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COMMISSION STAFF WORKING DOCUMENT

2023 Country Report - Ireland

Accompanying the document

Recommendation for a COUNCIL RECOMMENDATION

**on the 2023 National Reform Programme of Ireland and delivering a Council opinion on
the 2023 Stability Programme of Ireland**

{COM(2023) 607 final}



European
Commission

Ireland

2023 Country Report



ECONOMIC AND EMPLOYMENT SNAPSHOT

The Irish economy continues its strong performance

Ireland's economy continued its robust growth, with a substantial contribution from multinationals. The country avoided a recession during the COVID-19 pandemic and recorded double-digit GDP growth of 13.6% in 2021 and 12.0% in 2022. Multinationals headquartered in Ireland contributed substantially to this exceptionally strong growth, as exports of information and telecommunication services and of medical and pharmaceutical products were the driving force behind the rapid real GDP expansion. The growth performance of domestic companies does not match that of multinationals; gross value added in sectors dominated by multinationals grew by 19.4% in 2022, compared with 7.2% in other sectors. This is also reflected in marked disparities between regions hosting multinationals (the areas in and around Dublin and Cork) and regions dominated by Irish-owned small and medium-sized companies (see Annex 17). The Irish financial sector is among the largest globally, with large international entities using Ireland as a gateway to the EU. Interlinkages with the Irish domestic economy remain limited. Irish SMEs and households mainly access finance through the local retail banking sector. The macroeconomic outlook remains positive, with real GDP growth projected at 5.5% in 2023 and 5.0% in 2024.

Disparities are evident for firms and social groups

Ireland's dual economy is marked by divergent economic performance. Over the past 20 years, labour productivity among foreign companies jumped fourfold, whereas domestic labour productivity grew by 30%. More recently, in 2021, while SMEs in Ireland grew by 5% in value added and 1.2% in employment, large enterprises grew by 20.2% and 3.3% respectively. Irish SMEs also export less than their European counterparts. Survey data shows the percentage of SMEs that do not export fluctuated between 58% and 65% over the past 5 years – well above the euro-area average ⁽¹⁾. A significant share of public support for R&D in firms is through a tax credit – which reaches only a small proportion of all SMEs – rather than direct support to SMEs. This divergent economic performance has an impact on regional development; those regions less able to attract foreign firms fall behind in terms of productivity, innovation and growth.

The continued strong performance of the labour market highlights labour shortages. The unemployment rate fell to near historic lows of 4.3% in March 2023. Employment in the multinational sector increased by 9% in 2022, with no significant negative impact from the worldwide staff reductions by big tech companies. While wage pressures are strong given the tight labour market, nominal compensation per employee grew by 4.2% in 2022, which is well below inflation. As a result, real wages declined by 3.6% in 2022. Many sectors (particularly construction, ICT and hospitality)

⁽¹⁾ 2022 Survey on the Access to Finance of Enterprises.

experience labour shortages in both high and low-skilled employees.

Disadvantaged groups continue to face significant labour market challenges and disproportionately high poverty risks. The social scoreboard, supporting the European Pillar of Social Rights (see Annex 14), indicates that the disability employment gap stood at 41.3 percentage points in 2021, among the highest in the EU. While the employment rate of single parents has grown significantly in the last decade, it was still the second lowest in the EU in 2021. Similarly, a 2019 study on the Traveller community indicated that only 17% of women and 13% of men had paid jobs. At 13%, Ireland has the highest share of low work intensity households in the EU (often overlapping with the above-mentioned groups). These disadvantaged groups also have high poverty rates. In 2021, the at-risk-of-poverty or social exclusion rate for people with disabilities and single parents was nearly double and triple that of the general population, respectively. The latest data on Travellers indicated that 40% struggle to make ends meet. The national minimum wage in 2023 remains below the estimated minimum living wage; however, Ireland is phasing in a national living wage that will become mandatory in 2026 ⁽²⁾. Poverty risks are exacerbated by high inflation and increasing living costs.

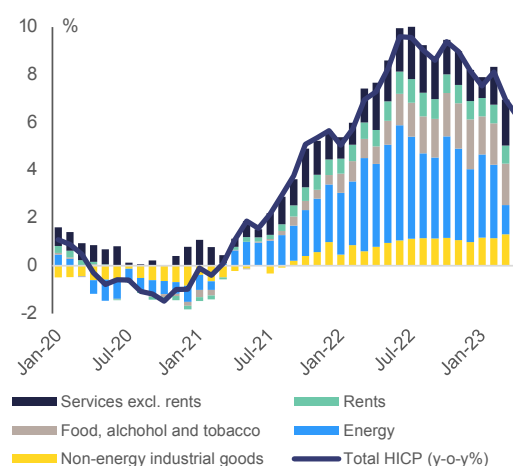
The impact of Russia's invasion of Ukraine endures

While the Irish economy has limited direct trade or financial links with Russia, it has suffered indirectly from Russia's invasion of Ukraine. The increase in global energy prices and supply

⁽²⁾ The national minimum wage was increased to EUR 11.30 per hour in 2023. The Low Pay Commission has set an indicative national living wage for 2023 of EUR 13.10 per hour. The civil society organisation 'Living Wage Technical Group,' using the 'minimum essential standard of living' approach, has estimated the 2023 living wage at EUR 13.85 per hour.

side shortages have had a negative impact on Ireland. Despite Ireland's limited exposure to Russian gas imports, energy inflation reached 41.3% in 2022 – amid a policy response that cushioned the impact of high prices on households and businesses while mostly preserving the price signal (see Box 1). Food prices also rose markedly after the Russian invasion and food inflation exceeded 10% (year-on-year) in the final quarter of 2022. Furthermore, around 80 000 Ukrainians fled to Ireland. This requires additional social spending and the provision of accommodation, which has been challenging, as the long-standing housing shortages have required the government to rely on serviced accommodation. A sizeable number of Ukrainians – around 15 000 by March 2023 – have found jobs, with many working in hospitality, manufacturing, construction and other services. This contributed to alleviating some pressures on the tight Irish labour market.

Graph 1.1: Inflation components



Source: Eurostat

Challenges persist for pensions, healthcare and housing

Ireland's public finances are sustainable in the short term, but reliance on multinationals presents risks in the longer term. Ireland's government balance returned to surplus in 2022. Thanks to

unexpectedly strong government revenue flows and EUR 6 billion total transfers to the National Reserve Fund, fiscal risks are negligible in the short term. However, when stripping out ‘windfall’ corporation tax revenues linked to multinationals, the government balance moves from surplus to deficit. Government debt, at 44.7% of GDP and 83.3% of GNI* is below pre-pandemic levels ⁽³⁾. While Ireland’s tax base is narrow, reforms on recurrent property taxes have been initiated (see Annex 19). At the same time, as part of its recovery and resilience plan, Ireland has committed to tightening its legal framework on withholding taxes imposed on outbound interest, dividends and royalty payments. Finally, the pronounced ageing of the population will put pressure on the pension system’s sustainability in the absence of targeted and effective reforms.

⁽³⁾ Modified GNI (GNI*) excludes globalisation effects and more accurately reflects the income standards of Irish residents than GDP. See Central Statistics Office, [‘modified GNI’](#) for more detail.

Box 1: Energy policy response in Ireland

Ireland adopted various support measures to cushion the impact of energy price inflation on households and businesses. The Commission 2023 spring forecast projects their costs to amount to 0.3% of GDP in 2023 ⁽⁴⁾. Most measures preserve the price signal, although they are only partly targeted at the most vulnerable. The bulk of these measures was originally introduced only for 2022 and then extended to 2023 (by the end of which they are expected to be tapered).

The key measures include two payments of EUR 400 to all household electricity consumers in 2022 and a further two in 2023; grant schemes to support businesses facing increases in their energy costs; and the extension of both temporary reductions in excise duty on fuels and temporary VAT cuts on gas and electricity. While the excise duty and VAT reduction do have the potential to distort the price signal, overall the price signal is preserved because the impact of the other measures is greater. The impact of the policy response is more untargeted than targeted. This is due to the large cost of the energy credits and the extension of the VAT reduction for the hospitality sector, notwithstanding a significant share of targeted measures (such as payments to long-term social welfare recipients).

Ireland applies the EU solidarity contribution in application of Council Regulation (EU) 2022/1854 ⁽⁵⁾. In November 2022, the government announced a cap on market revenues of non-gas electricity generators, in order to collect excess revenues and support electricity consumers. In addition, a temporary solidarity contribution will be levied on companies active in fossil fuel production and refining for 2022 and 2023. The temporary solidarity contribution will be calculated based on the portion of a company's taxable profits that are more than 20% above that company's average taxable profits in the period 2018 to 2021.

In April 2022, Ireland launched its national energy security framework to provide a comprehensive response to Ireland's energy security needs in the context of the war in Ukraine. This framework includes the establishment of an Energy Security Emergency Group. It also sets out areas in which Ireland aims to reduce dependence on energy imports. In addition, given that risks of an electricity generation shortfall are forecast for the coming years, Ireland launched a security of supply review in September 2022. At the same time, the energy regulator set out a programme of measures related to energy demand so as to: (i) reduce peak usage; (ii) increase the use of batteries; and (iii) procure permanent capacity through capacity market auctions. A new electricity interconnector to France is also under construction. Notwithstanding these actions, more immediate measures are required to address challenges to short-term energy supply security and to secure procurement of additional temporary electricity generation for winter 2023.

(4) For 2022, gross budgetary costs of measures amounted to 0.5% of GDP. Some of the measures outlined in this box were already in place in 2022.

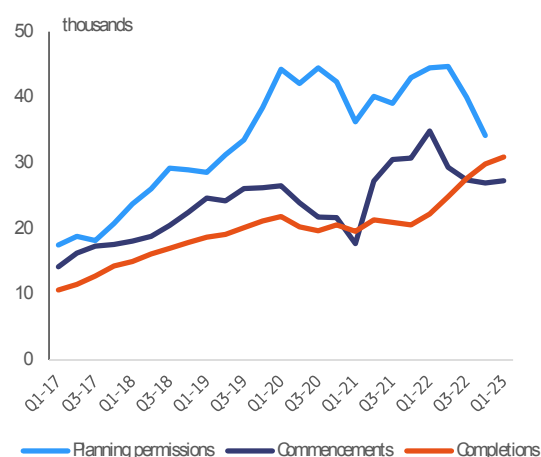
(5) That is the application of a mandatory temporary solidarity contribution at a rate of at least 33% to the extraordinary and unexpected profits of businesses active in the extraction of crude petroleum, natural gas, coal, and refinery sectors. It is calculated on taxable profits, as determined under national tax rules in the fiscal year starting in 2022 and/or in 2023, which are above a 20% increase of the average yearly taxable profits in 2018-2021.

The health- and long-term care systems continue to face long-standing issues, despite gradual improvements. The public healthcare system faces significant capacity constraints. Almost half of the population uses private health insurance to bypass long waiting lists in the public system. Ireland also remains the only EU country without universal primary care coverage. With respect to long-term care,

the public system focusses on institutional care over home care; the former is relatively costly and limits accessibility. The ageing of the population is expected to put considerable pressure on the sustainability of the health and long-term care systems.

House and rental price growth remained high due to persistent shortfalls in housing supply. In 2022, new housing completions increased by around 40% on the year to almost 30 000. However, this was in part driven by pent-up deliveries due to pandemic delays. Looking ahead, the fall in housing commencements (-12% year-on-year) and planning permissions (-20.5% year-on-year) in the second half of 2022 suggests completions might fall in 2023 ⁽⁶⁾. In addition, higher-than-expected demographic growth and the need to house people fleeing from Ukraine heightened housing demand, leading to an extremely tight rental market and soaring house prices. This suggests that the initial housing targets set in the ‘housing for all’ plan of 33 000 new homes per year might need to be revised upward substantially. In the short to medium term, the gap between housing supply and demand is thus expected to remain wide. Shortages of social housing have created long waiting lists, have resulted in an over-reliance on short-term rent supplement solutions for 75 000 families, and have contributed to a steep increase in homeless people (22% year-on-year in March 2023). Affordability remains low, especially for poorer cohorts, and is a key challenge for competitiveness, as it hinders the recruitment of skilled foreign labour.

Graph 1.2: Housing developments



Annualised data

Source: Central Statistics Office, Department of Housing, Local Government and Heritage

Climate and energy-related weaknesses remain

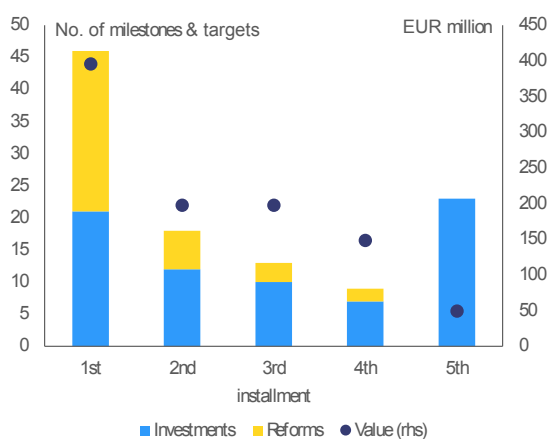
Ireland has made progress on the UN’s Sustainable Development Goals (SDGs), but climate and energy-related challenges are acute. Ireland performs above the EU average on many SDGs (see Annex 1) and is making progress on indicators related to inequality (SDG 10), poverty (SDG 1), inclusive growth (SDG 8), health and well-being (SDG 3), education (SDG 4) and gender equality (SDG 5). Nevertheless, Ireland’s performance is worsening for a limited number of SDGs, albeit still remaining above the EU average, such as on sustainable cities and communities (SDG 11), clean water and sanitation (SDG 6), and life on land (SDG 15). In spite of the recent adoption of a strengthened legislative framework for climate action linked to ambitious mitigation targets and the climate action plan 2023, Ireland is yet to achieve genuine progress in curbing greenhouse gas emissions (SDG 13). Achieving national and EU targets will be a major challenge that would require a transformation of many facets of the Irish economy.

⁽⁶⁾ Central Bank of Ireland (2023) March 2023 Quarterly Bulletin.

THE RECOVERY AND RESILIENCE PLAN IS UNDERWAY

Ireland's recovery and resilience plan (RRP) aims to address the key challenges related to the green and digital transitions, and to the social and economic recovery. It consists of 9 reforms and 16 investments that are supported by EUR 915 million in grants, representing 0.3% of 2019 GDP (see Annex 3 for more details). The first payment request, which covers 46 of the 109 milestones and targets in the RRP (see Graph 2.1), is in preparation.

Graph 2.1: Number of milestones and targets by instalment



Source: European Commission

The implementation of Ireland's recovery and resilience plan is underway, however with significant delays. Ireland submitted an amendment of its plan in May 2023. Limited resources and insufficient prioritisation have led Ireland to fall behind in the implementation process. Ireland has yet to submit its first payment request. Preparation of a REPowerEU chapter is ongoing.

The following, more detailed review of measures being implemented under the RRP in no way implies formal Commission approval or rejection of any payment requests.

Progress made in implementing the RRP contributes to accelerating the green transition of Ireland.

In 2021, retrofitting of public buildings in Dublin and in several other regions commenced with the appointment of the main contractor by the Office of Public Works. Ireland also kick-started its investments to foster sustainable public transport through signing the procurement contract for its zero-emission rolling stock and awarding the contract related to the upgrading of Cork's Kent station. Action on biodiversity and climate change adaptation has been accelerated by starting rehabilitation works of 39 bogs in peatland areas. The national grand challenges programme is underway; the first calls for funding for research and innovation supporting the green and digital transitions were launched in 2022. Additional actions undertaken are expected to improve wastewater treatment, as more than 10 wastewater treatment stations started to be upgraded in 2022. Lastly, Ireland adopted the Climate Action and Low Carbon Development Act, with accompanying measures being the first carbon budgets, the update of the climate action plan, and the 2021 and 2022 increases in the carbon tax rate.

Several digital infrastructure and skills-related measures are contributing to addressing productivity-related challenges.

Ireland completed the configuration of an integrated financial management system to support effective management of the health service. In addition, contracts for building an ePharmacy system and a shared government data centre were awarded. Ireland also launched a call for projects to drive the digital transformation of Irish enterprises. Ireland developed relevant guidelines to apply an SME test; this aims to reduce regulatory barriers to the business activity of SMEs. Several actions

contributing to enhancing productivity by improving digital skills were also implemented. These include the upgrade to high-speed broadband connectivity in 750 primary schools and funding for ICT infrastructure in 3 415 primary and post-primary schools. Finally, Ireland also published its long-term strategies on adult digital literacy and a digital strategy for schools, while providing laptops to around 21 500 disadvantaged further and higher education students. Looking ahead, the RRP is also expected to improve the efficiency of the census collection process by testing an online response option.

The RRP is contributing to improving fairness through measures on skills, housing, and healthcare. Numerous work placements, training events, and skills opportunities were made available under the work placement experience programme and the SOLAS recovery skills programme. However, so far, their take-up is significantly below initial expectations. To help increase the supply of social and affordable housing, a reform of Ireland's Land Development Agency has taken place. In addition, three schemes have been launched to increase housing affordability for low- and medium-income households. The first houses have now been made available under each of these schemes. The new 'public-only' employment contract for hospital consultants (i.e. specialised doctors) has been implemented. This is expected to improve the healthcare system's cost-effectiveness, accessibility and resilience by alleviating shortages of doctors in public

hospitals and transitioning away from the provision of private care in public hospitals.

Several reforms that can contribute to macroeconomic stability and the quality of public institutions have been implemented. Anti-money laundering supervision was bolstered by carrying out inspections of trust or company service providers, publishing a sectoral risk assessment of them, and completing a report on expanding the enforcement toolkit with financial sanctions. The relevant legislative framework has been amended, and an economic analysis and a public consultation published, to better tackle aggressive tax planning strategies. Looking ahead, legislation applying to outbound payments (interests, royalties, and dividends) is expected to enter into force to prevent double non-taxation. On pensions, a report by the Interdepartmental Pensions Reform and Taxation Group has been published on the simplification and harmonisation of the supplementary pension landscape. Finally, Irish authorities have put in place a repository system for monitoring RRP implementation and have taken steps to ensure sufficient administrative capacity.

Box 2:

Box on key deliverables in 2023-2024

- Completion of the retrofit work of Tom Johnson House in Dublin and other regionally located public offices.
- Commencement of the electrification and double tracking work on the railway line connecting Glounthaune to Midleton.
- Building and configuration of the core technical IT functionality for a digital hospital ePharmacy solution.
- Testing of the online response option for the census by a sample of citizens.
- Upskilling activities or improved learning conditions for at least 4 000 staff members and 9 600 students at technological universities.
- Entry into force of legislation applying to outbound payments (interests, royalties, and dividends) to prevent double non-taxation.

FURTHER PRIORITIES AHEAD

Beyond those tackled in the recovery and resilience plan (RRP), as outlined above, Ireland faces additional challenges not sufficiently covered in the plan. Challenges remain notably with regard to: (i) climate action; (ii) energy; (iii) environmental sustainability; (iv) housing; (v) pensions; (vi) health and long-term care; (vii) domestic SME productivity; and (viii) labour market integration of vulnerable groups. Addressing these challenges will also help make further progress in achieving the SDGs where Ireland currently shows room for further improvement, namely clean water and sanitation (SDG 6), sustainable cities and communities (SDG 11), and climate action (SDG 13).

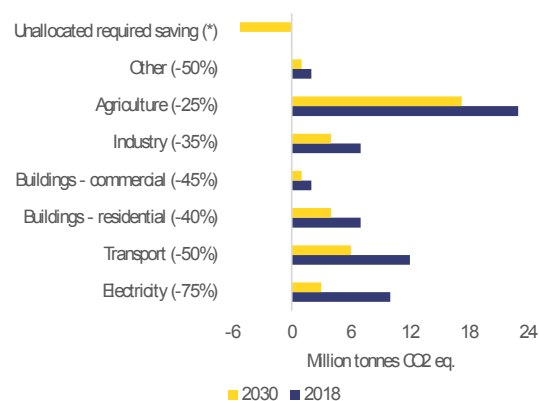
Accelerating the green transition remains a priority

Achieving the objectives set under Ireland's climate law and under EU legislation will be a major undertaking. The climate action plan 2023 highlights the wide-ranging nature of the changes required, and sets objectives and actions across all sectors of the economy. It remains an ambitious plan despite some major weaknesses, mainly linked to unspecified mitigation efforts up to 2030. Looking ahead, key challenges relate to: the transformation of the power sector; the transition towards sustainable transport modes; the decarbonisation of the building sector via the use of renewable energies and energy efficiency; and further emissions reductions in industry. Fossil fuels still make up the most of Ireland's energy mix, despite the rapid expansion in the use of renewable electricity. In 2021, oil accounted for 48% of Ireland's energy consumption and natural gas 31%, while 12% came from renewable sources. Reducing Ireland's reliance on fossil fuels

is an essential part of ensuring security of supply.

