlands—the highest in the EA (with 20.5 percent on average). This ratio was the highest in the EA overall and separately for men and women. However, part-time work is distributed unequally between men and women, as nearly 63 percent of all employed women work part-time, compared to about 23 percent of men. The prevalence of part-time employment is structural in nature rather than cyclical, as the average working hours change only gradually with limited response to economic conditions (IBO Part-Time Work Working Group, 2019).

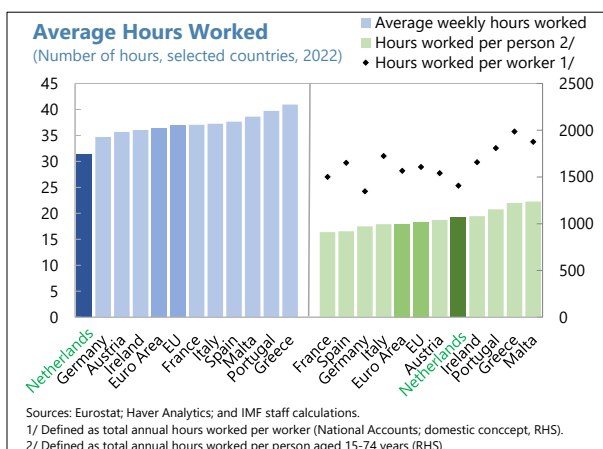
9. **Government policies and supply and demand factors led to the prevalence of part-time employment.** Historically, Dutch women joined the labor market later than in some other countries but did so rapidly and on a large scale. Given the country's wealth, a comfortable life did not require two incomes in a household. While the fiscal incentives focused on allowing women to stay home with children until the 1980s, efforts were made to bring women into the labor force and ensure that part-time workers' rights were comparable to those of full-time workers starting in the late 1980s (The Economist, 2015). Over the following few decades, female labor force participation and employment rates grew remarkably, particularly among women earning second incomes in a

household, while male employment increased only modestly. By 2014, the Netherlands had one of the highest employment rates for women within OECD countries (de Boer et al., 2022).

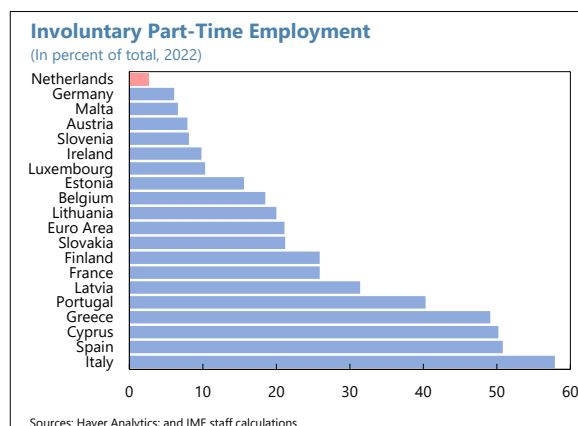


10. While the high incidence of part-time workers explains low average working hours, the Dutch hours worked per capita are above the EA average due to high participation rates.

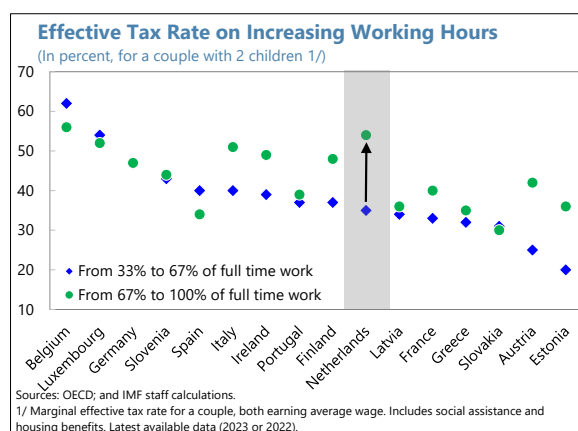
The average weekly hours worked by the Dutch employed are the lowest in the EA, reflecting the large share of part-time workers. However, due to high participation rates in the Netherlands, hours worked per capita are above the EA and EU averages (text chart). Additionally, women tend to work as much as men when paid and unpaid work is considered, giving rise to an imbalance and misallocation of human capital, resulting in gender gaps in earnings, wealth accumulation, and pensions, as well as slower progression into management positions (Gonne, 2023b). However, some indicate that when part-time work is taken into account, women attain management roles nearly as frequently as men (excluding top management) (The Economist, 2015). Having children imposes significant earnings penalties, as mothers' earnings tend to be about 46 percent below the pre-birth trajectory, while fathers' earnings tend to be unaffected by the birth of a child (Rabate et al., 2021).



11. Social norms and cultural factors play a significant role in explaining the prevalence of part-time work. Surveys show that the Netherlands has the lowest share of involuntary part-time employment in the EA (text chart). Non-financial reasons often explain the choice to work part-time, including child and elderly care, individual work-leisure preferences, time needed for themselves or to complete housework, training, or for reasons related to health, as well as social norms, which play a significant role. The complexity of the tax-benefit system may also contribute, as some individuals abstain from working more hours amid concerns that it would lead to the loss of benefits, given that benefits are often tied to the level of income (Gonne, 2023a).