Curbing emissions from agriculture and land use will be challenging. The sectoral carbon budgets and the climate action plan 2023 envisage a reduction in greenhouse gas (GHG) emissions from agriculture of 25% by 2030 compared with 2018. Achieving this will require fully onboarding the sector with an increased focus on sustainable agriculture. Finally, a mitigation target is yet to be set for the land-use sector which continues to be a significant source of emissions. Setting a target for the sector and designing ways to achieve it is a priority if the national and EU climate targets are to be achieved.

Graph 3.1: Sectoral GHG emissions, 2030 national target vs 2018



(1) The definition of sectoral emissions ceilings and a 2030 target for the land use, land-use change and forestry sector has been deferred.

(*) Unallocated savings amount to about 15% of total targeted emissions in 2030.

Source: Government of Ireland, Sectoral Emissions Ceilings, September 2022.

Achieving 80% renewable electricity by 2030 and ensuring a stable energy supply will require addressing structural shortcomings. The power system showed signs of vulnerability in 2022, with capacity adequacy issues requiring emergency

measures at a high cost for public finances. Renewable energy auctions have awarded large volumes of new capacity. In addition, regulatory instruments are being developed, such as a new planning and consenting framework for offshore wind energy. However, the new target implies an accelerated deployment of wind and solar photovoltaic systems at a pace that would require faster permitting and grid connection processes. It also requires major upgrades in the transmission, distribution, and storage infrastructure, and flexibility options such as demand response to absorb the large volumes of variable generation and avoid curtailment. The growing energy demand from data centres also poses a concern, partly because they do not yet offer credible options to contribute to system flexibility.

Energy efficiency – in particular home energy upgrades and retrofitting – is key to achieving climate objectives.

Challenges remain in particular on implementation. Despite gearing up its ambition, Ireland fell short of its 2020 energy efficiency target and has not yet reversed the trend of increasing energy consumption. The climate action plan sets a target for reducing emissions from the residential sector by retrofitting the equivalent of 500 000 homes to a building energy rating of B2/cost optimal, as well as installing 400 000 heat pumps in existing homes to replace older, less efficient heating systems by end-2030. This will entail approximately 30% of the housing stock being upgraded to warmer, safer and more comfortable homes, with lower energy bills and emissions, thereby adding value to these assets. Despite the publication of the national retrofit plan as part of the climate action plan 2021, key challenges and barriers remain in terms of capacity constraints, particularly related to the availability of skilled labour. Successful implementation of the plan will be key to achieving energy efficiency targets.

Labour shortages in key sectors for the green transition have increased in recent years, thus creating bottlenecks in the transition to a net-zero economy. In 2022, labour shortages were reported in

Ireland for 12 occupations that required specific skills or knowledge for the green transition, including environmental protection professionals, engineering professionals and electrical engineers (7). The job vacancy rate increased across key sectors, such as construction (from 0.8% in 2015 to 1.3% in 2022) and manufacturing (from 0.6% in 2015 to 1.0% in 2022), with both sectors standing below the EU 2022 averages of 4.0% and 2.3%, respectively. In 2022, labour shortages were reported as a factor constraining production in industry (for 46.8% of firms) and construction (for 60.3% of firms). Upskilling and reskilling for the green transition, including for people most affected by it, and promoting inclusive labour markets are essential policy levers to accelerate the transition to net-zero and ensure its fairness (see Annex 8).

The number of zero-emission passenger cars is growing, but the number of public charging points struggles to keep pace.

Ireland's climate action plan 2021 sets out an ambitious target of 845 000 passenger electric vehicles and 95 000 low-emission vans on the road by 2030. The national car and van fleet accounts for almost 60% of all land transport emissions. A transition to low-emission vehicles, including electric vehicles, is therefore a necessary step to substantially reduce transport emissions. In July 2022, the government established a new initiative: zero emission vehicles Ireland. This is to coordinate the work on incentivising switching to electric vehicles and to create an electric vehicle charging network capable of staying ahead of demand. Decarbonisation of the transport sector

(7) Data on shortages is based on European Labour Authority (2023), *EURES Report on labour shortages and surpluses 2022*. National authorities report through a questionnaire, based on administrative data and other sources as submitted by the EURES National Coordination Offices (definitions of shortages differ, thus data is not comparable across countries and covers a wide variety of sectors). Skills and knowledge requirements are based on the ESCO (European Skills Competences and Occupations) taxonomy on skills for the green transition (for occupations at ISCO 4-digit level of which there are 436 in total). Examples are identified based on their ESCO 'greenness' score and relevant sectors.

remains key to an overall reduction in greenhouse gas emissions.

Some barriers remain to developing further Ireland's clean tech industry.

Ireland is a leader in power management systems, with some Irish companies ranking among the biggest European manufacturers of uninterruptible power supply systems, power distribution units, smart meters and inverters. According to the European Investment Bank, businesses in Ireland have accelerated their investment in clean tech, with the share of firms investing in improving energy efficiency increasing from 24% in 2021 to 46% in 2022. However, labour shortages reported by firms in electrical equipment manufacturing ⁽⁸⁾ (33%) and in specialised construction activities ⁽⁹⁾ (55%) inhibit clean tech development and its roll-out. Moreover, public investment in energy related R&I – an EU Energy Union priority ⁽¹⁰⁾ – decreased from 0.022% of GNI* in 2014 to 0.09% in 2021 (0.025% of GDP for EU average). In order to reverse this trend, the Sustainable Energy Authority of Ireland has begun publishing yearly calls to fund innovative energy research development and demonstration projects. Hurdles include lengthy and complex permitting procedures, which are hampering the deployment of renewable energy. In addition, procedural barriers for new wind and solar energy projects include permitting delays and suboptimal outcomes resulting in installing outdated technologies ⁽¹¹⁾ (see Annex 12).

Ireland's waste generation continues to rise and remains above the EU average.

⁽⁸⁾ NACE 27 – 'Manufacture of electrical equipment' code is used as a proxy for clean energy manufacturing industry as many clean energy technologies fall under this category.

⁽⁹⁾ NACE 43 – 'Specialised construction activities' is used as a proxy for clean tech installation for example heat pumps and solar panels.

⁽¹⁰⁾ Includes renewables, smart systems, efficient systems, sustainable transport, carbon capture, utilisation and storage, and nuclear safety, COM(2015) 80 final (energy union package).

⁽¹¹⁾ Single Market Enforcement Task Force (2022) Report 2021-2022.

Municipal waste generation in Ireland remains higher than the EU average. The recently adopted waste action plan for a circular economy aims to improve the country's performance, but the updated waste management plan has not yet been adopted. Although Ireland is well above the EU average in terms of resource productivity, its circular (secondary) use of materials is the second lowest in the EU. In addition, between 2014 and 2020, the circular economy, including waste management, saw a financing gap estimated at EUR 879 million per year. Additional investment in areas such as eco-design, repair, reuse and remanufacturing, as well as expanding viable recycling activities, will be necessary to reach the EU's circular economy objectives. Additional investment is also needed to improve the infrastructure for separate waste collection and treatment so as to divert waste from landfill and incineration, with a particular focus on plastic and biowaste. The implementation of a high-level whole-of-government circular economy strategy began in 2022.

An ageing infrastructure and decades of underinvestment have an effect on water services.

Infrastructure investment is needed in wastewater collection and treatment, reduction of leaks from drinking water systems and drinking water supply, better water quality and quantity monitoring. Ireland has one of the EU's highest rates for pipe leakage. The quality of drinking water remains a problem in certain areas. Some progress can be expected in the quality of Ireland's bathing waters to reach the EU average rate of bathing sites qualified as of excellent quality. Significant degradation of water quality from agricultural expansion is not sufficiently addressed ⁽¹²⁾. According to the OECD, nutrient enrichment from agriculture and untreated sewage (i.e. inappropriate treatment or sewer overflow when rainfall occurs) is the main compromising factor for water quality ⁽¹³⁾ (see also Annex 5).

⁽¹²⁾ These challenges are further corroborated by low resilience capacities in the area of 'ecosystems, biodiversity, sustainable agriculture'.

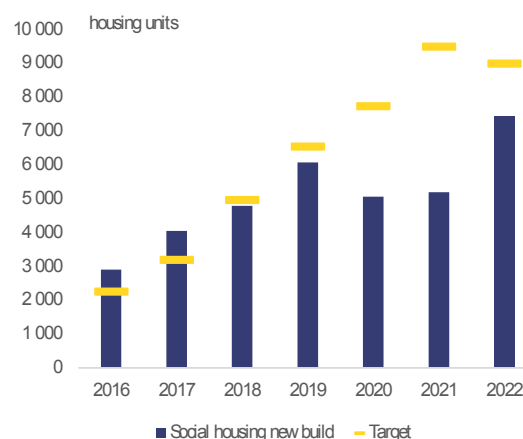
⁽¹³⁾ OECD (2022) Financing a Water Secure Future.

Nitrate concentration in groundwater is an issue, particularly in the south-east and south.

Addressing persistent social and affordable housing shortfalls

Construction of social housing under the ‘housing for all’ plan is progressing, but faces significant challenges related to construction cost increases and capacity constraints. Even though new social housing units built in 2022 increased by more than 43% year-on-year to around 7 500, the government missed its initial target by around 1 500 units. This was mainly due to construction materials inflation, rising energy costs and supply chain challenges, which delayed many projects and public tenders ⁽¹⁴⁾. In May 2022, the government issued the ‘inflation - supply chain delay cooperation’ framework to absorb 70% of the additional costs. Social housing remains high on the government agenda and increasing capital funding for new builds has been committed ⁽¹⁵⁾. Action in this area will contribute to achieving the national target of reducing poverty by at least 90 000 individuals by 2030 (see Annex 14). However, risks to social housing delivery in the coming years remain high due to higher financing costs and capacity constraints.

Graph 3.2: Social housing new build



(1) New build excludes housing units delivered through leasing or acquisition of existing properties.

(2) New build targets as originally included in the ‘rebuilding Ireland’ and ‘housing for all’ plans.

Source: Department of Housing, Local Government and Heritage

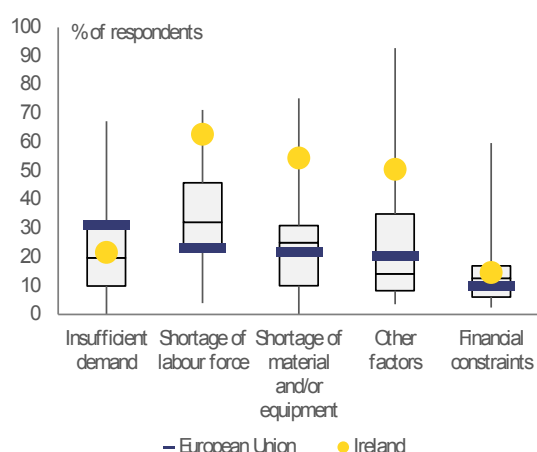
The overall capacity of the construction sector remains a significant constraint requiring complex reforms. In response, the government has been taking a much more active role in housing, using the Land Development Agency to unlock land not being developed by the private sector (also as part of the RRP) and building on state lands, although with delays. Recently government funding has been made available to bridge the viability gap between building costs and the market sale price of selected projects. Looking ahead, effective implementation of several reforms in the ‘housing for all’ plan will be essential, particularly for those related to planning, land management, vacant housing, labour force attraction from abroad, reskilling and upskilling of the available labour force, and diversifying production methods ⁽¹⁶⁾.

⁽¹⁴⁾ Department of Housing, Local Government and Heritage (2022) Overview of Activities and Structure.

⁽¹⁵⁾ Department of the Taoiseach (2023) Housing for All – Q4 2022 Progress Report.

⁽¹⁶⁾ Egan, Kenny and McQuinn (2022) Increasing future housing supply: what are the implications for the Irish Economy?

Graph 3.3: **Main factors limiting building activity**



July to December 2022 average.

Box plots show five summary statistics: minimum, 25th percentile, median, 75th percentile, and maximum.

Source: DG ECFIN - Business and consumer survey

Housing affordability further deteriorated because of persistent supply shortages, combined with higher-than-expected demographic growth. In 2022, rents increased by 9.8% and the average monthly rent for new tenancies in Dublin reached EUR 2 000 ⁽¹⁷⁾. At the same time, the number of years of gross disposable income required by an average income household to buy a 100 m² dwelling increased to 17.3 in 2022 – the second highest level in the EU. Availability of affordable housing is key for social cohesion and competitiveness. Business considers affordability the single greatest impediment to attracting and retaining talented workers ⁽¹⁸⁾. The government has responded with a commitment to fund, on average, 2 000 cost-rental homes per year until 2030 ⁽¹⁹⁾. In addition, the government introduced a set of demand-based measures aimed at first-time buyers, such as extending the help-to-buy scheme and introducing the shared-equity scheme. A

⁽¹⁷⁾ Residential Tenancy Board (2022) Q2 Rental Index.

⁽¹⁸⁾ IBEC (2023) Better Housing Better Business.

⁽¹⁹⁾ Cost rental is a new form of public housing in Ireland, aimed at people who are above the social housing income limits, with a target to achieve rents at least 25% below market level.

set of these measures are also reflected in the Irish RRP. While these have the potential to bridge the affordability gap, close and regular monitoring of these demand-based measures will be crucial so that they can be quickly adjusted if any inflationary pressures arise.

Making the pension system robust to the costs of ageing

An ageing population requires safeguarding the pension system against rising costs. The share of the population older than 64 relative to that of working-age population (20-64) is projected to almost double between 2019 and 2070. Because of this, public pension expenditure is projected to increase from 4.6% of GDP in 2019 to 7.6% in 2070 ⁽²⁰⁾. The projected increases in expenditure are driven by the assumption that there will be no increases in pension age. The reform announced in September 2022 keeps the pension age at 66. This contrasts with a recommendation by an independent pension commission to incrementally increase the pension age by 3 months each year, commencing in 2028, to reach 67 in 2031. The same proposals also envisage further increases of 3 months every second year thereafter, thus reaching 68 by 2039. Current government policy puts the entire adjustment to age-related cost pressures on higher pension contributions, alongside incentives for voluntarily working beyond the state pension age of 66. In 2023, the government will present a roadmap for a gradual increase in social insurance contributions between 2024 and 2034.

⁽²⁰⁾ European Commission (2021) Ageing Report.

Increasing the accessibility and cost-effectiveness of health and long-term care

The public healthcare system faces challenges related to capacity constraints and a lack of universal coverage, also raising fiscal sustainability concerns.

Despite significant improvements over the past decade, Ireland still faces a shortage of doctors, with fewer practising doctors than the EU average (see Annex 16). Ireland has one of the highest numbers of medical graduates per capita. However, few of these graduates remain in Ireland; they are mainly international students faced with uncompetitive working conditions in the Irish healthcare system and limited options to complete their postgraduate practice in Ireland. The shortage of doctors limits the healthcare system's capacity to provide care, resulting in long waiting lists in both hospital and outpatient settings. This particularly affects poorer patients who cannot afford private health services. Shortages can also drive costs up by requiring costly temporary solutions such as overtime or the use of agency workers. In addition, Ireland is the only EU country without universal primary care coverage, which leads to an overuse of more expensive hospital care. In 2020, overall health expenditure per capita stood slightly above the EU average ⁽²¹⁾. Looking ahead, the healthcare system is expected to come under further pressure from population ageing, with a projected 1.4 percentage points of GDP increase in public expenditure by 2070 vs a 0.9 percentage points of GDP increase for the EU ⁽²²⁾.

Long-term care in Ireland faces challenges related to a focus on institutional care over more accessible and cost-effective home care. The share of the inactive population for reasons of

caring responsibilities was 27.2%, above the EU average of 21.4% ⁽²³⁾. This suggests unmet needs, especially in home care. At the same time, the public long-term care system focuses on institutional care over the more cost-effective home care. Indeed, insufficient provision of community-based social services often means people with disabilities are dependent on institutional care. Long-term care expenditure in Ireland stood at 2.9% of GNI* (1.6% of GDP) in 2020, well above the EU average of 1.8% of GDP. As with healthcare, public expenditure on long-term care is expected to rise due to an ageing population. This rise will be almost double the EU average by 2070, at 1.9 percentage points of GDP in Ireland vs 1.1 percentage points of GDP for the EU ⁽²⁴⁾. This is driven by one of the highest expected increases in the share of old-age dependents in the EU.

The government is taking action to address these long-standing challenges in health and long-term care. Regarding healthcare, the RRP contains key Sláintecare reforms, including the entry into operation of a new 'public-only' employment contract for hospital consultants (see Section 2). At the same time, the healthcare reforms included in the RRP do not address the lack of universal primary care coverage and only partially address fiscal sustainability concerns. Outside the RRP, the ongoing Sláintecare reforms also aim to set up a statutory home care service, which would reduce the need for institutional care. Fully implementing the Sláintecare reforms has the potential to increase the accessibility of health and long-term care, thereby reducing the demand for more complex and costly services. However, the timing, cost, and exact scope of some reforms are yet to be fully determined.

⁽²¹⁾ Health spending in Ireland stood at around 13.2% of GNI* (or 7.1% of GDP) in 2020 – compared to an EU average of 10.9% of GDP.

⁽²²⁾ European Commission (2021) Ageing Report.

⁽²³⁾ The proportion is even higher for women at 38.7%.

⁽²⁴⁾ European Commission (2021) Ageing Report.

Addressing productivity and employment gaps

Ireland's SMEs and domestic industry face a productivity differential. Labour productivity growth in Ireland is the highest in the EU, but the productivity gap between large enterprises and SMEs is large and widening. Challenges such as skills shortages and supply chain disruptions are particularly acute in Ireland and weigh asymmetrically heavy on the growth of SMEs. In 2022, 92% of firms reported a lack of skilled staff as a barrier to long-term investment – one of the highest percentages in the EU. In addition, more than one in two businesses cited materials shortages in industry and construction. Various challenges hold back Ireland's SMEs and domestic industries from tapping the potential of the single market. They relate to access to finance, late payments, preparedness for the twin transitions, poor infrastructure, low levels of R&D investment, and dependence on tax credits (see Annexes 11 and 12).

People with disabilities, single parents, Travellers, and persons living in very-low-work-intensity households still experience sizeable challenges in accessing labour markets. The new 'early engagement' method of the public employment service *Intreo*, if sufficiently resourced with specialised caseworkers, has the potential to increase access to employment for disabled jobseekers. At the same time, strengthening support services for employers who hire people with disabilities could facilitate recruitment and retainment. Both disabled people and Travellers tend to have low qualifications, pointing to a need for a more inclusive education system. Caring responsibilities and high childcare costs, despite decreasing significantly in recent years, remain major barriers to employment, especially in disadvantaged areas⁽²⁵⁾. Regulations on flexible working and more sufficient welfare support for working single

parents could increase labour market participation. The government has launched several actions under the pathways to work 2021-2025 strategy; however, in many cases engagement of (potential) jobseekers has been low. Continuous monitoring and cooperation with stakeholders will be essential to improve the take-up and effectiveness of these schemes. As the above-mentioned groups face disproportionate risks of poverty and social exclusion, improved social services and social protection will be key for Ireland to reach its poverty reduction commitment under the European Pillar of Social Rights action plan.

⁽²⁵⁾ Pobal (2022) Annual Early Years Sector Profile Report 2020/2021, p. 40.

KEY FINDINGS

Ireland's recovery and resilience plan (RRP) includes measures to address a series of its structural challenges through:

- accelerating retrofitting and improving the energy efficiency of buildings;
- promoting safer and cleaner wastewater management systems;
- ensuring that the expected increase in pension costs is financed in a structural and transparent manner;
- tackling aggressive tax planning;
- strengthening anti-money laundering supervision;
- increasing the supply of social and affordable housing, in particular through implementing the national 'housing for all' plan effectively;
- implementing the Sláintecare reforms, in particular the parts related to improving the cost-effectiveness of the healthcare system, workforce planning, and long-term care, and ensuring universal access to health services;
- increasing the level of public R&D investment and reducing the dependence on tax credits, in favour of direct support for R&D activities; and
- supporting employment and social inclusion, including through the labour market integration of vulnerable groups and by developing skills.

At the same time, due to the modest size of the plan, further efforts on the above-mentioned challenges beyond the RRP are needed.

Ireland should significantly accelerate the implementation of its recovery and resilience plan, also by ensuring sufficient resources, and swiftly finalise the addendum and the REPowerEU chapter with a view to rapidly starting its implementation.

Beyond the reforms and investments in the RRP, Ireland would benefit from:

- fostering investment in electricity networks, flexibility and storage capacity to absorb a higher share of power generated from variable sources of energy and to mitigate increasing electricity demand;
- improving permitting, planning and grid connection procedures to accelerate the roll-out of renewables;
- addressing financing gaps to increase the efficiency of the waste management system, reducing waste production, increasing reused and recycled content, achieving lower incineration, and separating more efficiently the collection of recyclable waste;
- supporting productivity growth for SMEs and domestic industries; and
- further promoting skills needed for the green transition.

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CROSS-CUTTING INDICATORS

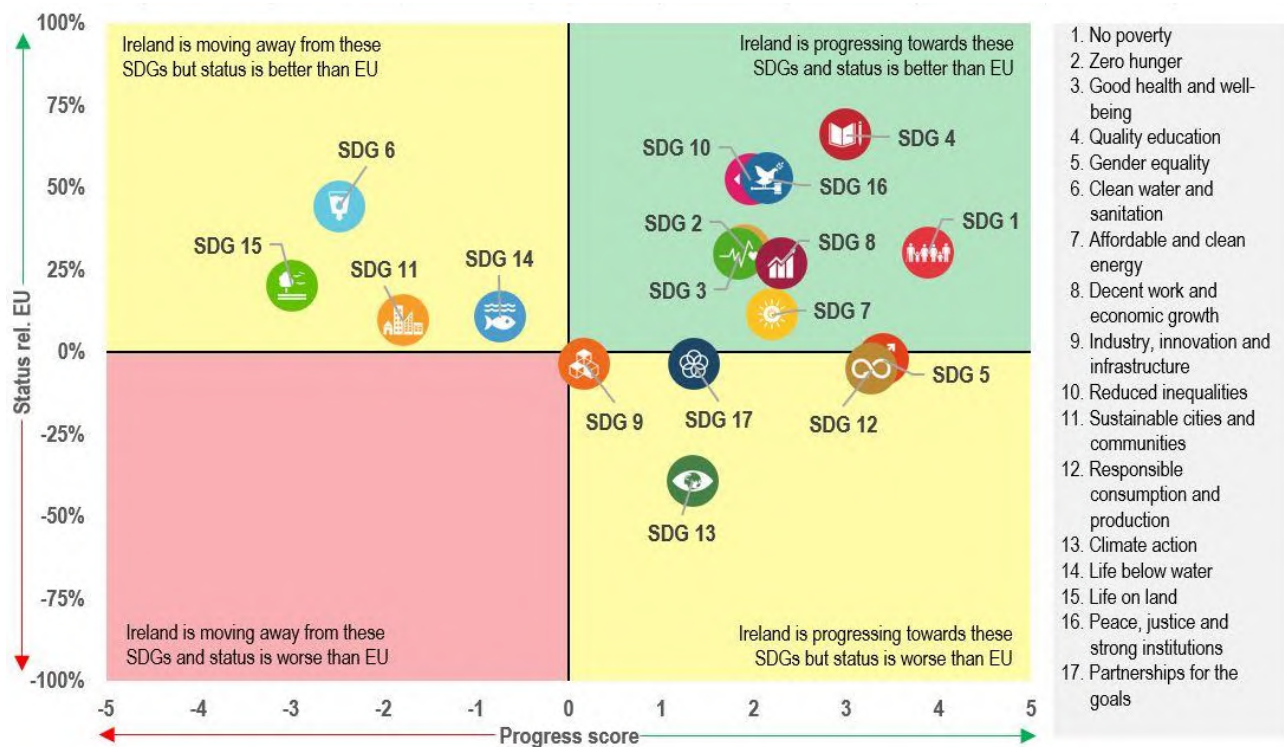
ANNEX 1: SUSTAINABLE DEVELOPMENT GOALS

This Annex assesses Ireland’s progress on the Sustainable Development Goals (SDGs) along the four dimensions of competitive sustainability. The 17 SDGs and their related indicators provide a policy framework under the UN’s 2030 Agenda for Sustainable Development. The aim is to end all forms of poverty, fight inequalities and tackle climate change and the environmental crisis, while ensuring that no one is left behind. The EU and its Member States are committed to this historic global framework agreement and to playing an active role in maximising progress on the SDGs. The graph below is based on the EU SDG indicator set developed to monitor progress on the SDGs in an EU context.

While Ireland is improving on most of the SDG indicators related to *environmental sustainability*, it is moving away from SDG 6 (Clean water and sanitation), SDG 11 (Sustainable cities and communities) and

SDG 15 (Life on land). It needs to catch up with the EU average, in particular on SDG 13 (Climate action) and SDG 12 (Responsible consumption and production). Ireland has made some progress on climate mitigation, including on net greenhouse gas emissions (SDG 13; from 15.1 tonnes per capita in 2016 to 13.8 tonnes in 2021). Nevertheless, it remains above the EU average (7.4 tonnes per capita in 2021). In addition, net greenhouse gas emissions from land use, land use change and forestry have also increased (from 93.5 tonnes CO₂ eq. per km³ in 2016 to 109.9 tonnes in 2021) and remain significantly higher than the EU average (-50.1 tonnes). Ireland’s ambitions in tackling climate challenges have increased with its climate action plan, which was introduced in 2019 and updated annually. On waste generation and management (SDG 12), the circular material use rate increased further from 1.7% in 2015 to 2.0% in 2021, but remains significantly lower

Graph A1.1: Progress towards the SDGs in Ireland in the last 5 years



For detailed datasets on the various SDGs, see the annual Eurostat report ‘Sustainable development in the European Union’; for details on extensive country-specific data on the short-term progress of Member States: [Key findings – Sustainable development indicators – Eurostat \(europa.eu\)](#). The status of each SDG in a country is the aggregation of all indicators for the specific goal compared to the EU average. A high status does not mean that a country is close to reaching a specific SDG, but signals that it is doing better than the EU on average. The progress score is an absolute measure based on the indicator trends over the past 5 years. The calculation does not take into account any target values as most EU policy targets are only valid for the aggregate EU level. Depending on data availability for each goal, not all 17 SDGs are shown for each country.

Source: Eurostat, latest update of early April 2023, except for the EU Labour Force Survey (LFS) indicators released on 27 April 2023. Data mainly refer to 2016-2021 or 2017-2022.

than the EU average (11.7%). Ireland's material footprint decreased (from 11.2 tonnes per inhabitant in 2015 to 10.8 tonnes in 2020), below the EU average (13.7 tonnes in 2020). In 2020, Ireland introduced a waste action plan for a circular economy, which set out its overall policy on the transition to a circular economy and waste prevention. On SDG 11 (Sustainable cities and communities), Ireland is moving away from the goal due to a deterioration in the quality of life in cities and communities. The severe housing deprivation rate increased from 1.2% of the population in 2015 to 1.4% in 2020, although this is lower than the EU average of 4.3%. There is a higher percentage of the population reporting crime, violence or vandalism in their area (11.3% compared to the EU average of 10.7% in 2020). Ireland also has a lower percentage of the population connected to at least secondary wastewater treatment (SDG 6; 61.9% in 2019 compared to an EU average of 81.1% in 2020). Ireland is also moving away from target of SDG 15 (life on land) as the percentage of total land area covered by forests decreased from 22.4% in 2015 to 19.0% in 2018.

Ireland performs well on SDG indicators related to *fairness* (SDGs 1, 3, 4, 5, 7, 8, 10).

The country performs better than the EU average and is making progress on several indicators related to inequality, poverty, inclusive growth, health and well-being, education and gender equality. Ireland performs well on the severe material and social deprivation rate (SDG 1), as it fell from 8.0% of the population in 2016 to 5.1% in 2021 compared to the EU average of 6.3% in 2021. In addition, the in work at-risk-of-poverty rate decreased (SDG 1; 4.3% in 2021 compared to 5.1% in 2016). The country has improved on several fairness-related indicators such as self-reported unmet needs for medical care (SDG 3; 2.0% in 2021 compared to 2.5% in 2016) and early leavers from education and training (SDG 4; 3.7% in 2022 compared to 5.0% in 2017). There were improvements in the population unable to keep their homes adequately warm (SDG 7; 3.2% in 2021 compared to 5.9% in 2016, against the EU average of 6.9% in 2021) and the long-term unemployment rate (SDG 8; 1.3% in 2022 compared to 3.0% in 2017), while the income share of the bottom 40% of the population (SDG 10) increased to 23.3% of income in 2021 from 21.6% in 2016.

Ireland is improving on some SDGs on *productivity* (SDGs 4 and 8), but still needs to catch up with the EU average in some (SDG 9). The percentage of adults with at least basic digital skills (SDG 4; 70.5% in 2021) is above the EU average (53.9%), although this leaves almost one-third of the population aged 16-74 lacking basic digital skills. On SDG 8 (Decent work and economic growth), the percentage of young people not in employment, education or training aged 15-29 dropped from 12.8% in 2017 to 8.7% in 2022 and is below the EU average (11.7% in 2022). However, Ireland is lagging behind the EU average on SDG 9 (Industry, innovation and infrastructure). The Irish research and innovation system suffers from underinvestment, as shown by gross domestic expenditure on R&D (SDG 9; 1.06% of GDP in 2021 compared to the EU average of 2.26%). However, when looking at modified gross national income (GNI*), R&D expenditure (1.93% of GNI*)⁽²⁶⁾ was nearer to the EU average (see Annex 11). The Irish RRP includes significant reforms and investments aimed at boosting innovation and digital skills. In particular, the National Grand Challenges programme incentivises innovation in green, climate and digital solutions.

Ireland performs well on SDG indicators related to *macroeconomic stability* (SDGs 8 and 16).

The country performs well on SDG 8 (Decent work and economic growth) and SDG 16 (Peace, justice and strong institutions). Ireland has enjoyed significant growth in real GNI* per capita (SDG 8; from EUR 40 410 in 2016 to EUR 50 889 in 2021). GDP per capita increased from EUR 53 400 in 2017 to EUR 77 490 in 2022, compared with the EU average of EUR 28 820. Despite these improvements, Ireland still faces challenges, particularly on the sustainability of public finances. The Irish RRP includes several measures related to taxation and pensions. Ireland continues to improve on the quality of institutions (SDG 16). As for access to justice (SDG 16), Ireland has improved on general government total expenditure on law courts, increasing it from EUR 125 in 2016 to EUR 150 per capita in 2021 (EU average EUR 107 in 2021).

⁽²⁶⁾ GNI* excludes globalisation effects and more accurately reflects the income standards of Irish residents than GDP. See Central Statistics Office, [Modified GNI](#) for more details.

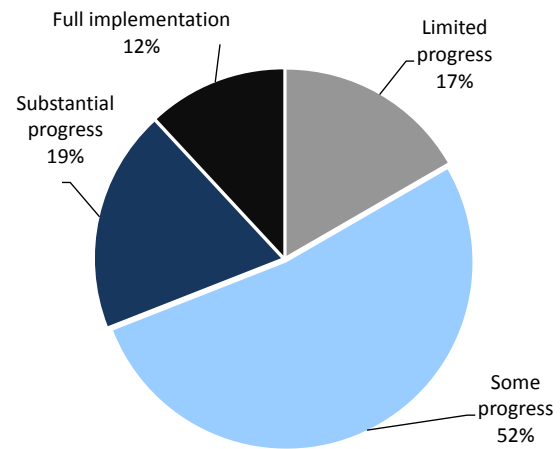
As the SDGs form an overarching framework, any links to relevant SDGs are either explained or depicted with icons in the other Annexes.



ANNEX 2: PROGRESS IN THE IMPLEMENTATION OF COUNTRY-SPECIFIC RECOMMENDATIONS

The Commission has assessed the 2019-2022 country-specific recommendations (CSRs)⁽²⁷⁾ addressed to Ireland as part of the European Semester. These recommendations concern a wide range of policy areas that are related to 15 of the 17 Sustainable Development Goals (see Annexes 1 and 3). The assessment considers the policy action taken by Ireland to date⁽²⁸⁾ and the commitments in its recovery and resilience plan (RRP)⁽²⁹⁾. At this stage of RRP implementation, 83% of the CSRs focusing on structural issues from 2019-2022 have recorded at least 'some progress', while 17% recorded 'limited progress' (see Graph A2.1). As the RRP is implemented further, considerable progress in addressing structural CSRs is expected in the years to come.

Graph A2.1: Ireland's progress on the 2019-2022 CSRs (2023 European Semester)



Source: European Commission.

⁽²⁷⁾ 2022 CSRs: [EUR-Lex - 32022H0901\(07\) - EN - EUR-Lex \(europa.eu\)](#)
2021 CSRs: [EUR-Lex - 32021H0729\(07\) - EN - EUR-Lex \(europa.eu\)](#)
2020 CSRs: [EUR-Lex - C:2020:282:TOC - EN - EUR-Lex \(europa.eu\)](#)
2019 CSRs: [EUR-Lex - 32019H0905\(07\) - EN - EUR-Lex \(europa.eu\)](#)

⁽²⁸⁾ Including policy action reported in the national reform programme and in Recovery and Resilience Facility (RRF) reporting (twice a year reporting on progress in implementing milestones and targets and resulting from the payment requests assessment).

⁽²⁹⁾ Member States were asked to effectively address all or a significant subset of the relevant country-specific recommendations issued by the Council in 2019 and 2020 in their RRP. The CSR assessment presented here considers the degree of implementation of the measures included in the RRP and of those carried out outside of the RRP at the time of assessment. Measures laid down in the Annex of the adopted Council Implementing Decision on approving the assessment of the RRP, which are not yet adopted or implemented but considered credibly announced, in line with the CSR assessment methodology, warrant 'limited progress'. Once implemented, these measures can lead to 'some/substantial progress or full implementation', depending on their relevance.

Table A2.1: Summary table on 2019-2022 CSRs

Ireland	Assessment in May 2023*	RRP coverage of CSRs until 2026	Relevant SDGs
2019 CSR 1	Limited Progress		
<i>Achieve the medium-term budgetary objective in 2020. Use windfall gains to accelerate the reduction of the general government debt ratio.</i>	Not relevant anymore	Not applicable	SDG 8, 16
<i>Limit the scope and number of tax expenditures, and broaden the tax base.</i>	Limited Progress		SDG 8, 10, 12
<i>Continue to address features of the tax system that may facilitate aggressive tax planning, and focus in particular on outbound payments.</i>	Limited Progress	Relevant RRP measures being planned as of 2020	SDG 8, 16
<i>Address the expected increase in age-related expenditure by making the healthcare system more cost-effective and by fully implementing pension reform plans.</i>	Some Progress	Relevant RRP measures being planned as of 2020, 2021	SDG 3, 8
2019 CSR 2	Some Progress		
<i>Provide personalised active integration support and facilitate upskilling, in particular for vulnerable groups and people living in households with low work intensity.</i>	Some Progress	Relevant RRP measures being planned as of 2021	SDG 4, 8, 10
<i>Increase access to affordable and quality childcare.</i>	Substantial Progress		SDG 4, 5
2019 CSR 3	Some Progress		
<i>Focus investment-related economic policy on low carbon and energy transition, the reduction of greenhouse gas emissions,</i>	Substantial Progress	Relevant RRP measures being planned as of 2020, 2021, 2022	SDG 7, 9, 10, 11, 13
<i>sustainable transport,</i>	Some Progress	Relevant RRP measures being planned as of 2022	SDG 10, 11
<i>water,</i>	Some Progress	Relevant RRP measures being planned as of 2021, 2022	SDG 6, 10, 11, 12, 15
<i>digital infrastructure</i>	Some Progress	Relevant RRP measures being planned as of 2021, 2022, 2023	SDG 9, 10, 11
<i>and affordable and social housing, taking into account regional disparities.</i>	Some Progress	Relevant RRP measures being planned as of 2021	SDG 1, 2, 8, 10, 11
<i>Implement measures, including those in the Future Jobs strategy, to diversify the economy and improve the productivity of Irish firms – small and medium enterprises in particular - by using more direct funding instruments to stimulate research and innovation</i>	Some Progress	Relevant RRP measures being planned as of 2025	SDG 8, 9
<i>and by reducing regulatory barriers to entrepreneurship.</i>	Some Progress	Relevant RRP measures being planned as of 2022	SDG 8, 9
2020 CSR 1	Some Progress		
<i>Take all necessary measures, in line with the general escape clause of the Stability and Growth Pact, to effectively address the COVID-19 pandemic, sustain the economy and support the ensuing recovery. When economic conditions allow, pursue fiscal policies aimed at achieving prudent medium-term fiscal positions and ensuring debt sustainability, while enhancing investment.</i>	Not relevant anymore	Not applicable	SDG 8, 16
<i>Improve accessibility of the health system and strengthen its resilience, including by responding to the health workforce's needs and ensuring universal coverage for primary care.</i>	Some Progress	Relevant RRP measures being planned as of 2021	SDG 3
2020 CSR 2	Some Progress		
<i>Support employment through developing skills.</i>	Some Progress	Relevant RRP measures being planned as of 2021	SDG 4
<i>Address the risk of digital divide, including in the education sector.</i>	Substantial Progress	Relevant RRP measures being planned as of 2021	SDG 4
<i>Increase the provision of social and affordable housing.</i>	Some Progress	Relevant RRP measures being planned as of 2021	SDG 1, 2, 8, 10
2020 CSR 3	Some Progress		
<i>Continue to provide support to companies, in particular SMEs, especially through measures ensuring their liquidity.</i>	Substantial Progress		SDG 8, 9
<i>Front-load mature public investment projects</i>	Full Implementation	Relevant RRP measures being planned as of 2021, 2022	SDG 8, 16
<i>and promote private investment to foster the economic recovery.</i>	Some Progress	Relevant RRP measures being planned as of 2021, 2022	SDG 8, 9
<i>Focus investment on the green and digital transition, in particular on clean and efficient production and use of energy.</i>	Substantial Progress	Relevant RRP measures being planned as of 2020, 2021, 2022	SDG 7, 9, 13
<i>sustainable public transport,</i>	Some Progress	Relevant RRP measures being planned as of 2022	SDG 11
<i>water supply and treatment,</i>	Some Progress	Relevant RRP measures being planned as of 2021, 2022	SDG 6, 12, 15
<i>research and innovation</i>	Some Progress	Relevant RRP measures being planned as of 2025	SDG 9
<i>and digital infrastructure.</i>	Some Progress	Relevant RRP measures being planned as of 2021, 2022, 2023	SDG 9
2020 CSR 4	Limited Progress		
<i>Broaden the tax base.</i>	Limited Progress		SDG 8, 10, 12
<i>Step up action to address features of the tax system that facilitate aggressive tax planning, including on outbound payments.</i>	Limited Progress	Relevant RRP measures being planned as of 2020	SDG 8, 16
<i>Ensure effective supervision and enforcement of the anti-money-laundering framework as regards professionals providing trust and company services.</i>	Some Progress	Relevant RRP measures being planned as of 2021	SDG 8, 16

(Continued on the next page)

Table (continued)