12. Several reforms targeting longer working hours by part-time workers have been introduced to reduce average effective tax rates on the second earners. When a Dutch worker increases the hours worked toward full-time employment, their effective tax rates rise more than in many other EA countries (text chart). However, Cnossen et al. (2022) argue that several reforms have reduced the average effective tax rates on dual-earner couples over the past few decades, stimulating formal labor force participation. These include the increase in the earned income tax credit (EITC) for working taxpayers, the EITC for working taxpayers with children, the introduction of tax rebates for childcare, and the removal of the transferability of the general tax credit. As the tax incentives to boost the participation of secondary earners become generous, the authors conclude that there is no need to incentivize secondary earners' labor supply through tax incentives further (Cnossen et al., 2022).



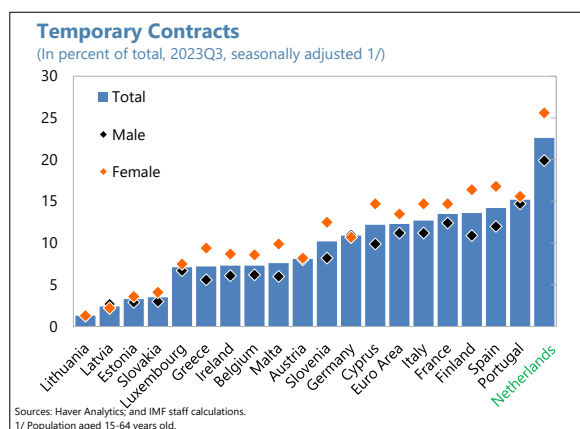
13. However, pockets of disincentives may remain. Gonne (2023a) contends that there are two instances where Dutch taxes and benefits discourage labor supply. First, at the intensive margin (hours of work), disincentives are strong for middle-income couples with children, which helps explain the large share of part-time employment. Second, at the extensive margin (participation), there are disincentives for single parents who depend on childcare services to enter employment. The current tax system provides preferential tax treatment for dual-earner households, incentivizing the “one-and-a-half” worker model, with one partner working full-time and the other part-time. The author argues that there is still room to reduce disincentives arising from childcare, schooling, and leave arrangements and reduce the “maternity penalty.”

14. Stimulating labor supply through further tax incentives would likely have limited overall effects. The literature (Cnossen et al., 2022) shows that while labor supply elasticities of women in couples (mostly second earners) are higher than those for men in couples, female labor supply elasticities have declined substantially over the last few decades. Empirical studies show that labor supply elasticities for married women are higher than in other countries in relative terms but still small in absolute terms, with the extensive margin (participation) generating most of the responsiveness. These results suggest two conclusions. First, further tax cuts to incentivize labor supply through the intensive margin (longer working hours) would have a limited effect on the labor supply. Second, with the extensive margin already at an all-time high, the remaining potential of stimulating even greater labor force participation by tax-benefit reforms is also limited (de Boer et al., 2022).

15. However, single parents and working mothers with young children would likely have greater response of labor supply to tax incentives. Labor market reforms have already reduced the effective average and marginal tax burden on the second earner. Further reductions in marginal tax rates for secondary earners will likely have little effect on hours worked. Therefore, it is more important to focus on instruments and groups more sensitive to such measures (Caminada et al., 2022). The literature suggests that policies targeting single parents and working mothers with young children (such as increases in-work tax credits for secondary earners and childcare subsidies) would likely generate a more significant labor supply response (de Boer et al., 2022).

Temporary Work

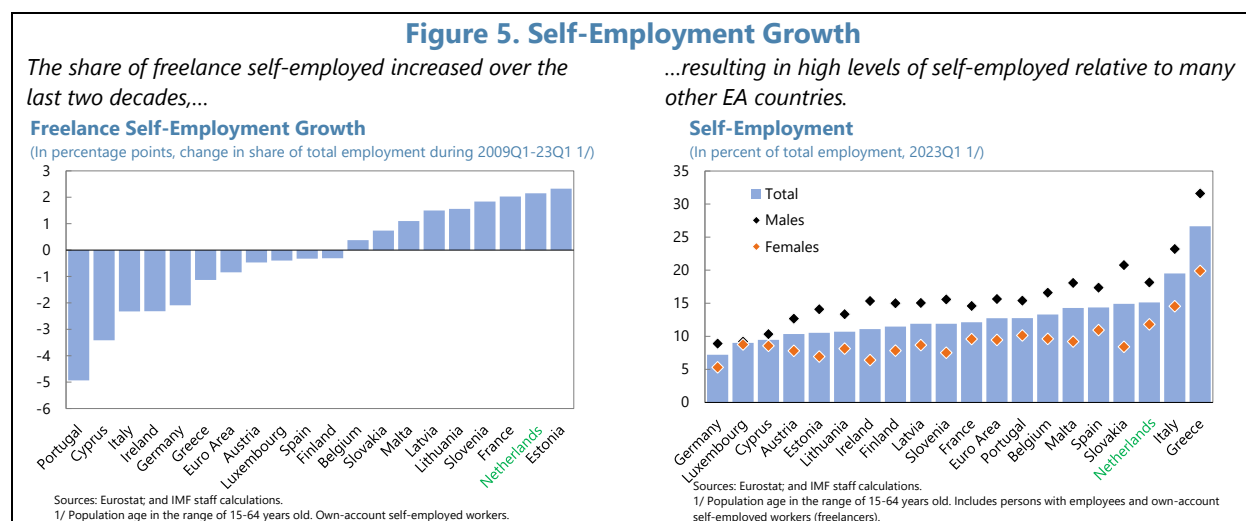
16. Temporary contracts are also prevalent in the Netherlands (text chart). The number of temporary jobs—fixed-term and “on call” contracts, and temporary agency work, among others—increased over the last couple of decades. Temporary workers have less job security and were more hit by the recession during the global financial crisis in many European countries (International Labour Organization, 2016). There are also fewer incentives to provide training to temporary workers.



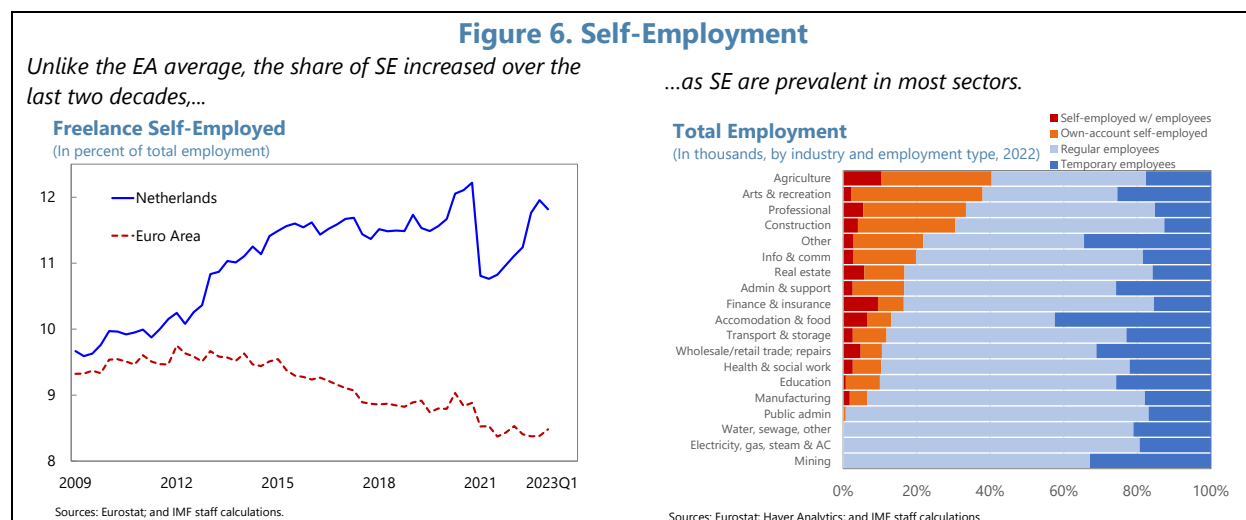
Self-Employment

17. A significant growth in freelance self-employed (SE) has occurred over the last two decades, increasing the fragmentation of the Dutch labor market (Figure 5). While self-employment does not increase labor shortages, it often leads to labor market fragmentation, impeding workers’ ability to transition between occupations and further contributing to a tight labor market. While SE often enjoy more freedom than employees, they also have less social protection: no unemployment and disability benefits, no coverage against risk of accidents at work, no occupational pension, giving rise to labor market duality between employed and SE persons. There

are also concerns about pension adequacy for the SE, as there is evidence that SE workers with lower earnings may not have sufficient funds in retirement (OECD, 2019).



18. While the share of freelance self-employment in the EA has declined in recent decades, consistent with the declining importance of agriculture, the share of SE in the Netherlands increased and remains elevated (Figure 6). There are various reasons why workers may prefer self-employment over traditional employment. Workers in sectors with higher personnel shortages or industries with highly regulated pay sometimes choose freelance employment to earn more or have better working conditions (for instance, the care sector; Jacobs, 2020). Others opt for self-employment if they cannot find a job, which can sometimes lead to precarious positions, as about 6 percent of SEs have a higher risk of poverty.



19. However, in general, the growth in SE has been credited mainly to tax incentives. Growth in non-standard work in the Netherlands is largely attributed to institutional factors. First, significant differences in the tax treatment between employees and the self-employed can shift employer-employee preferences toward self-employment and encourage misclassification (OECD, 2019). The SE in the Netherlands have considerable tax advantages over the employees, the most

important of which are the self-employed allowance and the SME profit exemptions (Bovenberg et al., 2022). Second, the relative compliance cost with the employment protection regulation can encourage firms to look for alternative contractual arrangements, such as temporary contracts or self-employment arrangements (OECD, 2019). Thus, the lower tax burden and cost of compliance on SE than on employees at the same income level also contribute to labor market duality and fragmentation.

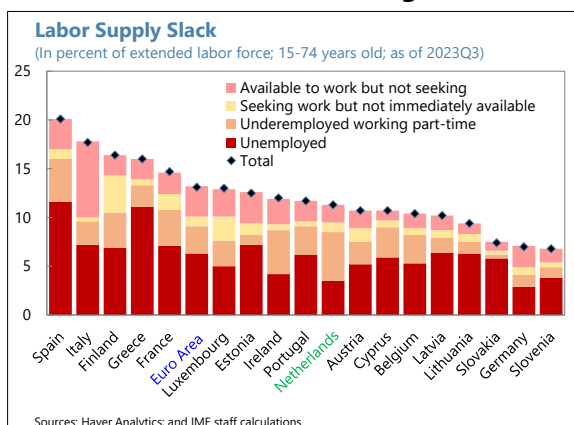
20. The SE are often able to offer their services at a lower price than employees on the labor market but are also less productive. Bovenberg et al. (2022) point out that employees are more expensive than the self-employed up to 44 percent at the minimum income level, as much as 73 percent at the average income level, and 58 percent at twice the average income level. Empirical studies also show that the SE are less productive than employees, even after correcting for self-selection, as they may benefit less from company-specific training, for instance (Bovenberg et al., 2022).