2021 CSR 1	Substantial Progress		
<i>In 2022, pursue a supportive fiscal stance, including the impulse provided by the Recovery and Resilience Facility, and preserve nationally financed investment.</i>	Full Implementation	Not applicable	SDG 8, 16
<i>When economic conditions allow, pursue a fiscal policy aimed at achieving prudent medium-term fiscal positions and ensuring fiscal sustainability in the medium term.</i>	Full Implementation	Not applicable	SDG 8, 16
<i>At the same time, enhance investment to boost growth potential. Pay particular attention to the composition of public finances, on both the revenue and expenditure sides of the national budget, and to the quality of budgetary measures in order to ensure a sustainable and inclusive recovery. Prioritise sustainable and growth-enhancing investment, in particular investment supporting the green and digital transition.</i>	Substantial Progress	Not applicable	SDG 8, 16
<i>Give priority to fiscal structural reforms that will help provide financing for public policy priorities and contribute to the long-term sustainability of public finances, including, where relevant, by strengthening the coverage, adequacy and sustainability of health and social protection systems for all</i>	Some Progress	Not applicable	SDG 8, 16
2022 CSR 1	Substantial Progress		
<i>In 2023, ensure that the growth of nationally financed primary current expenditure is in line with an overall neutral policy stance, taking into account continued temporary and targeted support to households and firms most vulnerable to energy price hikes and to people fleeing Ukraine. Stand ready to adjust current spending to the evolving situation.</i>	Full Implementation	Not applicable	SDG 8, 16
<i>Expand public investment for the green and digital transitions, and for energy security taking into account the REPowerEU initiative, including by making use of the Recovery and Resilience Facility and other Union funds.</i>	Substantial Progress	Not applicable	SDG 8, 16
<i>For the period beyond 2023, pursue a fiscal policy aimed at achieving prudent medium-term fiscal positions.</i>	Full Implementation	Not applicable	SDG 8, 16
<i>Address the expected increase in age-related pension expenditure by ensuring the fiscal sustainability of the state pension system.</i>	Limited Progress	Relevant RRP measures being planned as of 2020	SDG 8
2022 CSR 2			
<i>Proceed with the implementation of its recovery and resilience plan, in line with the milestones and targets included in the Council Implementing Decision of 8 September 2021.</i>	RRP implementation is monitored by assessing RRP payment requests and analysing reports published twice a year on the achievement of the milestones and targets. These are to be reflected in the country reports.		
<i>Submit the 2021-2027 cohesion policy programming documents with a view to finalising their negotiations with the Commission and subsequently starting their implementation.</i>	Progress on the cohesion policy programming documents is monitored under the EU cohesion policy.		
2022 CSR 3	Limited Progress		
<i>Focus efforts on boosting the circular economy. In particular, develop both infrastructure and policies to prevent waste and increase reused and recycled content, and develop a more effective system for the separate collection of recyclable waste, including biodegradable waste.</i>	Limited Progress	Not applicable	SDG 6, 12, 15
<i>Promote safer and cleaner waste water circuits.</i>	Limited Progress	Relevant RRP measures being planned as of 2022	SDG 6, 12, 15
2022 CSR 4	Some Progress		
<i>Reduce overall reliance on fossil fuels.</i>	Some Progress	Relevant RRP measures being planned as of 2020 and 2021	SDG 7, 9, 13
<i>Accelerate the deployment of renewable energy, in particular offshore wind, including by introducing reforms to improve the efficiency of the planning and permit system, particularly by reducing the duration of procedures.</i>	Substantial Progress	Not applicable	SDG 7, 8, 9, 13
<i>Upgrade energy infrastructure, including for storage and enhance the stability of the grid.</i>	Some Progress	Not applicable	SDG 7, 9, 13
<i>Ensure the fast implementation of deep building retrofits.</i>	Some Progress	Relevant RRP measure being planned as of 2021	SDG 7
<i>Accelerate the electrification of transport, including by installing charging facilities.</i>	Some Progress	Relevant RRP measure being planned as of 2021	SDG 11

Note:

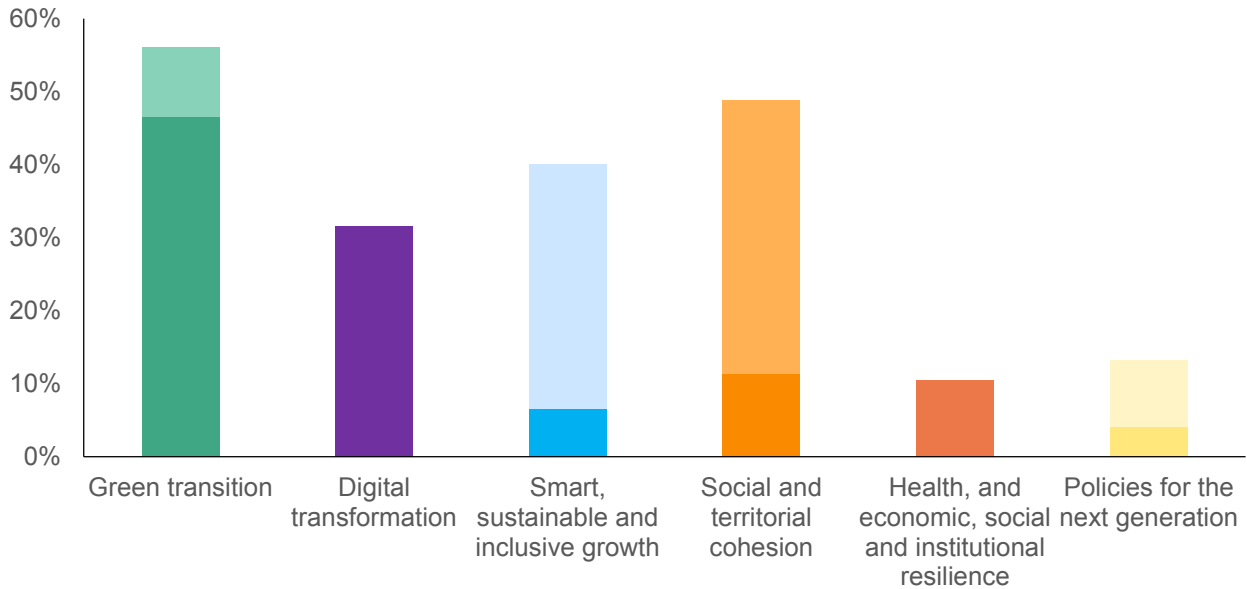
* See footnote (55).

** RRP measures included in this table contribute to the implementation of CSRs. Nevertheless, additional measures outside the RRP are necessary to fully implement CSRs and address their underlying challenges. Measures indicated as 'being implemented' are only those included in the RRP payment requests submitted and positively assessed by the European Commission.

Source: European Commission



Graph A3.1: Share of RRF funds contribution to each policy pillar



Note: Each measure contributes towards two policy areas of the six pillars, therefore the total contribution to all pillars displayed on this chart amounts to 200% of the estimated cost of the RRP. The bottom part represents the amount of the primary pillar, the top part the amount of the secondary pillar.

Source: RRF Scoreboard

The Recovery and Resilience Facility (RRF) is the centrepiece of the EU’s efforts to help it recover from the COVID-19 pandemic, speed up the twin transition and strengthen resilience against future shocks. The RRF also contributes to implementation of the SDGs and helps to address the Country Specific Recommendations (see Annex 4). Ireland submitted its initial recovery and resilience plan (RRP) on 25 May 2021. The Commission’s positive assessment on 16 July 2021 and Council’s approval on 8 September 2021 paved the way for disbursing 989 million in grants under the RRF over the 2021-2026 period.

Since the entry into force of the RRF Regulation and the assessment of the national recovery and resilience plans, geopolitical and economic developments have caused major disruptions across the EU. In order to effectively address these disruptions, the (adjusted) RRF Regulation allows Member States to amend their recovery and resilience plan for a variety of reasons. In line with article 11(2) of the RRF, the maximum financial contribution for Ireland was moreover updated on 30 June 2022 to an amount of EUR 915 billion in grants.

In this context, **Ireland submitted an amended RRP to the Commission on 22 May 2022** due to objective circumstances that

make it no longer possible to achieve certain milestones and targets in the RRP in line with Article 21 of the RRF Regulation. The update to Ireland’s plan is of a technical nature. It concerns two measures in Ireland’s plan, one related to a guarantee scheme that aims to encourage private investment in energy efficiency (postponement of completion dates due to unforeseen difficulties in the implementation of the measure), and the other to increasing the supply of social and affordable housing (postponement of completion dates due to construction delays, as well as the identification of a manifestly better alternative approach for one housing scheme).

Ireland’s progress in implementing its plan is published in the Recovery and Resilience Scoreboard ⁽³⁰⁾. The Scoreboard also gives an overview of the progress made in implementing the RRF as a whole, in a transparent manner. The graphs below show the current state of play of the milestones and targets to be reached by Ireland and subsequently assessed as satisfactorily fulfilled by the Commission.

⁽³⁰⁾ https://ec.europa.eu/economy_finance/recovery-and-resilience-scoreboard/country_overview.html

Table A3.1: **Key elements of the Irish RRP('s)**

	Current RRP
Scope	Initial plan
GD adoption date	8 September 2021
Total allocation	EUR989 million in grants (0.23% of 2021 GDP)
Investments and reforms	16 investments and 9 reforms
Total number of milestones and targets	109

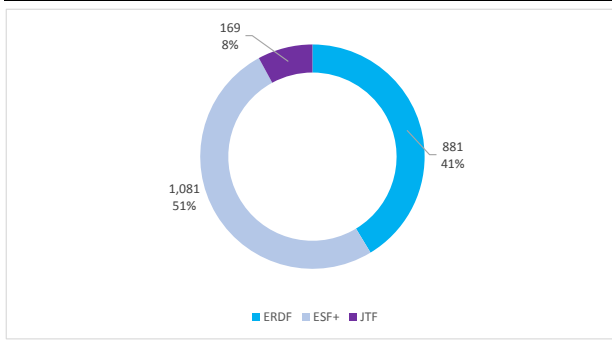
Source: RRF Scoreboard



ANNEX 4: OTHER EU INSTRUMENTS FOR RECOVERY AND GROWTH

The EU budget of over EUR 1.2 trillion for 2021-2027 is geared towards implementing the EU's main priorities. Cohesion policy investment amounts to EUR 392 billion across the EU and represents almost a third of the overall EU budget, including around EUR 48 billion invested in line with REPowerEU objectives.

Graph A4.1: Cohesion policy funds 2021-2027 in Ireland: budget by fund



(1) million EUR in current prices, % of total; (total amount including EU and national co-financing)

Source: European Commission, Cohesion Open Data

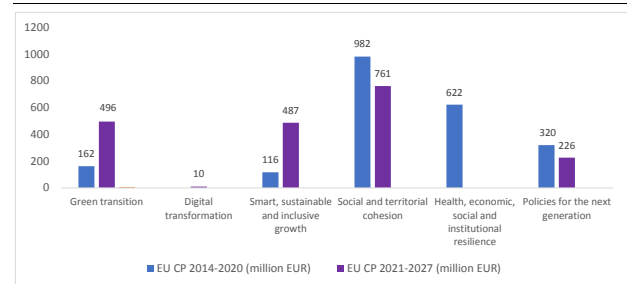
In 2021-2027, in Ireland, cohesion policy funds⁽³¹⁾ will invest EUR 496 million in the green transition and EUR 10 million in the digital transformation as part of the country's total allocation of EUR 2.1 billion. In particular, the European Regional Development Fund (ERDF) will strengthen regional innovation ecosystems and foster knowledge creation and transfers between higher education institutions, in particular technological universities, and companies. This will help over 10 000 firms become more competitive. More than 5 000 homes will benefit from improved energy efficiency, leading to an overall reduction of primary energy consumption of about 113 500 Mwh/year. Particular attention should be paid to maintaining strong regional and local ownership during programme implementation. The Just Transition Fund will support Ireland's efforts to phase out peat burning. The programme will contribute in particular to further economic diversification in the Midlands, to the restoration of degraded peatlands and the repurposing of former industrial heritage assets. The European Social Fund Plus (ESF+) programme in Ireland

⁽³¹⁾ European Regional Development Fund (ERDF), European Social Fund+ (ESF+), Just Transition Fund (JTF) excluding Interreg programmes. The total amount includes national and EU contributions. Data source: [Cohesion Open Data](#).

earmarks EUR 242 million for fostering active inclusion, social integration, and material assistance. Moreover, Ireland allocated EUR 132 million to education and skills, including EUR 39 million to the development of digital skills.

Of the investments mentioned above, EUR 264 million will be invested in line with REPowerEU objectives. This is on top of the EUR 60 million dedicated to REPowerEU under the 2014-2020 budget.

Graph A4.2: Synergies between cohesion policy funds and the RRF with its six pillars in Ireland



(1) million EUR in current prices (CP funds: total amount, including EU and national co-financing)

Source: European Commission

In 2014-2020, cohesion policy funds made EUR 1.1 billion available to Ireland⁽³²⁾ with an absorption of 89%⁽³³⁾. Including national financing, the total investment amounted to EUR 2 billion - around 0.1% of GDP for 2014-2020.

Ireland continues to benefit from cohesion policy flexibility to support economic recovery, step up convergence and provide vital support to regions following the COVID-19 pandemic. The Recovery Assistance for Cohesion and the Territories of Europe instrument (REACT-EU)⁽³⁴⁾ under NextGenerationEU provides EUR 142 million on top of the 2014-2020 cohesion policy allocation for Ireland. The initial amount of REACT-EU support was used for the

⁽³²⁾ Cohesion policy funds include the ERDF, ESF and the Youth Employment Initiative (YEI). ETC programmes are excluded here. According to the 'N+3 rule', the funds committed for 2014-2020 must be spent by 2023. REACT-EU is included in all figures. The total amount includes EU and national co-financing. Data source: [Cohesion Open Data](#).

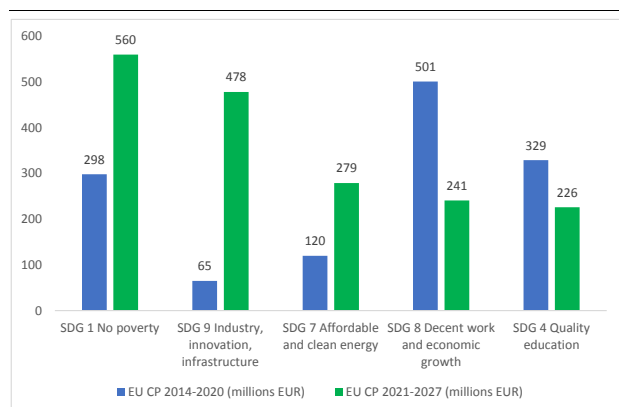
⁽³³⁾ 2014-2020 Cohesion policy EU payments by MS is updated daily on [Cohesion Open Data](#).

⁽³⁴⁾ REACT-EU allocation on [Cohesion Open Data](#).

reopening of schools following the COVID-19 pandemic and to provide laptops to disadvantaged students in further and higher education. The second amount was used to address migratory challenges resulting from the Russian military aggression in Ukraine. In addition, EUR 1.2 billion was provisionally allocated to Ireland through the Brexit Adjustment Reserve (BAR), of which IE requested in March 2023 to transfer EUR 150 million to the REPowerEU chapter of the RRP. With SAFE (Supporting Affordable Energy), the 2014-2020 cohesion policy funds may also be mobilised by Ireland to support vulnerable households, jobs and companies particularly affected by high energy prices.

In both 2014-2020 and 2021-2027, cohesion policy funds have contributed to the Sustainable Development Goals (SDGs). These funds support 11 of the 17 SDGs, notably SDG 1 'no poverty' and SDG 9 'industry, innovation and infrastructure' ⁽³⁵⁾.

Graph A4.3: Cohesion policy funds contribution to the SDGs in 2014-2020 and 2021-2027 in Ireland



(1) 5 largest contributions to SDGs in million (EUR) current prices

Source: European Commission

Other EU funds make significant resources available for Ireland. The common agricultural policy (CAP) made available EUR 4.9 billion in 2014-2022 and will keep supporting Ireland with EUR 7.5 billion in 2023-2027. The two CAP Funds (European Agricultural Guarantee Fund and European Agricultural Fund for Rural Development), contribute to the European Green Deal while ensuring long-term food

⁽³⁵⁾ Other EU funds contribute to the implementation of the SDGs. In 2014-2022, this includes both the European Agricultural Fund for Rural Development (EARDF) and the European Maritime and Fisheries Fund (EMFF).

security. They promote social, environmental and economic sustainability and innovation in agriculture and rural areas, in coordination with other EU Funds. The European Maritime and Fisheries Fund made EUR 148 million available to Ireland in 2014-2020 and the European Maritime, Fisheries and Aquaculture Fund allocates EUR 142 million in 2021-2027.

Ireland also benefits from other EU programmes, notably the Connecting Europe Facility, which under CEF 2 (2021-2027) has so far allocated EU funding of EUR 12.6 million to seven specific projects on strategic transport networks. Similarly, Horizon Europe has so far allocated more than EUR 253 million for Irish R&I on top of the EUR 1.2 billion earmarked under the previous programme (Horizon 2020). The Public Sector Loan Facility set up under the Just Transition Mechanism makes EUR 6.41 million of grant support from the Commission available for projects located in Ireland for 2021-2027, which will be combined with loans from the EIB to support investments by public sector entities in just transition regions.

Ireland received support under the European instrument for temporary support to mitigate unemployment risks in an emergency to finance short-time work schemes to mitigate the impact of COVID-19. The Council granted financial assistance to Ireland of EUR 2 473 million in loans, which supported around 23% of workers and 37% of firms in 2020.

The Technical Support Instrument (TSI) supports Ireland in designing and implementing growth-enhancing reforms, including those set out in its RRP. Ireland has received significant support since 2018. Examples ⁽³⁶⁾ include strengthening policy development and foresight in the public service, designing the deep energy renovation of historic buildings and identifying the most suitable reforms and investments linked to the REPowerEU plan. The TSI is also helping Ireland implement specific reforms and investments included in its RRP, e.g. reforming marine management, strengthening environmental considerations in public investment management and health workforce planning.

⁽³⁶⁾ Country factsheets on reform support are available [here](#).



ANNEX 5: RESILIENCE

This Annex illustrates Ireland’s relative resilience capacities and vulnerabilities using the Commission’s resilience dashboards (RDB)⁽³⁷⁾. Comprising a set of 124 quantitative indicators, the RDB provide broad indications of Member States’ ability to make progress across four interrelated dimensions: social and economic, green, digital, and geopolitical. The indicators show vulnerabilities⁽³⁸⁾ and capacities⁽³⁹⁾ that can become increasingly relevant, both to navigate ongoing transitions and to cope with potential future shocks. To this end, the RDB help to identify areas that need further efforts to build stronger and more resilient economies and societies. They are summarised in Table A5.1 as synthetic resilience indices, which illustrate the overall relative situation for each of the four dimensions and their underlying areas for Ireland and the EU-27⁽⁴⁰⁾.

According to the set of resilience indicators under the RDB, Ireland generally displays a similar level of vulnerabilities compared to the EU average. Ireland shows high vulnerabilities in the geopolitical dimension of the resilience dashboards, medium-low vulnerabilities in the green and digital dimensions and medium vulnerabilities in the social and economic dimension. Compared to the EU level, it shows significantly higher vulnerabilities, for instance related to ‘climate change mitigation and adaptation’, ‘cybersecurity’ and ‘raw material and energy supply’. Ireland also has high vulnerabilities in the area ‘value chains and trade’. It shows clearly lower vulnerabilities compared to the EU average in the areas ‘inequalities and social impact of the transitions’, ‘ecosystems, biodiversity, sustainable agriculture’ and ‘digital for personal space’.

Compared to the EU average, Ireland shows an overall similar level of capacities across all RDB indicators. Ireland has overall medium-low resilience capacities in the green dimension, but medium-high to high capacities in the other three dimensions. Ireland shows stronger capacities than the EU average in the areas ‘Inequalities and social impact of the transitions’ and ‘economic and financial stability and sustainability’ of the social and economic dimension as well as in the areas ‘sustainable use of resources’, ‘digital for personal space’, ‘digital for industry’ and ‘financial globalisation’. There is clearly room for improving capacities compared to the EU in the areas ‘ecosystems, biodiversity, sustainable agriculture’ and ‘raw material and energy supply’.

Table A5.1: Resilience indices summarising the situation across RDB dimensions and areas

Dimension/Area	Vulnerabilities		Capacities	
	IE	EU-27	IE	EU-27
Social and economic				
Inequalities and social impact of the transitions	Low	Medium	High	Medium-high
Health, education and work	Medium	Medium	Medium	Medium
Economic & financial stability and sustainability	Medium	Medium	High	Medium-high
Green				
Climate change mitigation & adaptation	High	Medium	Medium	Medium
Sustainable use of resources	Medium	Medium	High	Medium-high
Ecosystems, biodiversity, sustainable agriculture	Low	Medium	High	Medium-high
Digital				
Digital for personal space	Low	Medium	High	Medium-high
Digital for industry	Medium	Medium	High	Medium-high
Digital for public space	Medium	Medium	Medium	Medium
Cybersecurity	High	Medium	Medium	Medium
Geopolitical				
Raw material and energy supply	High	Medium	High	Medium-high
Value chains and trade	High	Not available	Medium	Medium
Financial globalisation	High	Medium	High	Medium-high
Security and demography	Medium	Medium	Medium	Medium

Vulnerabilities Index

- High
- Medium-high
- Medium
- Medium-low
- Low
- Not available

Capacities Index

- High
- Medium-high
- Medium
- Medium-low
- Low
- Not available

(37) For details see https://ec.europa.eu/info/strategy/strategic-planning/strategic-foresight/2020-strategic-foresight-report/resilience-dashboards_en; see also 2020 Strategic Foresight Report (COM(2020) 493).