Skill Mismatches

21. Skill mismatches create bottlenecks and exacerbate labor shortages in sectors relevant to greater digitalization and low-carbon transition. The shortages of personnel in engineering and Information and Communication Technology (ICT) sectors are felt across the economy. Given the country's ambitious climate agenda, green skills are in high demand. In October 2022, some 48 thousand vacancies for jobs related to energy transition remained unfilled. Most vacancies were open for designers, architects, IT systems analysts, electricians, solar panel installation technicians, electric car charging station installers, accountants, administrators, and project leaders for the construction sector and installation businesses (NL Times, 2022). In the future, even more professionals will be needed to achieve its goals. Gonne (2023b) highlights a study, which finds that reducing greenhouse gas emissions by 55 percent by 2030 could create about 28 thousand new technical jobs, in addition to the already existing 26 thousand full-time equivalent jobs employed in the Dutch energy sector.

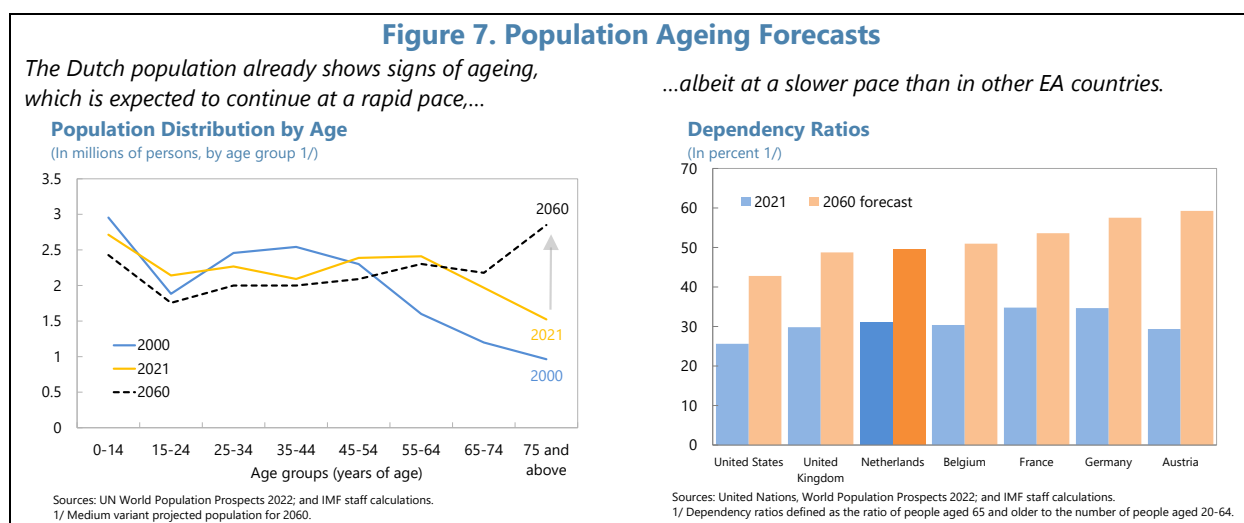
C. Key Challenges Ahead

22. The Dutch economy may already reach limits in several areas, including labor. The Dutch electricity grid reaches capacity at peak times and requires investment. Land shortages and nitrogen emissions limits impede more housing supply. Labor shortages already exist in most sectors. Over time, labor shortages could lead to higher wages and inflation, potentially eroding Dutch enterprises' competitiveness. This underscores the importance of fully utilizing available labor resources. Albeit lower than the EA average, aggregate numbers suggest some remaining labor supply slack in the economy.



However, with a large share of the population working part-time voluntarily, much of the remaining labor reserve cannot be easily activated (text chart).

23. Labor and skill shortages weigh on growth prospects, green transition, and digitalization. The Dutch population continues to age rapidly, although forecasts suggest a slower pace of population aging than in some other EA countries (Figure 7). With population aging and climate change, labor and skill shortages will likely become more severe. Labor shortages in ICT, green technology, health care, and social work, already among the highest in the EA, are expected to worsen. This is due to the projected increase in the old-age dependency ratio from 31 to 50 percent between 2021 and 2060.³ With the ambitious climate agenda, there is also a need to create and fill new skills and jobs.