(38) Vulnerabilities describe features that can exacerbate the negative impact of crises and transitions, or obstacles that may hinder the achievement of long-term strategic goals.

(39) Capacities refer to enablers or abilities to cope with crises and structural changes and to manage the transitions.

(40) This Annex is linked to Annex 1 on SDGs, Annex 6 on the green deal, Annex 8 on the fair transition to climate neutrality, Annex 9 on resource productivity, efficiency and circularity, Annex 10 on the digital transition and Annex 14 on the European pillar of social rights.

(1) Data are for 2021, and EU-27 refers to the value for the EU as a whole. Data underlying EU-27 vulnerabilities in the area ‘value chains and trade’ are not available as they comprise partner concentration measures that are not comparable with Member States’ level values.

Source: JRC Resilience Dashboards - European Commission

Ireland's green transition requires continued action on several aspects including cutting greenhouse gas emissions through promoting energy efficiency and sustainable transport. Implementation of the European Green Deal is underway in Ireland; this Annex provides a snapshot of the key areas involved ⁽⁴¹⁾.

Ireland has not yet defined all the climate policy measures it needs to reach its 2030 climate target for the effort sharing sectors. ⁽⁴²⁾ Data for 2021 are expected to show that in these sectors the country generated more greenhouse gas emissions than its annual emission allocations ⁽⁴³⁾. Current policies in Ireland are projected to reduce these emissions by -11% relative to 2005 levels in 2030, not a sufficient reduction to reach the effort sharing target even before the target was raised to meet the EU's 55% objective, let alone Ireland's new target to reduce emissions by -42%. ⁽⁴⁴⁾ In late 2022,

⁽⁴¹⁾ The overview in this Annex is complemented by information provided in Annex 7 on energy security and affordability, Annex 8 on the fair transition to climate neutrality and environmental sustainability, Annex 9 on resource productivity, efficiency and circularity, Annex 11 on innovation, and Annex 19 on taxation.

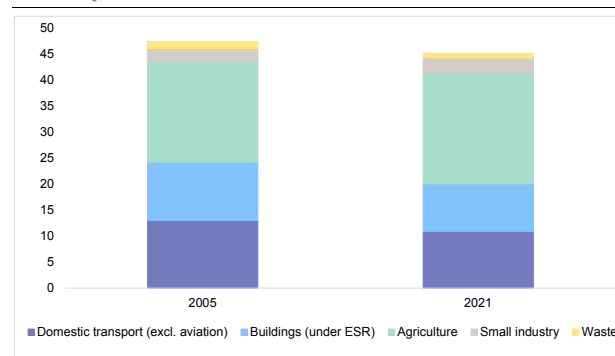
⁽⁴²⁾ Member States' greenhouse gas emission targets for 2030 ('effort sharing targets') were increased by Regulation (EU) 2023/857 (the Effort Sharing Regulation) amending Regulation (EU) 2018/842, aligning the action in the concerned sectors with the objective to reach EU-level, economy-wide greenhouse gas emission reductions of at least 55% relative to 1990 levels. The Regulation sets national targets for sectors outside the current EU Emissions Trading System, notably: buildings (heating and cooling), road transport, agriculture, waste, and small industry. Emissions covered by the EU ETS and the Effort Sharing Regulation are complemented by net removals in the land use sector, regulated by Regulation (EU) 2018/841 (the Land Use, Land Use Change and Forestry (LULUCF) Regulation) amended by Regulation (EU) 2023/839.

⁽⁴³⁾ Ireland's annual emission allocations for 2021 were some about 42.6 Mt CO₂eq, and its approximated 2021 emissions were at 45.2 Mt (see European Commission, *Accelerating the transition to climate neutrality for Europe's security and prosperity: EU Climate Action Progress Report 2022*, SWD(2022)343). Greenhouse gas emissions in the effort sharing sectors above the annual emission allocations do not imply non-compliance with the Effort Sharing Regulation, as the latter provides for specific flexibility instruments that may be used for compliance.

⁽⁴⁴⁾ See the information on the distance to the 2030 climate policy target in Table A6.1. Existing and additional measures as of 15 March 2022.

Ireland published its climate action plan 2023, prepared under the Climate Action and Low Carbon Development (Amendment) Act 2021 ⁽⁴⁵⁾. The plan – a milestone in Ireland's ambition on climate mitigation – contains measures to cut overall domestic greenhouse gas emissions, including from the land use sector, by -43% in 2030, compared to 2018 levels. However, this falls short of the national objective of cutting these emissions by -51%. Ireland's emissions are yet to be put on a sustained downward trend; therefore, rolling out the measures in the plan will be critical. In its recovery and resilience plan (RRP), Ireland allocates 42 % of its Recovery and Resilience Facility grants to key reforms and investments to attain climate objectives ⁽⁴⁶⁾.

Graph A6.1: Thematic – greenhouse gas emissions from the effort sharing sectors in Mt CO₂eq, 2005-2021



Source: European Environmental Agency.

Ireland's land use sector is a net emitter of greenhouse gases, at levels significantly above its 2030 target for that sector. Ireland's land use, land use change and forestry (LULUCF) sector is currently a significant net source of emissions due to the small presence of forests and the large emissions from grasslands on organic soils. Action is being taken to protect and restore peatlands and to improve management of

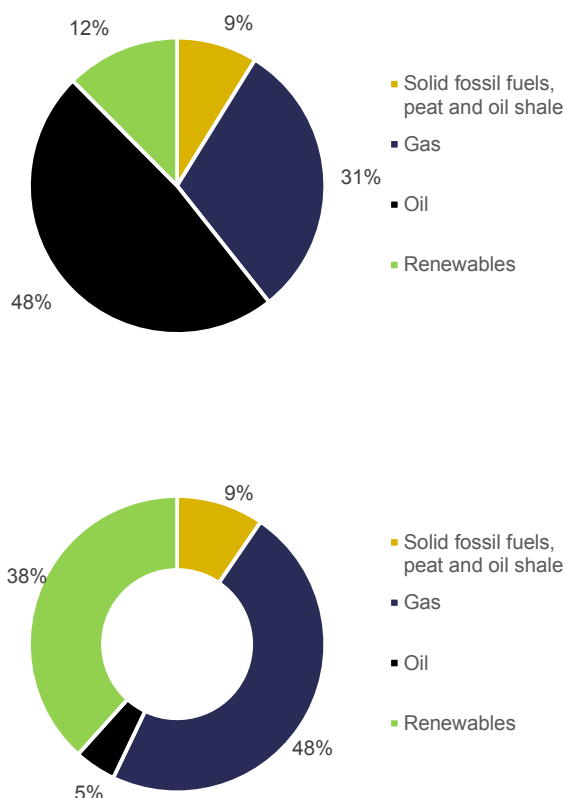
⁽⁴⁵⁾ The WEM ('with existing measures') and WAM ('with additional measures') projections in Table A6.1. do not take the measures of the climate action plan 2023 into account.

⁽⁴⁶⁾ For example, increasing the carbon tax and reforming climate governance, promoting investments in energy efficiency, decarbonising the business sector, promoting sustainable railway transport, rehabilitating peatlands, improving wastewater treatment, and promoting green research and development.



soils, including with support from EU funds. Ireland's target under the Land Use, Land Use Change and Forestry (LULUCF) Regulation implies to reduce land sector emissions to below 3 728 ktCO₂e (see Table A6.1) ⁽⁴⁷⁾. Ireland's climate action plan 2023 deferred the setting of a target for the sector, pending the completion of the planned land use review.

Graph A6.2: Energy mix (top) and electricity mix (bottom), 2021



The energy mix is based on gross inland consumption, and excludes heat and electricity. The share of renewables includes biofuels and non-renewable waste.

Source: Eurostat

Fossil fuels still make up the most of Ireland's energy mix, despite the rapid expansion in the use of renewable electricity. In 2021, oil accounted for 48% of Ireland's energy consumption and natural gas 31%, while 12% came from renewable

sources. 38% of Ireland's electricity already came from renewables, but progress in the decarbonisation of heating has been very limited. Ireland set itself very ambitious targets to transform its energy system, with peat and coal fired power production being rapidly phased out and heating and transport being electrified combined with an extremely fast deployment of wind and solar PV, to reach its 80% renewable electricity target by 2030. This increased reliance on electricity and on variable energy sources, combined with structural issues such as an ageing generation fleet, inadequate transmission infrastructure and limited interconnections, poses challenges in terms of security of supply.

The climate action plan 2023 sets very ambitious targets for wind and solar power and for heat pumps. Ireland's target of 34.1% of share of energy from renewable sources in gross final energy consumption by 2030 included in the NECP was considered sufficiently ambitious. Ireland will need to increase its renewable energy target in the updated NECP to reflect the more ambitious EU climate and energy targets in the Fit for 55 Package and in the REPowerEU Plan. If achieved, the 80% renewable electricity target, based on 9GW of onshore wind, 8GW of solar PV and at least 5GW of offshore wind, and a target of 680 000 heat pumps, will result in an energy system largely based on renewable energy by 2030. The recovery and resilience plan focuses on developing renewable electricity and on developing renewable energy for thermal needs of buildings, services, and industry. Ireland has begun to put in place required regulatory tools, including new support schemes for renewable electricity and heat and a regulatory framework for offshore energy. To stay on course with the trajectory, accelerating the permitting procedures and grid connection and rapidly building up skills and supply chains will be needed. Large investments will be required to upgrade the power infrastructure and provide storage and flexibility technologies to support the very high levels of variable generation.

Ireland fell short of its 2020 energy efficiency target and has not yet reversed the trend of increasing overall energy consumption. Ireland's NECP targets for primary and final energy consumption (PEC and FEC) were considered of low ambition in the 2020 Commission assessment. Based on

⁽⁴⁷⁾ This value is indicative and will be updated in 2025 (as mandated by Regulation (EU) 2023/839).

the energy consumption trajectory for 2018-2021, Ireland is expected to be on track to meet its 2030 target for PEC and for FEC, as these were notified in its NECP ⁽⁴⁸⁾. One major factor to the energy efficiency gap in Ireland is the lack of awareness of the potential for energy savings. Another factor is a lack of access to financing in order to afford the upfront cost of energy efficiency investments. The climate action plan 2023 seeks to address the poor efficiency of the building stock with an ambitious residential retrofit plan (aiming to upgrade 500 000 homes, representing 30% of the housing stock, by 2030 through grants of up to 50% of the cost of a deep retrofit) and ambitious targets for new buildings (Near Zero-Energy Building standard by 2025 and Zero-Emission Building standard by 2030). Ireland also announced a ban of oil boilers for new buildings starting in 2023 and gas boilers by 2025. While Ireland aims to decarbonise its industry through electrification and energy efficiency, absolute energy consumption remains bound to increase due to data centres, which jeopardises energy saving targets and puts additional stress on the energy system.

On sustainable mobility, much remains to be done in Ireland. The number of zero-emission passenger cars in the Irish fleet is growing rapidly, but the density of public charging points struggles to keep pace. Just over 100 kms of railroads are electrified, making Ireland the EU country with the lowest share of electrified railways. Road congestion puts a high and increasing burden on commuters' time. Air quality is generally good, with exceptions. However, specific actions under the national air pollution control programme are still to be rolled out, and reductions of nitrogen oxide, ammonia and volatile organic compounds emissions are needed.

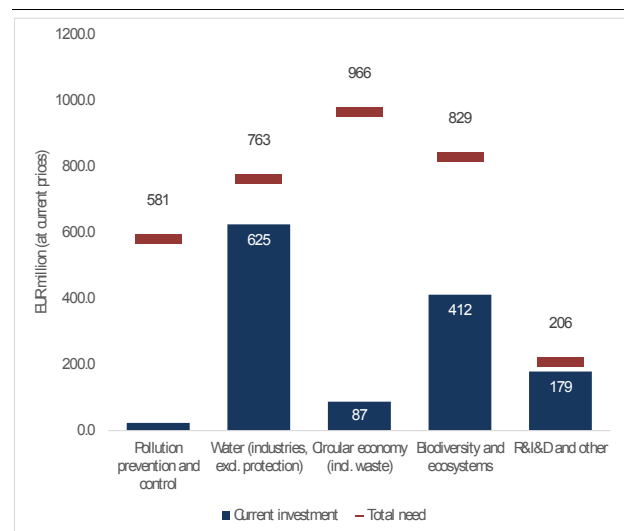
Ireland would benefit from investing more in environmental protection and in measures to tackle pollution, to protect biodiversity, and to promote the circular economy ⁽⁴⁹⁾. Between 2014 and 2020,

⁽⁴⁸⁾ After the conclusion of the negotiations for a recast EED, the ambition of both the EU and national targets as well as of the national measures for energy efficiency to meet these targets is expected to increase

⁽⁴⁹⁾ Environmental objectives include pollution prevention and control, water management and industries, circular economy and waste, biodiversity and ecosystems

environmental investment needs were estimated at EUR 3.3 billion while actual investment stood at about EUR 1.3 billion, with a gap of 2 billion, per year (see Graph A6.3) ⁽⁵⁰⁾. Under Natura 2000 and national designations, Ireland legally protects 13.9% of its land areas and 2.3% of its marine areas ⁽⁵¹⁾. However, there are significant knowledge and designation gaps in Ireland's marine Natura 2000 network. There are still concerns about special areas of conservation for raised and blanket bogs. Furthermore, Ireland is confronted with an ageing infrastructure and decades of under-investment in the water sector. The expanding dairy sector has a significant impact on water and air quality, pushing Ireland to exceeding the ammonia levels under the National Emission Reduction Commitments Directive.

Graph A6.3: Thematic – environmental investment needs and current investment, p.a. 2014-2020



Source: European Commission.

Ireland has a well-established climate adaptation framework. It identified key exposures to extreme weather events (floods, droughts, and storms). The first national adaptation framework, from 2018, was followed

(European Commission, 2022, Environmental Implementation Review, [country report Ireland](#)).

⁽⁵⁰⁾ When also accounting for needs estimated at EU level only (e.g., water protection, higher circularity, biodiversity strategy).

⁽⁵¹⁾ In 2021, Ireland had 13.9% terrestrial protected areas (Natura 2000 and nationally designated areas), against the EU average of 26.4% (European Environment Agency, 2023, [Natura 2000 Barometer](#)).

by adaptation plans in 12 key sectors, including natural capital, critical infrastructure, water and flood risk management, and public health. The climate action plan 2023 identifies several priority actions on adaptation, including updating the framework and the sectoral plans, improving the resilience of its water infrastructure, and incorporating adaptation into investment projects for key gas and power infrastructure. The Climate Action and Low Carbon Development (Amendment) Act 2021 requires all local authorities to develop climate action plans covering both mitigation and adaptation.

Ireland provides fossil fuel and other environmentally harmful subsidies that could be considered for reform, while ensuring food and energy security and mitigating social effects. Despite a fall in direct fossil fuel subsidies in recent years, various forms of direct support to end-users' fossil fuel consumption have remained. Environmentally harmful subsidies have been identified, via an initial assessment, in the agriculture, forestry and fishing, electricity, gas, steam and air conditioning, transportation and storage, mining and quarrying, real estate and services sectors. Examples of such subsidies include the reduced VAT rate for fertilisers and pesticides, the excise tax exemption and tax relief for natural gas for industrial consumers, the reimbursement of excise duty on diesel used in freight, other categories of passenger transport and direct subsidies for intensive meat and dairy production systems⁽⁵²⁾. Ireland recently undertook a review of fossil fuel subsidies and other potentially climate harmful supports, as part of its efforts to implement green budgeting on a wide basis⁽⁵³⁾. This is a significant first step, and a mapping of all environmentally harmful subsidies would help prioritise candidates for reform.

⁽⁵²⁾ Fossil fuel figures in EUR of 2021 from the 2022 State of the Energy Union report. Initial assessment of environmentally harmful subsidies done by the Commission in the 2022 toolbox for reforming environmentally harmful subsidies in Europe, using OECD definitions, and based on the following datasets: OECD Agriculture Policy Monitoring and Evaluations; OECD Policy Instruments for the Environment (PINE) Database; OECD Statistical Database for Fossil Fuels Support; IMF country-level energy subsidy estimates. Annex 4 of the toolbox contains detailed examples of subsidies on the candidates for reform.

⁽⁵³⁾ Ireland has undertaken and published an [analysis of fossil fuel subsidies and climate harmful spending \(2023\)](#).

Ireland could apply tax instruments to promote resource efficiency and further apply the polluter pays principle. It has a broad-based carbon tax and has recently passed legislation to provide for annual rate increases to EUR 100 per tonne of CO₂ in 2030, with the current rate at EUR 48.5. In 2021, energy- and transport-related environmental taxes accounted for the 64.7% and 35.1% of total environmental taxes, respectively. However, taxes on pollution and resources are limited⁽⁵⁴⁾ (see Annex 19). This leaves significant room to use tax instruments to drive behavioural change. As part of its climate action plan, Ireland has indicated that a review and possible reform of key environmental taxes will take place.

⁽⁵⁴⁾ European Commission, 2021, Green taxation and other economic instruments – Internalising environmental costs to make the polluter pay, [Ensuring that polluters pay](#).

Table A6.1: Indicators tracking progress on the European Green Deal from a macroeconomic perspective

								'Fit for 55'			
		2005	2017	2018	2019	2020	2021	2030 target/value	Distance WEM	Distance WAM	
Progress to policy targets	Greenhouse gas emission reductions in effort sharing sectors ⁽¹⁾	Mt CO ₂ eq; % pp	47.1	-7%	-4%	-3%	-5%	-	-42%	-31	-12
	Net carbon removals from LULUCF ⁽²⁾	kt CO ₂ eq	7 691	7 439	6 264	6 657	7 042	7 338	3728	n/a	n/a
								National contribution to 2030 EU target			
	Share of energy from renewable sources in gross final consumption of energy ⁽³⁾	%	300%	11%	11%	12%	16%	13%	34.1%		
Energy efficiency: primary energy consumption ⁽³⁾	Mtoe	14.9	14.4	14.6	14.7	13.4	13.9	13.7			
Energy efficiency: final energy consumption ⁽³⁾	Mtoe	12.6	11.8	12.4	12.4	11.2	11.4	11.2			
		Ireland						EU			
Fiscal and financial indicators	Environmental taxes (% of GDP)	% of GDP	1.9	1.8	1.6	1.4	1.2	1.2	2.4	2.2	2.2
	Environmental taxes (% of GNI*)	% of GNI*	3.0	2.9	2.6	2.4	2.3	2.1	-	-	-
	Environmental taxes (% of total taxation) ⁽⁴⁾	% of taxation	8.0	7.8	7.0	6.4	6.1	5.5	5.9	5.6	5.5
	Government expenditure on environmental protection	% of total exp.	1.6	1.6	1.6	1.6	1.4	1.4	1.7	1.6	1.6
	Investment in environmental protection ⁽⁵⁾	% of GDP	0.2	0.1	0.2	0.2	-	-	0.4	0.4	0.4
	Investment in environmental protection ⁽⁵⁾	% of GDP	0.3	0.2	0.3	0.3	-	-	-	-	-
	Fossil fuel subsidies ⁽⁶⁾	EUR2021bn	2.3	2.0	2.0	1.7	1.6	-	53.0	50.0	-
Climate protection gap ⁽⁷⁾	score 1-4	-	-	-	-	0.7	1.2	-	-	1.5	
Climate	Net greenhouse gas emissions	1990 = 100	111.0	117.0	119.0	114.0	106.0	111.0	76.0	69.0	72.0
	Greenhouse gas emission intensity of the economy	kg/€UR10	0.32	0.30	0.28	0.26	0.21	0.26	0.31	0.30	0.26
	Energy intensity of the economy	kgoe/€UR10	0.06	0.06	0.05	0.05	0.04	-	0.11	0.11	-
Energy	Final energy consumption (FEC)	2015=100	103.8	104.7	109.4	109.4	98.8	100.7	102.9	94.6	-
	FEC in residential building sector	2015=100	103.5	100.4	106.9	104.5	112.6	107.7	101.3	101.3	106.8
	FEC in services building sector	2015=100	101.5	101.5	112.5	113.9	115.2	114.3	100.1	94.4	100.7
Pollution	Smog-precursor emission intensity (to GDP) ⁽⁸⁾	tonne/€UR10	0.8	0.7	0.7	0.6	0.5	-	0.9	0.9	-
	Smog-precursor emission intensity (to GNI*) ⁽⁸⁾	tonne/€UR10	1.2	1.2	1.1	1.0	1.0	-	-	-	-
	Years of life lost due to air pollution by PM _{2.5}	per 100,000 inh.	112.2	66.9	153.3	146.1	119.7	-	581.6	544.5	-
	Years of life lost due to air pollution by NO ₂	per 100,000 inh.	44.2	31.6	45.5	41.6	11.6	-	309.6	218.8	-
	Nitrates in ground water	mg NO ₃ /litre	12.7	12.8	12.8	14.4	13.9	-	21.0	20.8	-
Biodiversity	Land protected areas	% of total	13.4	13.8	-	13.8	13.8	13.9	26.2	26.4	26.4
	Marine protected areas	% of total	2.3	-	-	2.3	-	2.3	10.7	-	12.1
	Organic farming	% of total utilised agricultural area	1.7	1.7	1.7	1.6	1.7	2.0	8.5	9.1	-
Mobility	Share of zero-emission vehicles ⁽⁹⁾	% in new registrations	0.5	1.0	3.1	4.5	8.3	14.7	5.4	8.9	10.7
	Number of ACDC recharging points (AFRCategorisation)		-	-	-	1144	1038	2166	188626	330028	432518
	Share of electrified railways	%	5.7	5.3	5.3	n/a	n/a	2.8	56.6	n/a	56.6
	Hours of congestion per commuting driver per year		35.0	35.3	36.0	36.1	n/a	n/a	28.7	n/a	n/a

Sources: (1) Historical and projected emissions, as well as Member States' climate policy targets and 2005 base year emissions under the Effort Sharing Decision (for 2020) are measured in global warming potential (GWP) values from the 4th Assessment Report (AR4) of the Intergovernmental Panel on Climate Change (IPCC). Member States' climate policy targets and 2005 base year emissions under the Effort Sharing Regulation (for 2030) are in GWP values from the 5th Assessment Report (AR5). The table above shows the base year emissions 2005 under the Effort Sharing Decision, using AR4 GWP values. Emissions for 2017-2021 are expressed in percentage change from 2005 base year emissions, with AR4 GWP values. 2021 data are preliminary. The table shows the 2030 target under Regulation (EU) 2023/857 that aligns it with the EU's 55% objective, in percentage change from 2005 base year emissions (AR5 GWP). Distance to target is the gap between Member States' 2030 target (with AR5 GWP values) and projected emissions with existing measures (WEM) and with additional measures (WAM) (with AR4 GWP values), in percentage change from the 2005 base year emissions. Due to the difference in global warming potential values, the distance to target is only illustrative. The measures included reflect the state of play as of 2022.

(2) Net removals are expressed in negative figures, net emissions in positive figures. Reported data are from the 2023 greenhouse gas inventory submission. 2030 value of net greenhouse gas removals as in Regulation (EU) 2023/839 amending Regulation (EU) 2018/841 (LULUCF Regulation) – Annex IIa, kilotons of CO₂ equivalent, based on 2020 submissions.

(3) Renewable energy and energy efficiency targets and national contributions are in line with the methodology established under Regulation (EU) 2018/1999 (Governance Regulation).

(4) Percentage of total revenue from taxes and social contributions (excluding imputed social contributions). Revenue from the EU Emissions Trading System is included in environmental tax revenue.

(5) Expenditure on gross fixed capital formation for the production of environmental protection services (abatement and prevention of pollution) covering government, industry, and specialised providers.

(6) European Commission, Study on energy subsidies and other government interventions in the European Union, 2022 edition.

(7) The climate protection gap refers to the share of non-insured economic losses caused by climate-related disasters. This indicator is based on modelling of the current risk from floods, wildfires and windstorms as well as earthquakes, and an estimation of the current insurance penetration rate. The indicator does not provide information on the split between the private/public costs of climate-related disasters. A score of 0 means no protection gap, while a score of 4 corresponds to a very high gap (EIOPA, 2022).

(8) Sulphur oxides (SO₂ equivalent), ammonia, particulates < 10 µm, nitrogen oxides in total economy (divided by GDP).

(9) Battery electric vehicles (BEV) and fuel cell electric vehicles (FCEV).

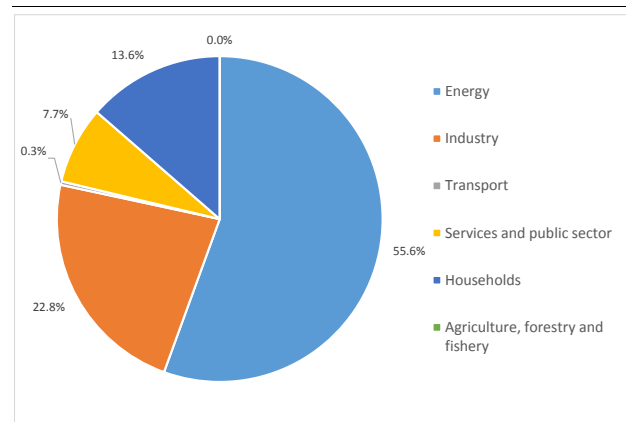
Before Russia invaded Ukraine, Ireland already had no direct exposure to Russian gas and oil. However, it is highly dependent on imported fossil fuels in general. This makes its economy particularly sensitive to global price developments, requiring it to step up efforts on the energy transition. This Annex ⁽⁵⁵⁾ sets out actions carried out by Ireland to achieve the REPowerEU objectives, including through the implementation of its recovery and resilience plan, in order to improve energy security and affordability while accelerating the clean energy transition, and contributing to enhancing the EU’s competitiveness in the clean energy sector ⁽⁵⁶⁾.

Ireland has no exposure to Russian crude oil and gas imports. However, it depends heavily on these energy sources for its energy supply. Natural gas production has decreased by 43% since 2018 due to the closure of the Kinsale Area gas fields, reaching 2 billion cubic metres (bcm) in 2020. Ireland’s gas imports have increased by almost 70% since 2018, reaching 3.4 bcm in 2020 to cover decreasing production. From 2010 to 2015, they fluctuated between 4 and 5 bcm. Imports account for 60% of gas consumed (2020) and all come from the UK. In April 2022, Ireland published its national energy security framework. It aims to ensure security of supply in the near term, reducing Ireland’s dependency on imported fossil fuels and compensating households and businesses exposed to higher energy costs.

Ireland has reviewed its energy security policy. The main issues for the security of its energy supply are related to the structural stress its power system is under. On 19 September 2022, the government launched a consultation to support the review of Ireland’s medium-term energy security to 2030. Measures to mitigate potential supply risks

include additional import capacity, reducing energy use, energy storage, additional electricity interconnection, fuel diversification and renewable gases (such as biomethane and hydrogen). This review will consider, among other things, the possibility of opening liquefied natural gas terminals. There were significant tensions over electricity supply in 2022. Ireland issued an early warning in August 2022 and expects these difficult circumstances to persist for the next few winters. The Irish authorities have entered into dialogue with the Commission to seek ways of addressing this issue.

Graph A7.1: Share of gas consumption per sector, 2021



Source: Eurostat

Lack of awareness of the potential for energy savings and lack of access to financing are a major factor for the energy efficiency gap. Many people are not aware of the cost-effective measures and the financial incentives and programmes available to help them make energy-efficient upgrades. In May 2020, the Irish government launched a new nationwide public information campaign – 'Reduce Your Use' – to promote energy efficiency and highlight the range of support available to households and businesses. Another reason is a lack of access to financing for the upfront cost of energy efficiency investments. Ireland’s National Retrofit Plan was launched in February 2022 to upgrade 500 000 homes, representing 30% of the housing stock, by 2030 with grants of up to 50% of the cost of a deep retrofit, while the country’s one-stop shops assist with project management. Ireland announced a ban on oil boilers for new buildings, starting this year, and gas boilers by 2025. Over the period August 2022 – March 2023, 0% of gas consumption has been saved in Ireland compared to the

⁽⁵⁵⁾ It is complemented by Annex 6 as the European Green Deal focuses on the clean energy transition, by Annex 8 on the actions taken to mitigate energy poverty, including the most vulnerable ones, by Annex 9 as the transition to a circular economy will unlock significant energy and resource savings, further strengthening energy security and affordability, and by Annex 12 on industry and single market complementing ongoing efforts under the European Green Deal and REPowerEU.

⁽⁵⁶⁾ in line with the Green Deal Industrial Plan COM(2023) 62 final, and the proposed Net-Zero Industry Act COM(2023) 161 final

previous 5-years average. Ireland is carrying out a number of checks on products covered by ecodesign and energy labelling, that may be too low. This generates with respect to the level playing field among economic operators and uncertainty as to the compliance levels of the concerned products, and therefore possible missed energy and CO2 savings ⁽⁵⁷⁾.

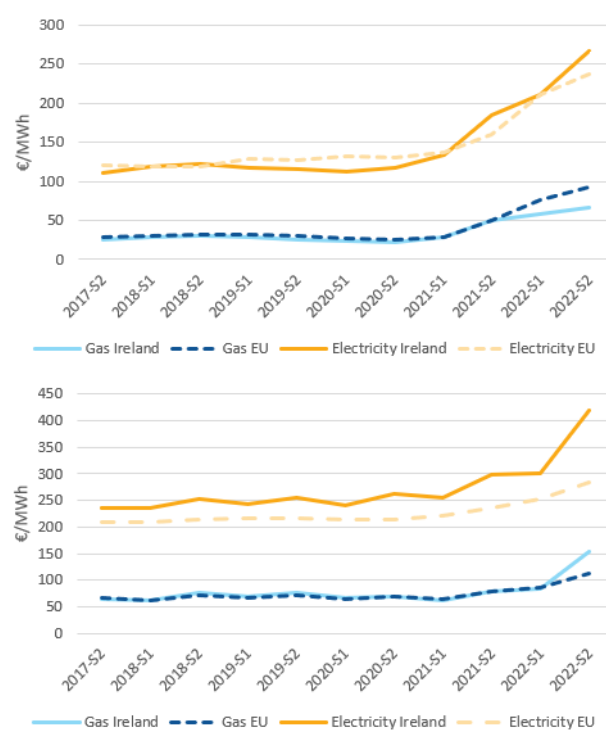
Ireland is further upgrading its grid infrastructure. The forthcoming electricity interconnection between France and Ireland is a major part of the upgrade. This will make it possible to accommodate higher shares of renewable generation, reduce curtailment and make Ireland’s energy supply more secure. This is a Project of Common Interest that has reached the construction stage and is expected to be ready in 2027. With high offshore wind potential, Ireland could play a major role in the generation of renewable hydrogen, provided the appropriate infrastructure were in place to deliver the hydrogen to demand centres in Europe, given the quite low demand there is for it in Ireland.

Ireland has introduced a broad range of support instruments to mitigate the impact of soaring energy prices on households and industry. Wholesale gas prices, and to a lesser extent electricity, increased more moderately in Ireland than in the rest of the EU in 2022 due to Ireland’s limited exposure to Russian gas imports and because prices had already increased significantly in 2021. In addition to the measures taken at the end of 2021 to mitigate the impact of a sharp rise in retail electricity prices, which hit households and small and medium-sized enterprises hardest, the government put various measures in place in 2022. These include electricity cost credits, VAT reductions, fuel allowances, a temporary business energy support scheme and protection measures for vulnerable customers. In addition, a national energy security framework adopted in the wake of the invasion of Ukraine includes more structural measures such as grants for vulnerable households to install solar panels.

Ireland has high ambitions to make a fast transition to a power system based on renewables. It is putting regulatory reforms to match its ambitions in place. Renewable

energy, representing over 40% of electricity production, is now the second largest source of electricity after natural gas. Ireland increased its 2030 renewable electricity target to 80% in 2022. To reach this target, Ireland will have to rely heavily on the accelerated development of onshore and especially offshore wind. The 2023 Climate Action Plan also considerably raised the 2030 objective for solar PV. A low wind year for renewable generation in 2021 meant Ireland used more coal and oil for electricity generation, bringing down its share of renewables in gross final energy consumption to 12.55%, from about 13.5% in 2020 (16.16% with statistical transfers). In March 2022, the government announced a new planning regime to enable the development of more offshore wind farms, vital for it to reach its 80% renewable electricity target. On 7 October 2022, the government introduced planning exemptions for the installation of solar panels on rooftops to bring Ireland into line with the EU’s solar rooftops initiative.

Graph A7.2: Ireland’s retail energy prices for industry (top) and households (bottom)



(1) On electricity, the band consumption is DC for households and ID for industry
(2) On gas, the band consumption is D2 for households and I4 for industry
Source: Eurostat

⁽⁵⁷⁾ The internet-supported information and communication system for the pan-European market surveillance

Renewable gases can be an important complement to renewable electricity and

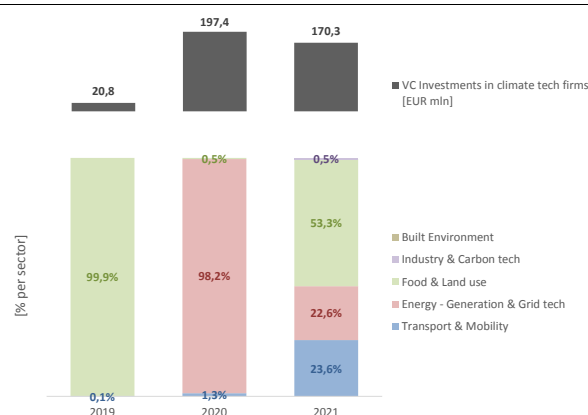
there are untapped potential to explore. Ireland's hydrogen strategy, still in the making, is needed to determine the role hydrogen can play in the future energy system and guide its deployment and use. There is also still potential to see what can be done in key sectors to reach the country's renewables penetration and decarbonisation targets. This would include in particular further upscaling its biomethane production. Ireland has set an indicative target for domestic biomethane production of 1.6 TWh by 2030. Considering the Irish agricultural sector, the waste and by-streams of whose livestock and dairy industry are suitable for biogas, potential is significantly higher. It is estimated that it could be around 12.53 TWh. It follows that, in view of the REPowerEU objectives and the current high prices of methane, this indicative target should be significantly increased, and the policies and measures necessary for it to be reached should be specified in the revised national energy and climate plan.

Ireland has a traditionally strong manufacturing base of low-carbon technologies and components (in particular for offshore wind). This is set to be strengthened, given the deployment needs in order to achieve decarbonisation objectives. Ireland is also among the European countries leading world export for power management systems. The transition to clean energy is mineral intensive. It will therefore require a considerable supply of many critical minerals (Annex 5). Some Irish companies are among the biggest European manufacturers of uninterruptible power supply systems, power distribution units, smart meters and inverters. Irish companies are also major players in the power management systems research and innovation (R&I) field. However, public investment in R&I as an EU Energy Union priority⁽⁵⁸⁾ decreased from 0.022% in 2014 to 0.009% in 2021 as a share of GNI* (0.017% to 0.005% as a share of GDP). There was also a downward trend in venture capital investment in climate tech start-ups and scale-ups (9.5% in 2021 compared to 17.1% in 2020 as a percentage of total venture capital investment), with Ireland representing nearly 2.5% of the EU's total venture capital

⁽⁵⁸⁾ Renewables, smart systems, efficient systems, sustainable transport, carbon capture, utilisation and storage, and nuclear safety, COM(2015) 80 final (Energy Union Package).

investments in climate tech start-ups and scale-ups (6.3% in 2020). More public and private investments in clean energy R&I, scale-up and affordable deployment are crucial. They are also important for bridging the gap between R&I and market uptake, helping to make the EU more competitive. In an effort to step up its support towards innovative energy companies, Ireland's SEAI has since 2021 published yearly calls to fund innovative energy Research Development and Demonstration projects which will help accelerate Ireland's transition to a clean and secure energy future.

Graph A7.2: **Venture capital investments in climate tech start-ups and scale-ups in Ireland**



Source: JRC elaboration based on PitchBook data (06/2022)

Ireland's green transition necessitates reskilling and upskilling of the workforce. Despite having a relatively low share of workers in energy-intensive industries (1.39% versus 3.06% in the EU), Ireland's move away from carbon-intensive sources of energy towards more sustainable, renewable energy sources is expected to affect jobs in the Midlands and its electricity-generating industry, with upskilling and reskilling of the workforce there being particularly important. Employment in the environmental goods and services sector is still relatively low (1.7% versus 2.2% in the EU), and wind and solar energy potential, as well as energy efficiency improvements, offer further opportunities for green jobs. On the other hand, the availability of qualified workers may also become a bottleneck given the pace of change required for Ireland to achieve its objectives. Ireland currently shows comparatively low unemployment rates and high labour shortages in the industry sector: Ireland ranks among top EU countries in terms of proportion of businesses in clean energy

Table A7.1: Key Energy Indicators

	IRELAND				EU				
	2018	2019	2020	2021	2018	2019	2020	2021	
ENERGY DEPENDENCE	Import Dependency [%]	68%	69%	71%	77%	58%	61%	57%	56%
	of Solid fossil fuels	113%	68%	56%	106%	44%	44%	36%	37%
	of Oil and petroleum products	98%	99%	103%	98%	95%	97%	97%	92%
	of Natural Gas	39%	53%	64%	71%	83%	90%	84%	83%
	Dependency from Russian Fossil Fuels [%]								
	of Hard Coal	1%	6%	22%	81%	40%	44%	49%	47%
	of Crude Oil	0%	0%	0%	0%	30%	27%	26%	25%
of Natural Gas	0%	0%	0%	0%	40%	40%	38%	41%	
	2015	2016	2017	2018	2019	2020	2021	2022	
ELECTRICITY	Gross Electricity Production (GWh)	28,391	30,513	30,876	31,139	30,962	32,276	31,872	-
	Combustible Fuels	20,720	23,387	22,525	21,546	19,771	19,440	20,968	-
	Nuclear	0	0	0	0	0	0	0	-
	Hydro	1,095	973	895	932	1,132	1,224	1,036	-
	Wind	6,573	6,147	7,444	8,640	10,019	11,549	9,776	-
	Solar	4	6	12	22	40	62	93	-
	Geothermal	0	0	0	0	0	0	0	-
	Other Sources	0	0	0	0	0	0	0	-
	Net Imports of Electricity (GWh)	673	-712	-679	-28	645	-152	1,588	-
	As a % of electricity available for final consumption	2.62%	-2.70%	-2.53%	-0.10%	2.29%	-0.53%	5.35%	-
Electricity Interconnection (%)	-	-	7.4%	7.1%	6.3%	6.6%	0.0%	0.0%	
	2015	2016	2017	2018	2019	2020	2021	2022	
DIVERSIFICATION OF GAS SUPPLIES	Gas Consumption (in bcm)	4.4	5.1	5.3	5.4	5.4	5.5	5.2	5.8
	Gas Imports - by type (in bcm)	4.2	2.0	1.7	2.0	2.9	3.4	3.7	-
	Gas imports - pipeline	4.2	2.0	1.7	2.0	2.9	3.4	3.7	-
	Gas imports - LNG	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-
	Gas Imports - by main source supplier (in bcm) (1)								
United Kingdom	4.2	2.0	1.7	2.0	2.9	3.4	3.7	-	
	2019	2020	2021	2022					
DIVERSIFICATION OF GAS SUPPLIES	LNG Terminals								
	Number of LNG Terminals (2)	0	0	0	0				
	LNG Storage capacity (m3 LNG)	0	0	0	0				
	Underground Storage								
	Number of storage facilities	0	0	0	0				
Operational Storage Capacity (bcm)	0	0	0	0					
	2019	2020	2021	2022					
CLEAN ENERGY	VC investments in climate tech start-ups and scale-ups (EUR Mln) (3)	20.8	197.4	170.3	n.a.				
	as a % of total VC investments in Ireland	4.1%	17.1%	9.5%	n.a.				
	Research & Innovation spending in Energy Union R&I priorities								
	Public R&I (EUR mln)	25.1	22.4	23.3	n.a.				
	Public R&I (% GDP)	0.007%	0.006%	0.005%	n.a.				
	Private R&I (EUR mln)	150.5	n.a.	n.a.	n.a.				
Private R&I (% GDP)	0.04%	n.a.	n.a.	n.a.					