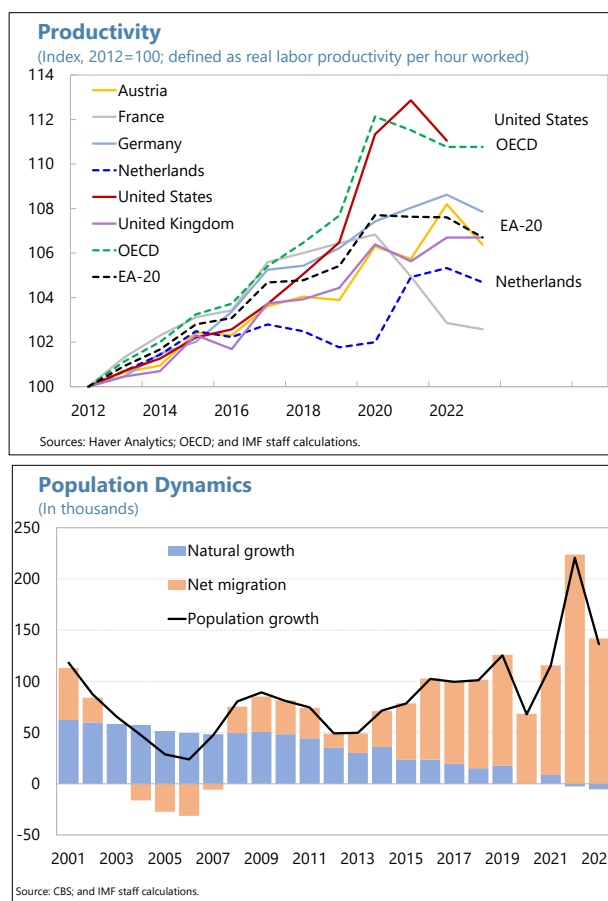
24. While the impact of the green transition on employment is expected to be limited, significant shifts will occur across sectors, enterprises, occupations, and regions. Studies suggest that the green transition will likely trigger a structural change in employment away from carbon-intensive and towards greener production processes, resulting in a relatively small number of jobs in high-emissions sectors that are lost with little chance of re-absorption in other sectors (Vandeplas et al., 2022).

25. Over the last decade, Dutch economic growth has been significantly driven by labor input, with productivity lagging its peers. Ando (2022) indicates that labor input growth has been the main contributor to the solid real GDP growth in the Netherlands, and productivity has been lagging some other advanced economies and its peers. The author suggests that the slowdown in Dutch productivity growth is likely driven by exogenous shocks (e.g., climate events and policy decisions) and structural challenges, which include labor market duality, skill mismatch, and weak

³ Estimate based on World Population Prospects (2022) published by the UN and defined as the ratio of persons aged 65 and above to those aged 15–64 years. Using population projections of the Dutch Statistics Office, the old-age dependency ratio—the ratio of persons aged 65 and above to those aged 20–64 years—is projected to increase from 34.1 in 2022 to 46.2 in 2060.

investment. Dutch labor productivity—defined as real GDP growth per employed person— has grown in line with the EA average. However, productivity per hour worked, defined as real GDP per hour worked, increased by 4.7 percent (text chart) but below the EA average (6.7 percent). Similarly to other EA countries, however, the Dutch productivity growth is also well below that of the United States and the average for the OECD countries (10.8 percent).

26. Greater productivity is critical for future growth. Amid population aging, maintaining or raising living standards over the long term will likely require a combination of faster productivity growth, higher labor force participation rates and longer working hours, and immigration, particularly of young workers. With population aging already affecting population dynamics, migration has dominated population growth amid declining natural growth dynamics since 2015 (text chart).



D. Dutch Labor Market Policies

27. Several labor market policies have already been introduced to reduce labor market duality and ease labor shortages. For instance, to establish a more level playing field between employees and freelance SEs, the authorities have introduced and accelerated a phase-out of the SE person's tax deduction by 2027. To allow a more even distribution of duties, paid parental leave and allowance were increased from 50 percent to 70 percent of the maximum daily average. To reduce labor shortages, pilots in healthcare, education, and childcare focused on increasing hours worked by women. To improve navigation of the tax-benefit system, a free online tax-benefit calculator was provided to help understand the complex tax-benefit system.

28. Furthermore, a package of reforms is being discussed to further improve the labor market's functioning. For the SE, mandatory disability insurance is being considered. Efforts to tackle false employment, provide the definition of and conditions for employment (and SE), and reduce work uncertainty by restricting zero-hour contracts are also underway.⁴ Considerations are also given to allowing greater employer flexibility in times of stress, for instance, by enabling firms more flexibility in reducing hours in tail-risk events. Greater access to childcare is discussed as an essential factor in participation decisions, but it faces challenges due to labor shortages. Measures to improve labor market opportunities for women with a migration background and efforts to

⁴ In a zero-hour contract, an employee has no fixed hours, and can be spontaneously called in to work when needed.

streamline the tax-benefits system are ongoing. On digitalization, shortages of ICT staff are more prevalent among SMEs. Efforts to address ICT staff shortages are continuing, including tracking shortages at the regional level, improving student enrollment in sciences, technology, engineering, and mathematics (STEM), including among women, and discussing the use of Artificial Intelligence (AI) with social partners.

E. Other Countries Policies: Examples

29. The EU member states employ various measures to address labor shortages, which vary depending on the policy context and underlying drivers. Labor shortages are not unique to the Netherlands, with many EU countries struggling to fill vacancies. EU member states have introduced various policy measures to help relieve these shortages. Eurofound (2021, 2023) studies provide examples (Figure 8) and classify them into three categories of measures that focus on: i) attracting labor; ii) activation of underutilized resources and retaining labor; and iii) enhancing the use of existing labor and retaining labor.

30. Measures to attract labor are often used to address quantitative labor shortages, including from declining population. Measures that focus on attracting labor into countries, regions, industries, or occupations that lack labor seek to address quantitative shortages (an absolute labor shortage) but can also be used to support qualitative labor shortages (skills mismatches between supply and demand). These measures often aim to address drivers of shortages that include declining population and unattractive employment and working conditions. Measures in this group include (Eurofound, 2021):

- *Enhancing the appeal of specific sectors, such as health and social care, education, and hospitality sectors.* Due to the prevalence of labor shortages in the health sector, measures often focus on pay, working conditions, and training of workers in the health and social care sectors. For instance, Belgium, Germany, and Hungary have adopted multifaceted approaches, which include actions related to pay and working conditions (e.g., Germany), foreign labor recruitment and ongoing training (e.g., Belgium, Germany), and enhancing the broader image of the sector (e.g., Belgium). Raising awareness of specific sectors is also used to address the underrepresentation of women in STEM occupations (e.g., Austria, Belgium, Portugal, Finland, Estonia).
- *Enhancing the appeal of living and working conditions in a region.* These measures focus on attracting specific groups of workers, such as high-level professionals, to countries/regions and assisting in their integration and that of their families (e.g., Austria, Germany, Latvia).
- *Active migration policies, such as encouraging the return of own nationals and managed migration to reduce labor shortages in specific sectors and integration of refugees.* Some actions focus on encouraging the return of own nationals (e.g., Lithuania, Portugal, Slovenia), for instance, by making the return locations more attractive, assisting with matching with opportunities in home countries, sharing experiences of those who return, and offering opportunities to establish own business, offering “one-stop-shop” services to help with job search and administrative requirements. Managed migration policies are also used to reduce

labor shortages. Employers in shortage sectors sometimes benefit from exemption from labor market tests (e.g. Austria, Belgium, France), quotas (e.g. Croatia, Italy), access to a points-based system (e.g. Austria), reduced minimum income threshold requirements (e.g. Estonia, Greece, Ireland), easing of access for groups that are already in the country, such as students (e.g. France, Germany), more favorable conditions for family reunification (e.g. Ireland), integration of refugees and asylum seekers into the labor market (e.g. following the war in Ukraine, many countries have taken measures to integrate them into their labor markets).

31. Measures that aim to activate underutilized resources (underemployed or inactive groups) primarily target low participation. Measures in this category often address work-life balance, including improving the under-representation of women in the labor market. These initiatives take on different forms, including adjustment in family leave schemes by placing equal sharing of caring responsibilities and leave, improving access to more flexible working arrangements, and greater access to child- and long-term care facilities. (e.g., Spain, Slovenia, Estonia). Other measures aim to improve childcare availability and support the integration of specific groups (e.g., overcoming non-skills-related barriers to integrate vulnerable groups), among others. Concerning childcare, most EU countries offer free early childhood education and care in the last year before school starts (Eurofound, 2021).

32. Measures that aim to enhance the use of existing resources and retain labor broadly aim to address qualitative shortages. To improve matching between demand and supply, many countries use skills forecasting to adapt vocational and ongoing training systems to identify future labor shortages. Some countries go further to integrate broader government development strategies with training and job creation. Some measures aim to improve the match between the education system and labor market needs, including with the involvement of social partners. To address skills mismatches, measures focus on enhancing the delivery of transferable skills through education and training. To minimize burnout, measures also target preventing early exit from the labor market (Eurofound, 2021).

33. Labor shortages in sectors with challenging working conditions, such as health and long-term care, are prevalent in many EU countries. The impact of the COVID-19 pandemic has contributed to the shortages of health and long-term care workers in many countries. Population aging will continue to amplify labor shortages in health and long-term care sectors and subsequently in other sectors if a lack of healthcare personnel results in treatment delays for health conditions. To address shortages, measures primarily focus on pay and working conditions, and the focus on pay often needs to be accompanied by measures to enhance working and living conditions. For instance, Germany employs a comprehensive approach to address training and ongoing qualifications, working conditions and remuneration, care planning, attracting skilled workers from abroad, enabling migrants already living in the country to obtain recognition of qualifications gained abroad, and vocational training. Austria supports training in shortage occupations, covering the cost of living during training. Spain aims to prevent early market exit and burnout by delivering medical and social support and legal services (Eurofound, 2023).