(1) The ranking of the main suppliers is based on the latest available figures (for 2021)

(2) includes FSRU

(3) Venture Capital investments include Venture Capital deals (all stages) and Private Equity Growth/Expansion deals (for companies that have previously been part of the portfolio of a VC investment firm)

Source: Eurostat, Gas Infrastructure Europe (Storage and LNG Transparency Platform), JRC SETIS (2022), JRC elaboration based on PitchBook data (06/2022)

relevant manufacturing experiencing labour shortages that limit their production.

ANNEX 8: FAIR TRANSITION TO CLIMATE NEUTRALITY

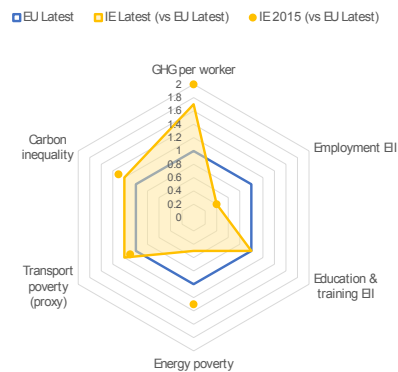
This Annex monitors Ireland's progress in ensuring a fair transition towards climate neutrality and environmental sustainability, notably for workers and households in vulnerable situations. The number of jobs in the green economy has recently risen in Ireland. To ensure a fair green transition in line with the Council Recommendation⁽⁵⁹⁾, upskilling and reskilling measures will promote smooth labour market transitions and the implementation of REPowerEU. Ireland's recovery and resilience plan (RRP) outlines crucial reforms and investments for a fair green transition⁽⁶⁰⁾, complementing the territorial just transition plan and actions supported by the European Social Fund Plus (ESF+).

Employment in Ireland's sectors most affected by the green transition remains almost stable, but workers in declining activities need active support. The greenhouse gas (GHG) emissions intensity of Ireland's workforce declined from 27.8 to 22.8 tonnes per worker between 2015 and 2021. Yet it continues to be above the EU average of 13.7 in 2020. (see Graph A8.1 and Table A8.1). Agriculture is the largest contributor to greenhouse emissions, followed by the transport and energy industries and the residential sector. Employment in Ireland's energy-intensive industries (EII) represented a share of 0.9% of total employment in 2021 (in 2020: 1.10 vs 3.0% in the EU). Employment in mining and quarrying decreased by 28.5% since 2015 (to around 5 000 workers). Total jobs in the environmental goods and services sector grew by 56.7% (to 38 096) during 2015-19 (EU: 8.3%), reaching 1.6% of total employment (EU: 2.2%) (see Annex 9 for circular jobs specifically). The job vacancy rate in construction, which is key for the green transition, is relatively low, 1.3% vs 4.0% in the EU in 2022. Young workers (18-24 years), people with disabilities, ethnic minorities (e.g. Roma and Travellers), single parents and those with lower educational background face greater challenges with regards to job transitions/job changes when compared to the general population (see Annex 14). The RRP

includes a measure to equip workers with green skills, aiming to improve their employability.

Upskilling and reskilling in declining and transforming sectors represent a key challenge. Skills are key for smooth labour market transitions and preserving jobs in transforming sectors. In Ireland, 35% of citizens believe they do not have the necessary skills to contribute to the green transition (EU: 38%)⁽⁶¹⁾ (cf. Annex 15). To promote skills development, specific investment under the RRP and the Just Transition Mechanism provide training for reskilling workers in regions affected by the transition, together with a broader training offer at national level under the SOLAS recovery skills programme⁽⁶²⁾. In Ireland, 2.3% of ESF+ funding contributes to green skills and jobs. The European Agricultural Fund for Rural Development (EAFRD) also helps improve access to knowledge and innovation for the rural community.

Graph A8.1: Fair transition challenges in Ireland



Source: Eurostat, EMPL-JRC GD-AMEDI/AMEDI+ projects and World Inequality Database (see Table A8.1).

While energy poverty indicators were improving between 2015 and 2021, the spike in energy prices can be expected to aggravate the situation⁽⁶³⁾. The share of the total population unable to keep their homes adequately warm declined from 9% in 2015 to 3.2% in 2021 (below the EU average of 6.9%

⁽⁵⁹⁾ Council Recommendation of 16 June 2022 on ensuring a fair transition towards climate neutrality (2022/C 243/04) covers employment, skills, tax-benefit and social protection systems, essential services and housing.

⁽⁶⁰⁾ See 2022 Country Report Annex 6 and Annex 3 for an overview.

⁽⁶¹⁾ Special Eurobarometer 527. Fairness perceptions of the green transition (May – June 2022).

⁽⁶²⁾ Department of Public Expenditure and Reform (2021) Ireland's 2021 National Recovery and Resilience Plan

⁽⁶³⁾ Economic and Social Research Institute (2022) Energy poverty at highest recorded rate



Table A8.1: Key indicators for a fair transition in Ireland

Indicator	Description	IE 2015	IE Latest	EU Latest
GHG per worker	Greenhouse gas emissions per worker - CO2 equivalent tonnes	27.8	22.8 (2021)	13.7 (2021)
Employment EII	Employment share in energy-intensive industries, including mining and quarrying (NACE B), chemicals (C20), minerals (C23), metals (C24), automotive (C29) - %	1.2	1.1 (2020)	3 (2020)
Education & training EII	Adult participation in education and training (last 4 weeks) in energy-intensive industries - %		9.9 (2018)	10.4 (2022)
Energy poverty	Share of the total population living in a household unable to keep its home adequately warm - %	9	3.2 (2021)	6.9 (2021)
Transport poverty (proxy)	Estimated share of the AROP population that spends over 6% of expenditure on fuels for personal transport - %	39.9	43.6 (2023)	37.1 (2023)
Carbon inequality	Average emissions per capita of top 10% of emitters vs bottom 50% of emitters	6.4	5.9 (2020)	5 (2020)

Source: Eurostat (env_ac_ainah_r2, nama_10_a64_e, ilc_mdcs01), EU Labour Force Survey (break in time series in 2021), EMPL-JRC GD-AMEDI/AMEDI+ projects and World Inequality Database (WID).

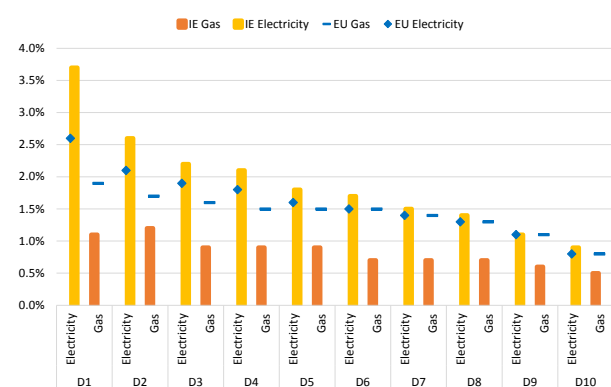
in 2021)⁽⁶⁴⁾. In particular, 8.1% of the population at risk of poverty in 2021 (EU: 16.4% in 2021) and 3.8% of lower middle-income households (in deciles 4-5) were affected in 2021 (EU: 8.2% in 2021). Before the energy price hikes, an estimated 18.8% of the total population and 45.9% of the (expenditure-based) at-risk-of-poverty (AROP) population had residential expenditure budget shares on electricity, gas, and other fuels⁽⁶⁵⁾ above 10% of their household budget (still below the estimated EU average of 26.9% and 48.2%, respectively).

The increased energy prices in 2021-2023 negatively affect households' budgets, in particular for low-income groups. As a result of energy price changes during the August 2021 to January 2023 period relative to the 18 months prior (cf. Annex 7), in the absence of policy support and behavioural responses, the fraction of individuals living in households which spend more than 10% of their budget on energy would have increased by 21.7 percentage points (pps) for the whole population and by 24.9 pps among the (expenditure-based) AROP population, more than the EU-level increases of 16.4 pps and 19.1 pps, respectively⁽⁶⁶⁾. Expenditure shares of low and lower-middle income groups would have increased the most, which is most pronounced for electricity, as shown in Graph A8.2. Among the (expenditure-based) AROP population, the share of individuals living in households with budget shares for

private transport fuels⁽⁶⁷⁾ above 6% would have increased less than the EU average (3.7 pps vs 5.3 pps), reaching 43.6% in January 2023 (EU: 37.1%) due to the increase in transport fuel prices.

Access to public transport displays an urban-rural divide. Citizens perceive public transport to be relatively available (49% vs 55% in the EU), affordable (57% vs 54% in the EU) and of good quality (58% vs 60% in the EU). As regards these perceptions, rural areas were below the EU average on all three dimensions.⁽⁶⁸⁾ The average carbon footprint of the top 10% of emitters (households with the highest incomes) among the population in Ireland is 5.9 times higher than that of the bottom 50% (see Graph A8.1), while the EU average is 5.0 times higher.

Graph A8.2: Distributional impacts of energy prices due to rising energy expenditure (2021-2023)



Mean change of energy expenditure as a percentage (%) of total expenditure per income decile (D) due to observed price changes (August 2021 – January 2023 relative to the 18 months prior), excl. policy support and behavioural responses.

Source: EMPL-JRC GD-AMEDI/AMEDI+ projects, based on Household Budget Survey 2015 and Eurostat inflation data for CP0451 and CP0452.

⁽⁶⁴⁾ Energy poverty is a multi-dimensional concept. The indicator used focuses on an outcome of energy poverty. Further indicators are available at the [Energy Poverty Advisory Hub](#).

⁽⁶⁵⁾ Products defined according to the European Classification of Individual Consumption according to Purpose (ECOICOP): CP045.

⁽⁶⁶⁾ [EMPL-JRC GD-AMEDI/AMEDI+](#); see details in the related technical brief.

⁽⁶⁷⁾ ECOICOP: CP0722.

⁽⁶⁸⁾ EU (rural): 4.6%, 4.8%, 5.5%. Special Eurobarometer 527.

The circular economy transition is key to delivering on the EU's climate and environmental goals and provides large socio-economic benefits. It spurs job growth, innovation and competitiveness and fosters resilience and resource security. The circularity transition of industry, the built environment and agri-food can generate significant environmental improvements (see Annex 6), as they rank among the most resource-intensive systems.

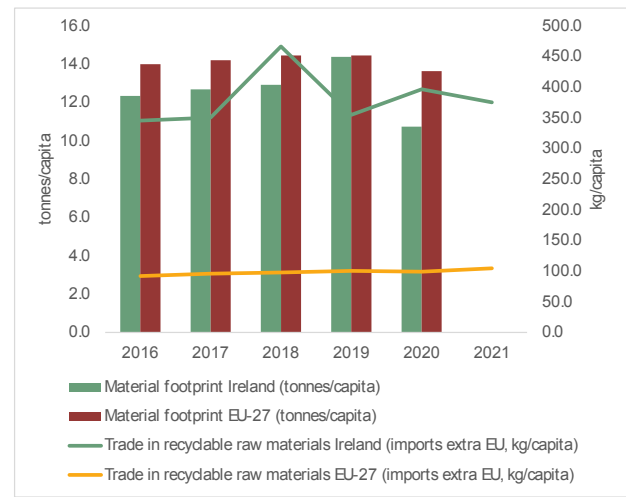
Ireland's circular economy transition needs accelerating to meet the EU's circular economy goals. The EU's 2020 circular economy action plan (CEAP) aims at doubling the circular material use rate between 2020 and 2030. Ireland's circular use of material slightly increased from 1.7% in 2016 to 2% in 2021, well below the EU average of 11.7%. As its growth was lower than that of the EU-27 overall, the gap with the EU average has widened. The CEAP also aims to significantly decrease the EU's material footprint. In 2020, Ireland's material footprint (10.8%) was below the 2020 EU-27 average (13.7%) and experienced a drop in its upward trend since 2016. As regards health and safety in circular jobs, fatal accidents in waste management and materials recovery are above the average of all economic sectors in Ireland and above the EU average⁽⁶⁹⁾.

Ireland recently adopted new policies to address circular economy challenges, but more measures are needed. In 2020, Ireland adopted the Waste Action Plan for a Circular Economy to improve the country's performance in waste prevention and management. However, Ireland does not yet have an updated waste management plan in line with the new Waste Framework Directive. The Programme for Government, Our Shared Future, and the new 2020-2025 Waste Action Plan: A Waste Action Plan for a Circular Economy (September 2020) committed to a range of actions to support the transition to a circular economy. This included the adoption of a high-level whole-of-government circular economy strategy that was launched in December 2021 for implementation in 2022.

⁽⁶⁹⁾ Eurostat HSW_N2_o2 for NACE Rev. 2 sector E38; 14.33 fatal accidents p. 100 000 employed in 2018-2020 vs 1.69 for all sectors in IE; 6.33 in the EU-27 for sector E38

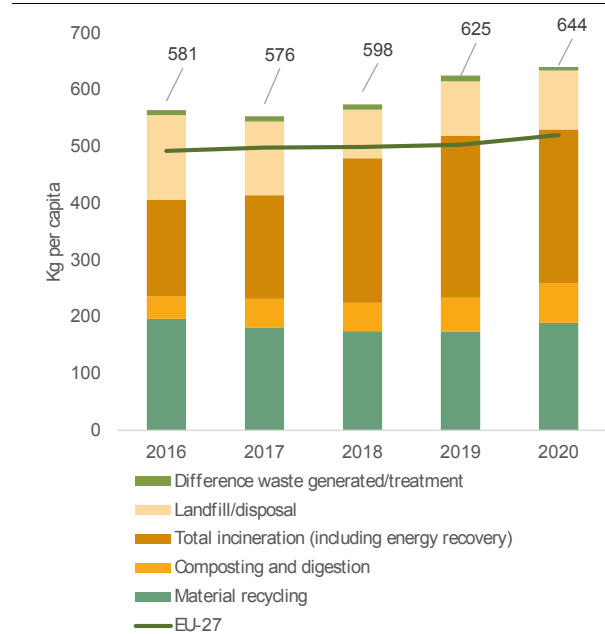
The Circular Economy and Miscellaneous Provisions Act 2022 was signed into law in July 2022. The new national waste management plan for a circular economy is expected at the beginning of 2023.

Graph A9.1: Trend in material use



Source: Eurostat

Graph A9.2: Treatment of municipal waste



Source: Eurostat

The recycling performance in Ireland has been stagnating for several years. Ireland's recycling rate for municipal waste was 40.8% in 2020, and it missed the EU target for recycling 50% of municipal waste by 2020. While improvements in waste management are being made, Ireland is at risk of missing the 2025 recycling target of 55% for municipal solid



Table A9.1: Overall and systemic indicators on circularity

AFFA	2016	2017	2018	2019	2020	2021	EU-27	Latest year EU-27
Overall state of the circular economy								
Material footprint (tonnes/capita)	124	127	129	144	108	-	13.7	2020
YoY growth in persons employed in the circular economy (%) ¹	-	-	-	-	-	-	2.9	2019
Water exploitation index plus (WEI+) (%)	0.7	0.7	0.7	0.6	-	-	3.6	2019
Industry								
Resource productivity (purchasing power standard (PPS) per kilogram)	2.3	2.3	2.4	2.4	2.7	3.2	2.3	2021
Circular material use rate (%) ²	1.7	1.7	1.6	1.6	1.7	2.0	11.7	2021
Recycling rate (% of municipal waste)	40.7	40.4	37.7	37.4	40.8	-	49.6	2021
Built environment								
Recovery rate from construction and demolition waste (%) ³	96.0	-	100.0	-	-	-	89.0	2020
Soil sealing index (base year = 2006) ⁴	103.4	-	107.9	-	-	-	108.3	2018
Agri-food								
Food waste (kg per capita) ⁵	-	-	-	-	155.0	-	131.0	2020
Composting and digestion (kg per capita)	40.0	51.0	50.0	60.0	70.0	-	100.0	2021

(1) Persons employed in the circular economy only tracks direct jobs in selected sub-sectors of NACE codes E, C, G and S; (2) the circular material use rate measures the share of material recovered and fed back into the economy in overall material use; (3) the recovery rate of construction and demolition waste includes waste which is prepared for reuse, recycled or subject to material recovery, including through backfilling operations; (4) soil sealing: 2016 column refers to 2015 data; (5) food waste includes primary production, processing and manufacturing, retail and distribution, restaurants and food services, and households.

Source: Eurostat, European Environment Agency

waste. In addition, with 27.5% recycling of plastic packaging, it is also at risk of missing the 50% target for plastic packaging waste. Ireland will need to make further efforts to meet the recycling targets by 2035 through improvements in separate collection and treatment of waste.

The industrial system is increasingly circular. The economy, particularly industry, is more efficient at using materials than the EU average, with a resource productivity of 3.2 purchasing power standard per kilogramme vs 2.3 for the EU in 2021, further increasing Ireland's resilience⁽⁷⁰⁾ (see Annex 5). After some stagnation, there is an increasing trend since 2020, indicating potential to boost repair, reuse and the use of secondary raw materials.

The built environment system continues to exacerbate the depletion of resources despite recent improvements. The recovery rate of construction and demolition waste has increased since 2016 and was above the EU

average. However, this needs to be nuanced as the data are not available for 2019, 2020 and 2021. Soil sealing progressed between 2015 and 2018 at a lower rate than the EU average. There is scope for renovating existing buildings in line with resource and energy efficiency measures and improving their use instead of building new ones, as well as increasing the share of secondary raw materials used in construction. The Irish recovery and resilience plan provides for energy efficiency investments in private and public buildings.

The agri-food system needs to further develop initiatives to tackle food waste. Ireland's composting and anaerobic digestion per head has increased moderately since 2016 but remained below the EU-27 average in 2020 at 70 kg per head vs 97 kg. Increasing anaerobic digestion could enhance Ireland's strategic autonomy by generating biomethane and/or producing organic fertilisers. The new CAP strategic plan provides for some support for producers to make investments in reducing waste.

There remains a financing gap in the circular economy, including waste management. Additional investments will be required to address growing needs. The financing gap was estimated at EUR 879

⁽⁷⁰⁾ Resource productivity is defined as the ratio GDP at purchase power parity over domestic material consumption. However, in some cases, modified GNI (GNI*), which excludes globalisation effects, might more accurately reflect the income standards of Irish residents than GDP. Nominal GNI* was 54,8% of GDP in 2021. See Central Statistics Office, 'Modified GNI' for more detail.

million per year between 2014 and 2020. Over this period, investment needs were estimated to be at least EUR 966 million per year, while investment baselines were EUR 87 million per year (see Annex 6). Investment areas such as eco-design, repair, reuse and remanufacturing as well as the uptake of new business models will be necessary to reach the EU's circular economy objectives. Additional investments are needed in improving separate waste collection and treatment infrastructure to divert waste from landfilling and incineration.

Digital transformation is key to ensuring a resilient and competitive economy. In line with the Digital Decade Policy Programme, and in particular with the targets in that Programme for digital transformation by 2030, this Annex describes Ireland's performance on digital skills, digital infrastructure/connectivity and the digitalisation of businesses and public services. Where relevant, it makes reference to progress on implementing the Recovery and Resilience Plan (RRP). Ireland allocates 32% of its total RRP budget to digital (EUR 0.3 billion) ⁽⁷¹⁾.

The Digital Decade Policy Programme sets out a pathway for Europe's successful digital transformation by 2030. The Programme provides a framework for assessing the EU's and Member States' digital transformation, notably via the Digital Economy and Society Index (DESI). It also provides a way for the EU and its Member States to work together, including via multi-country projects, to accelerate progress towards the Digital Decade digital targets and general objectives ⁽⁷²⁾. More generally, several aspects of digital transformation are particularly relevant in the current context. In 2023, the European Year of Skills, building the appropriate skillset to make full use of the opportunities that digital transformation offers is a priority. A digitally skilled population increases the development and adoption of digital technologies and leads to productivity gains ⁽⁷³⁾. Digital technologies, infrastructure and tools all play a role in the fundamental transformation needed to adapt the energy system to the current structural challenges ⁽⁷⁴⁾.

Ireland scores highly on all indicators related to digital skills. In Ireland, the share of the population that has at least basic digital

skills and the percentage of ICT specialists is above the EU average. The RRP includes several measures to further improve basic digital skills, in particular those of students, and to increase the number of ICT graduates.