Figure 8. Selected Measures to Address Labor Shortages

Group	Measure	Description	Examples of countries using approach
Attract labor			
Enhance the appeal of certain sectors	Enhancing the attractiveness of training for certain (vocational) <u>sectors/occupations</u> .		Austria, Germany, Hungary, Luxembourg, Romania
	Improving pay and working conditions in specific sectors (e.g. health and care), incl. regular review of minimum wage.		Belgium, Bulgaria, Croatia, Estonia, Finland, Germany, Hungary, Lithuania, Luxembourg, the Netherlands, Slovakia, Slovenia, Sweden
	Awareness raising of sectors		Austria, Belgium, Finland, Estonia, Malta, the Netherlands, Portugal, Sweden
Enhance the attractiveness of living and working conditions in a country/region	Attracting specific groups of workers, such as high-level professionals, to countries/regions and assisting in their integration and that of their families.		Austria, Finland, Germany, Latvia
Active migration policies	Setting up specific migration policy projects based on access requirements for high-, medium-, and low-skilled staff in specific sectors (incl. points-based immigration system, creation of catalogues of shortage occupations, easing of salary criteria and quota system, and easing of admin. requirements).		Austria, Belgium, Cyprus, Czech Republic, Estonia, Finland, France, Germany, Hungary, Ireland, Latvia, Lithuania, Malta, the Netherlands, Poland, Portugal, Slovenia, Spain
	Setting up agreements with specific countries and prolonging the stays of third-country nationals.		
	<u>Setting up specific schemes to support the rights of seasonal workers.</u>		Croatia
	Offering vocational training with integrated language training for migrants.		Sweden
	<u>Encouraging the return migration of diaspora.</u>		Lithuania, Portugal, Slovenia
Improving recruitment strategies at company level	Providing company-level examples of enhanced recruitment practices		Austria, Malta, Poland
Activate underutilized resources and retain labor			
Addressing geographical barriers	Support for mobility		Austria, Croatia, Latvia, Lithuania, Sweden
Addressing work-life balance	Providing support for childcare		Malta
	Enhancing work-life balance policies, including the encouragement of a better <u>balance in caring responsibilities between men and women.</u>		Estonia, The Netherlands, Slovenia, Spain
Active labor market policies and other measures to support the integration of specific groups	Overcoming non-skills-related barriers to integration for vulnerable groups in the labor market, including long-term unemployed, workers with disabilities, <u>and migrants and refugees</u>		Belgium, Bulgaria, Czech Republic, Denmark, Germany
	Improving rehabilitation services to allow workers to return from long-term sick leave, unemployment or inactivity		Austria, Estonia, Romania
Enhance the use of existing labor and retain labor			
Improved matching between supply and demand	Using skills forecasting to adapt vocational and ongoing training systems to <u>identify future shortages</u>		Croatia, Estonia, Greece, Latvia, Lithuania, Malta
	Integrating broader government development strategies with training and job creation (taking account of digital transformation and artificial intelligence).		Ireland
	Improving the match between the education system at all levels and labor market needs through regular updating, including with the involvement of <u>social partners</u> .		Bulgaria, Germany, Latvia, Lithuania, The Netherlands (technology sector), Poland, Spain
Addressing skills mismatches	Introducing and developing dual education pathways.		Slovakia
	Enhancing the relevance of transferable skills in vocational training systems, <u>including digital and soft skills.</u>		Finland, Ireland
Improved matching systems	Improving career guidance and counselling.		Greece
	Better validation and certification of existing skills and non-formal and informal <u>education.</u>		Croatia, Cyprus, Sweden
	Implementing active labor market policies (training) to provide a better match <u>between bottleneck occupations and jobseekers</u>		Austria, Belgium, Bulgaria, Croatia, Cyprus, Estonia, Finland, Germany, Latvia, Romania
	Delivering workplace-tailored training (e.g., by public employment service).		Austria, Belgium, Cyprus
	Greater emphasis in active labor market policies on in-work training.		Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Greece, Ireland, Italy, Latvia, Slovenia
Enhancing the preparation of employees for labor market change	Providing support for the delivery of lifelong learning, including digital skills.		Austria, Belgium, Latvia, Luxembourg, Sweden
	Ongoing assessments of vocational requirements (including mid-career <u>assessments</u>).		Croatia, Germany
Enhancing the use of existing labor through employee sharing	Addressing labor shortages through employee sharing.		Czech Republic, the Netherlands
Preventing early exit from the labor market	Providing support for active age management strategies and promoting the <u>retention of the work ability of older workers.</u>		Lithuania, Romania, Slovenia
	Pension reform and other (non-skills-focused) measures to retain older <u>workers.</u>		Croatia, Estonia, Slovakia, Slovenia

Source: Eurofound (2021), Tackling labour shortages in EU Member States, Publications Office of the European Union, Luxembourg.

For details, see <https://www.eurofound.europa.eu/en/publications/2021/tackling-labour-shortages-eu-member-states>

34. Sectors requiring advanced skills, such as ICT, also experience labor shortages, primarily driven by insufficient matching of skills supply and demand and foresight deficiency. A relatively small share of women in this sector also contributes to shortages in the EU overall and specifically in the Netherlands, where part-time work in ICT is not a common practice, inhibiting representation of women further, as a large share of Dutch women prefer to work part-time. Wages tend to be higher in ICT than the national average and act as a pull factor, enticing employees from other occupations. Nevertheless, about 6 percent of European enterprises had hard-to-fill vacancies for jobs requiring ICT specialist skills in 2022, up from 3.4 percent in 2014. In 2022, the share of enterprises with hard-to-fill vacancies for jobs requiring ICT specialist skills was the highest (more than 10 percent) in Malta, Denmark, the Netherlands, and Belgium. Measures to address labor shortages focus on raising awareness, providing female role models, and delivering training, including to women (Eurofound, 2023).

F. Policy Recommendations

35. The high degree of integration of the Dutch economy has served the country well, supporting international trade, providing jobs, and boosting economic growth. The Dutch economy has long benefited from substantial openness to achieve high living standards, with trade and foreign direct investment among the highest in the world and hosting a myriad of multinational companies. This integration and globalization have offered employment opportunities, creating jobs in many sectors. However, the labor market has become exceptionally tight recently, with employment and labor force participation rates at an all-time high and low unemployment rate. Despite some easing since mid-2022, vacancies are among the highest in the EA overall and in most sectors. Both cyclical and structural factors—including the prevalence of non-standard employment, labor market fragmentation, and skill mismatches, particularly in the ICT and sectors related to the green transition—have contributed to labor market tightness.

36. Rapid population aging and an ambitious climate agenda call for more efficient use of resources and productivity growth to maintain economic growth. The prevalence of land shortages, nitrogen emission limits, electricity grid limitations at peak times, and labor shortages suggest that the economy may already reach capacity in some respects. While limitations of the Dutch electricity grid at peak times could be addressed with additional investment to expand capacity, land and emissions limits constitute hard constraints, while relieving labor shortages requires policy actions. Over time, labor shortages—exacerbated by population aging—may lead to higher wages and inflation, potentially resulting in Dutch enterprises losing competitiveness. Personnel shortages may hinder the government’s ambitious climate agenda, while the lack of healthcare workers will worsen as the population ages. Making the best possible use of the remaining labor potential is becoming increasingly important, fostering development in priority sectors, and increasing productivity growth, which has been lagging some peers during the last decade.

37. A comprehensive approach is needed to address labor shortages, promote a more inclusive, flexible, and efficient labor market, and support economic growth. With the high labor participation rate, any gains through the extensive margin (more people working) will likely

generate limited additional yields. As a result, policymakers should target measures that help increase market flexibility, activate the unemployed, incentivize longer working hours of part-time employees, promote longer working lives, restore the balance between different types of employment, secure adequate social protection of all groups, ensure a smooth transition from one job to another, and encourage innovation and technology adoption. Potential broad areas include:

- *Continue efforts to establish a more level playing field between different types of employment, including employees and the SE.* For the SE, mandatory disability insurance to enhance the social protection of the SE should be established, and pension arrangements for the non-traditional types of employment should be reviewed to ensure adequacy after retirement. Efforts to tackle false employment, provide the definition of and conditions for employment (and SE), and reduce work uncertainty by restricting zero-hour contracts should also continue. Allowing greater employer flexibility in times of stress, for instance, by enabling firms more flexibility in lowering hours in tail risk events, should help bridge the gap between employees and the SE.
- *Address labor and skill shortages by incentivizing part-time workers to increase hours worked.* With labor force participation among the highest in the EA, including for women, there is limited remaining potential to stimulate the extensive margin (participation). Efforts should focus on the intensive margin (hours per employed worker). Access to child and elderly care should be improved in a fiscally sustainable manner. Childcare access should help relieve the maternity penalty and reduce gender norms restricting labor supply. Over the medium term, the tax-benefit system should be streamlined to reduce complexity.
- *Promote training and labor mobility towards priority sectors (green transition, digitalization, health).* Upskilling the existing labor force to facilitate worker transition from declining to growing sectors should help with worker mobility. Efforts should focus on adjusting active labor market policies by reorienting training towards addressing skill shortages in priority sectors and continuing to enhance and target lifelong learning programs to support the acquisition of new skills and improve productivity. For older workers, lifelong learning would help support longer working lives by increasing their potential and improving their mobility and employability in the labor market (OECD, 2018).
- *Improve education quality to prepare the future workforce better.* To help relieve future labor shortages, efforts should target skill development, vocational training, and STEM education by stimulating interest at a young age and encouraging female interest and participation. Attracting qualified personnel to fill positions in health, ICT, and green transition occupations will become increasingly complex, with more European countries facing labor shortages. Investment in education should help enhance learning and sustain the supply of human capital and skills.
- *Optimize migration.* Better integration of migrants into the market, including through language training, job search support, and streamlining and accelerating the existing processes of recognition and validation of qualifications acquired abroad for skills that are in shortage.

- *Undertake broader policies to support productivity.* Supporting research and development and encouraging labor-saving innovation and productivity-enhancing investment should continue to help revive business investment.
- *Consider measures to adopt technology, including robotics, automation, and AI to help reduce labor shortages and stimulate productivity.*

38. The Netherlands, already a European digital frontrunner, is well-positioned to leverage digitalization to help address labor shortages and boost productivity. Labor policies should align with evolving worker preferences, such as telework and remote work access (Duval et al., 2022). The country's robust digital infrastructure, evidenced by its high rankings in internet access and digitalization, proved invaluable during the COVID-19 crisis. However, the pre-pandemic shortage of IT professionals, particularly among SMEs, underscores the need for accelerated digital technology adoption in these sectors.⁵

39. AI and robotics hold significant potential across various sectors. Robots increasingly assist with complex tasks like surgery, supply transport, and drug dispensing in healthcare. An analysis by Cazzaniga et al. (2024) suggests that AI promises to boost productivity and growth, but its impact will vary by country. In general, however, advanced economies are more susceptible to AI but also are better positioned to benefit from AI, given their mature industries, service-driven economies, and higher concentrations in jobs requiring cognitive tasks. An analysis by PricewaterhouseCoopers (2023) suggests that over 44 percent of jobs in the Netherlands are highly (or very highly) exposed to generative artificial intelligence. In sectors like information and communication, finance, education, specialized business services, and public administration, over 75 percent of jobs are highly exposed. Notably, the study suggests that while technology reshapes jobs, it does not necessarily eliminate them. AI's dominance over repetitive and administrative tasks liberates workers from focusing on tasks that demand creativity and knowledge, underscoring AI's potential to enhance productivity and mitigate labor scarcity (PricewaterhouseCoopers, 2023).

⁵ The National Resilience and Recovery plan identifies digitalization as one of the key areas for investment, allocating 26 percent of the financing over 2023–26 to be invested in accelerating the digital transition by investing in quantum technology and digital upskilling and improving rail connectivity.

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