Ireland performs well in the area of digital infrastructure/connectivity. For instance, Ireland scores above the EU average both in fixed (optical fibre) and wireless (5G) broadband coverage, but at least 1 Gbps broadband take-up is low (7.5% compared to the EU average of 13.8%) ⁽⁷⁵⁾. The RRP envisages building a low-latency edge platform to harness 5G technology for the benefit of public services.

Irish businesses have integrated digital technology well. The share of SMEs with at least a basic level of digital intensity is considerably above the EU average. Businesses in Ireland are good at making use of available digital technologies. For example, use of big data and cloud computing services are above the EU average and the use of artificial intelligence by Irish companies is at par with the EU average. The RRP includes several measures to: (i) support the digitalisation of businesses (including the creation of Irish European Digital Innovation Hubs); (ii) advance digital capabilities through developing a shared government data centre; and (iii) promote digital-related investment in R&D.

Public services in Ireland are highly digitalised. This is true for services provided both to businesses and to citizens. To facilitate people's interaction with public services, Ireland has set up an electronic identification (eID) scheme called MyGovID. However, Ireland has not yet notified this scheme to the Commission under the eIDAS Regulation. Currently no access opportunities exist for citizens in Ireland that allow access to routine healthcare information in a digital environment. The RRP aims to create an online response option for the population census and includes a suite of eHealth projects.

⁽⁷¹⁾ The share of financial allocations that contribute to digital objectives has been calculated using Annex VII of the RRF Regulation.

⁽⁷²⁾ The Digital Decade targets as measured by DESI indicators and complementary data sources are integrated to the extent currently available and/or considered particularly relevant in the MS-specific context.

⁽⁷³⁾ See for example OECD (2019): OECD Economic Outlook, Digitalisation and productivity: A story of complementarities, [OECD Economic Outlook, Volume 2019 Issue 1 | OECD iLibrary \(oecd-ilibrary.org\)](https://www.oecd-ilibrary.org/economics/oecd-economic-outlook-volume-2019-issue-1).

⁽⁷⁴⁾ The need and possible actions for a digitalisation of the energy system are laid out in the Communication 'Digitalisation the energy system – EU action plan' (COM(2022)552.

⁽⁷⁵⁾ Communications Committee based on iDATE.

Table A10.1: Key Digital Decade targets monitored by DESI indicators

	Ireland			EU	Digital Decade target by 2030 (EU)
	DESI 2021	DESI 2022	DESI 2023	DESI 2023	
Digital skills					
At least basic digital skills	NA	70%	70%	54%	80%
% individuals		2021	2021	2021	2030
ICT specialists ⁽¹⁾	5.7%	6.3%	6.3%	4.5%	20 million
% individuals in employment aged 15-74	2020	2021	2021	2021	2030
Digital infrastructure/connectivity					
Fixed Very High Capacity Network (VHCN) coverage	67%	78%	84%	73%	100%
% households	2020	2021	2022	2022	2030
Fibre to the Premises (FTTP) coverage ⁽²⁾	48%	62%	72%	56%	-
% households	2020	2021	2022	2022	2030
Overall 5G coverage	30%	72%	84%	81%	100%
% populated areas	2020	2021	2022	2022	2030
5G coverage on the 3.4-3.8 GHz spectrum band	NA	NA	56%	41%	-
% populated areas			2022	2022	2030
Digitalisation of businesses					
SMEs with at least a basic level of digital intensity	NA	NA	85%	69%	90%
% SMEs			2022	2022	2030
Big data ⁽³⁾	23%	23%	23%	14%	75%
% enterprises	2020	2020	2020	2020	2030
Cloud ⁽³⁾	NA	47%	47%	34%	75%
% enterprises		2021	2021	2021	2030
Artificial Intelligence ⁽³⁾	NA	8%	8%	8%	75%
% enterprises		2021	2021	2021	2030
Digitalisation of public services					
Digital public services for citizens	NA	80	81	77	100
Score (0 to 100)		2021	2022	2022	2030
Digital public services for businesses	NA	100	100	84	100
Score (0 to 100)		2021	2022	2022	2030
Access to e-health records	NA	NA	0	71	100
Score (0 to 100)			2023	2023	2030

(1) The 20 million target represents about 10% of total employment.

(2) The Fibre to the Premises coverage indicator is included separately as its evaluation will also be monitored separately and taken into consideration when interpreting VHCN coverage data in the Digital Decade.

(3) At least 75 % of Union enterprises have taken up one or more of the following, in line with their business operations:

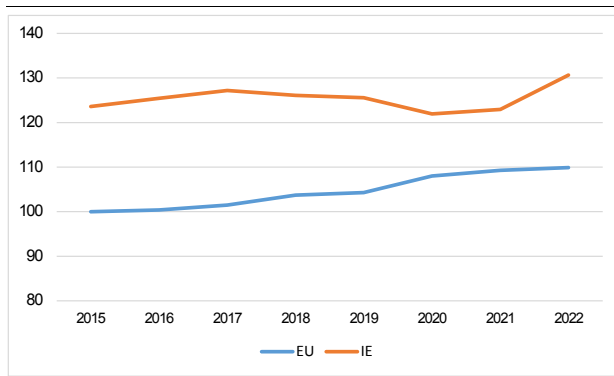
(i) cloud computing services; (ii) big data; (iii) artificial intelligence.

Source: Digital Economy and Society Index

This Annex provides a general overview of the performance of Ireland’s research and innovation system, which is essential for delivering the twin green and digital transition.

Ireland is a ‘strong innovator’ with performance at 118.9% of the EU average and above the average of the strong innovators (114.5%)⁽⁷⁶⁾. Ireland’s performance is increasing (by 7.1 percentage points between 2015 and 2022) although at a lower rate than the EU’s during the same period (9.9 pps) and its lead over the EU is shrinking. Strengths include employment in knowledge-intensive activities and the percentage of people with tertiary education, while the main weakness is the low level of R&D both in the public and business sector.

Graph A11.1: EIS performance 2015-2022



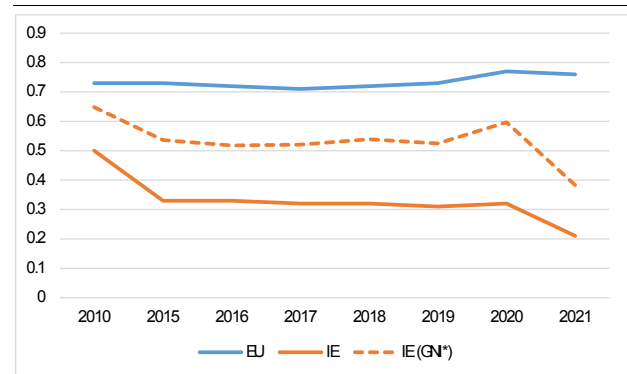
Source: European Innovation Scoreboard 2022

Ireland’s R&D intensity (R&D expenditure as a percentage of GDP) in 2021, at 1.06 %, was among the lowest in the EU. This is a significant fall from 1.23% in 2020, although the large increase in Ireland’s GDP in 2021 (13%) had an impact and gross domestic expenditure on R&D (GERD) in nominal terms fell only marginally (-2%). In terms of modified gross national income (GNI*), which excludes distortions from foreign-owned firms, Ireland’s R&D intensity in 2021 was 1.93%. Nevertheless, research intensity in Ireland has been on a declining trend since 2010 (-3.7% per annum) while public R&D intensity, at 0.21% in 2021 (0.38% in GNI*), is also among the lowest in the EU.

⁽⁷⁶⁾ 2022 European Innovation Scoreboard, Country profile: Ireland [ec_rtd_eis-country-profile-i.e.pdf](https://ec.rtd.eis-country-profile-i.e.pdf) (europa.eu) The EIS provides a comparative analysis of innovation performance in the EU countries, including the relative strengths and weaknesses of their national innovation systems (also compared to the EU average).

The research and innovation (R&I) investments in Ireland’s recovery and resilience plan can be expected to boost overall R&D intensity. The National Grand Challenge measure uses challenge-based funding to support research and innovation and incentivises researchers to focus on projects with potential to contribute to the climate, healthcare and agriculture sectors, and facilitate the green and digital transition.

Graph A11.2: Public expenditure on R&D as % of GDP and GNI*



Source: Eurostat

Ireland has a relatively well-developed R&I system and a strong public science base. This is reflected in the level of high-quality publications, new graduates in science and engineering, and employment in fast-growing companies. Ireland’s new R&I strategy, Impact 2030, aims to deliver system-wide impacts and add value to the activities of R&I performers and funders⁽⁷⁷⁾. However, the very low level of public R&D intensity may be placing this performance at risk.

Innovation policy tends towards tax credits as the preferred means of stimulating firm-level R&D investments. These tax credits are effective but might not be as useful to start-ups and innovative young firms in emerging sectors, as highlighted in the recently published smart specialisation strategy⁽⁷⁸⁾. Though most R&D tax credit recipients are small and medium-sized enterprises (SMEs), they only account for a small percentage of SMEs, and receive little support. In

⁽⁷⁷⁾ Impact 2030: Ireland’s research and innovation strategy (2022) [gov.i.e. - Impact 2030: Ireland’s Research and Innovation Strategy](https://www.gov.ie/en/publications-and-resources/documents/2022-07-impact-2030-ireland-s-research-and-innovation-strategy/) (www.gov.i.e.).

⁽⁷⁸⁾ National smart specialisation strategy for innovation 2022-2027 (p. 79) [national-smart-specialisation-strategy-for-innovation-2022-2027.pdf](https://www.enterprise.gov.ie/publications-and-resources/documents/2022-07-national-smart-specialisation-strategy-for-innovation-2022-2027.pdf) (enterprise.gov.ie).

Table A11.1: Key innovation indicators

Ireland	2010	2015	2019	2020	2021	EU average (1)
Key indicators						
R&D intensity (GERD as % of GDP)	1.59	1.18	1.23	1.23	1.06	2.26
<i>R&D intensity (GERD as % of GNI*)</i>	<i>2.06</i>	<i>1.92</i>	<i>2.08</i>	<i>2.29</i>	<i>1.93</i>	
Public expenditure on R&D as % of GDP	0.50	0.33	0.31	0.32	0.21	0.76
<i>Public expenditure on R&D as % of GNI*</i>	<i>0.65</i>	<i>0.54</i>	<i>0.52</i>	<i>0.60</i>	<i>0.38</i>	
Business enterprise expenditure on R&D (BERD) as % of GDP	1.10	0.85	0.91	0.91	0.84	1.49
<i>Business enterprise expenditure on R&D (BERD) as % of GNI*</i>	<i>1.43</i>	<i>1.38</i>	<i>1.54</i>	<i>1.70</i>	<i>1.53</i>	
Quality of the R&I system						
Scientific publications of the country within the top 10% most cited publications worldwide as % of total publications of the country	11.6	12.6	11.4	:	:	9.8
Patent Cooperation Treaty patent applications per billion GDP (in PPS)	2.3	1.9	1.5	:	:	3.3
Academia-business cooperation						
Public-private scientific co-publications as % of total publications	7.3	9.4	9.3	9.1	8.4	7.1
Public expenditure on R&D financed by business enterprise (national) as % of GDP	0.011	0.009	0.012	:	:	0.054
<i>Public expenditure on R&D financed by business enterprise (national) as % of GNI*</i>	<i>0.01</i>	<i>0.01</i>	<i>0.02</i>	:	:	
Human capital and skills availability						
New graduates in science & engineering per thousand pop. aged 25-34	17.8	18.2	24.1	26	:	16
Public support for business enterprise expenditure on R&D (BERD)						
Total public sector support for BERD as % of GDP	0.18	0.32	0.21	:	:	0.19
<i>Total public sector support for BERD as % of GNI*</i>	<i>0.23</i>	<i>0.51</i>	<i>0.36</i>	:	:	
R&D tax incentives: foregone revenues as % of GDP	0.13	0.27	0.18	:	:	0.10
<i>R&D tax incentives: foregone revenues as % of GNI*</i>	<i>0.17</i>	<i>0.44</i>	<i>0.30</i>	:	:	
Green innovation						
Share of environment-related patents in total patent applications filed under the Patent Cooperation Treaty (%)	9.4	10.2	8	:	:	13.3
Finance for innovation and economic renewal						
Venture capital (market statistics) as % of GDP	0.04	0.04	0.06	0.07	0.06	0.07
<i>Venture capital (market statistics) as % of GNI*</i>	<i>0.05</i>	<i>0.07</i>	<i>0.10</i>	<i>0.13</i>	<i>0.11</i>	
Employment in fast-growing enterprises in 50% most innovative sectors	6.6	7.1	10.8	:	:	5.5

(1) EU average for the latest available year or the year with the highest number of country data.

Source: Eurostat, OECD, DG JRC, Science-Metrix (Scopus database and EPO's Patent Statistical database), Invest Europe, CSO

2020, large companies accounted for 11% of those taking part in the tax credit scheme but 71% of the cost to the Exchequer⁽⁷⁹⁾. Greater use of direct funding instruments could thus help to stimulate research and innovation and improve the productivity of Irish firms, especially SMEs.

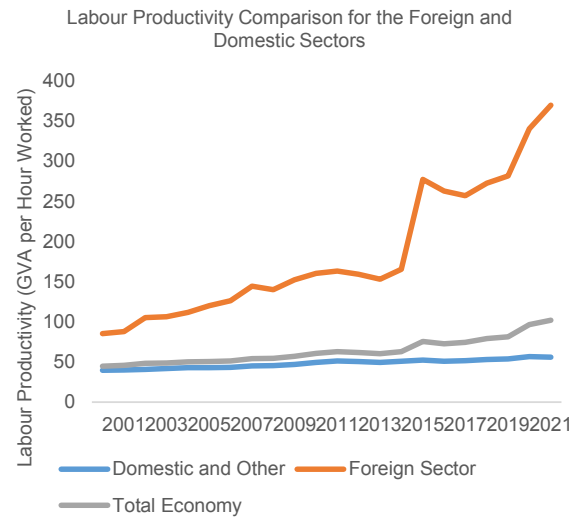
⁽⁷⁹⁾ Ireland's Competitiveness Challenge 2022 (p. 43) [National Competitiveness and Productivity Council](#).

Ireland’s small open economy model has proved to be robust in the face of overlapping global risks including Brexit, COVID-19 and supply and energy disruptions caused by Russia’s invasion of Ukraine. Having weathered the COVID-19 pandemic, Ireland’s real GDP in 2022 grew by 12.0% year on year. Even accounting for the distorting effects of multinational companies, modified domestic demand grew by 8.2% in 2022. Despite this steady performance, and in part due to its economic structure, challenges that are common across Member States such as supply chain disruptions and skills shortages, as well as local issues such as infrastructure, access to finance, and late payments, are asymmetrically weighing on Ireland’s SMEs and indigenous industry.

While Ireland’s economy has been robust, a productivity gap between large and small enterprises has created a two-speed economy (Graph A12.1). Labour productivity in Ireland has been one of the highest in the EU over the past five years thanks to a small number of foreign-owned multinational enterprises operating in a limited number of sectors. Between 2017 and 2019, the share of value added attributed to foreign-owned multinationals was 43.2%, nearly four times greater than the EU average. In 2021, while SMEs in Ireland grew by 5% in value added and 1.2% in employment, large enterprises grew by 20.2% and 3.3% respectively. Real labour productivity in industry grew by 11.7% between 2018 and 2021, way above the EU average of 0.95%, propelled by the pharmaceutical and information/communications sectors. The presence of multinationals in a sector can have positive and negative spillover effects. Industries that are dominated by multinationals are associated with fewer domestic entrants due to the huge capability gap, whereas linkages in overlapping domestic-multinational sectors can enhance the economy’s resilience⁽⁸⁰⁾. Ireland’s White Paper on Enterprise highlights the country’s aspirations to strengthen linkages ‘between MNEs and SMEs by developing ecosystems and mentoring which can help local firms, including High Potential Start Ups’.

⁽⁸⁰⁾ The role of relatedness and strategic linkages between domestic and MNE sectors in regional branching and resilience (2022) Landman, Ojanpera, Kinsella, and O’Clery

Graph A12.1: Labour productivity comparison for the foreign and domestic sectors



Source: CSO

The shortage of labour and materials are the biggest factors limiting Irish business activity. Ireland’s rapid recovery in employment to levels greater than pre-pandemic has exacerbated labour and skills shortages. Despite the vacancy rate in Ireland scoring below the EU average, half of firms in the services sector report labour shortages compared with an EU average of 30%. In particular, there is a critical shortage in information and communication analysts, engineers, and construction workers. Higher frequency data suggests that the total number of postings are 63% higher post-pandemic at the end of 2022, than pre-pandemic. According to the EIB Investment Survey, 92% of Irish firms cite a dearth of skilled staff as a barrier to investment, one of the highest in the EU. This challenge can also hold back innovation. Lack of qualified personnel was cited as one of the most common factors hampering innovation activities in 2020. As well as labour shortages, materials shortages are a major limiting factor for activity. In 2022, more than half of firms in industry and in the construction sector reported materials shortages, way above EU averages. While two in five firms had difficulties sourcing materials due to COVID-19, the United Kingdom as the most popular sourcing destination suggests Brexit is creating the main supply bottleneck; 54% of firms had been impacted by an increased regulatory burden due to Brexit⁽⁸¹⁾.

⁽⁸¹⁾ CSO Ireland, Global Value Chains 2021

While COVID-19 accelerated the digital transformation, Ireland must intensify its green transition to boost its competitiveness in light of global energy risks (see annex 6). While a large proportion of Irish firms are aware of climate risks, few are prepared – 69% of businesses have no climate action plan for the future⁽⁸²⁾. The results are starker when looked at by firm size, with 73% of SMEs having no climate action plan whatsoever, compared to 34% of larger enterprises. 59% of SMEs indicate they have no plans to invest in energy efficiency over the next year⁽⁸³⁾. Measures under the Irish RRP aim to tackle the decarbonisation of the enterprise sector but limit their focus to manufacturing.

Delays in payments to Irish business hamper their ability to operate and invest in the future. In 2022, it took businesses an average of 54 days to receive payment from other businesses (B2B), and 74 days from the public sector. The payment gap between the terms offered to businesses and the actual payment is one of the widest in the EU. On average, there is a gap of 14 days for B2B payments, and 19 days for payments from the public sector. This is in comparison to figures in 2019 of a 1-day and 3-day payment gap respectively. Despite decreasing since 2021, more than half of Irish businesses are more concerned than ever about debtor's ability to pay on time and 75% of firms stated that faster payments would enable their company to pay their suppliers on time.

Access to competitively priced finance remains a high barrier for Irish SMEs, slowing their growth. Despite increasing its score on the EIF Access to Finance Index over the past four years, Ireland's performance is hampered by its expensive credit costs. Interest rates in Ireland remain among the highest in the euro area and second only to Greece for the costliest borrowing conditions for SMEs. This perception is increasing, with the percentage of SMEs feeling that there are no financing obstacles having decreased by 5.5 percentage points in 2022. Costly financing conditions can be partly explained by the lack

of competition in domestic banks, which is set to worsen with two banks exiting the Irish market (see annex 18).

Delivering investment in infrastructure is key to boosting Ireland's competitiveness. While the 2022 IMD World Competitiveness Rankings show Ireland as one of the most competitive countries in the world, ranking fifth among EU member states, it highlights that Ireland lags behind the top economies for its levels of infrastructure. Ireland's performance on infrastructure deteriorated to 23rd place, falling ten places since 2021 and scoring particularly poorly in basic infrastructure (41st). With its National Development Plan Ireland has committed to spending €165 billion over 2021-2030. However, Ireland's planning system has been highlighted as a key barrier to the timely delivery of strategically important infrastructure, such as energy and housing⁽⁸⁴⁾. Evidence from a recent survey showed that 40% of developers set aside 11-15 months to receive planning permission, while 61% expect an additional 12 months for appeals and judicial reviews⁽⁸⁵⁾.

Some barriers to the Single Market remain. Ireland reported a transposition deficit (percentage of all directives not transposed) of 2.2% in 2021. It is one of six Member States whose deficit is more than doubled the 1% target set by the European Council. Having had a perfect score in 2012, it is now one of the Member States with the highest transposition deficit. In addition, it did not transpose 10 of the 26 single market directives (38%) due to have been transposed in the 6 months before the cut-off date for calculating the deficit (1 June to 30 November 2021). On regulated professions, restrictions are higher than the EU average for real estate agents and civil engineers. The fragmented system regulating civil engineers hinders the free movement of professional and impacts on the efficiency of service.

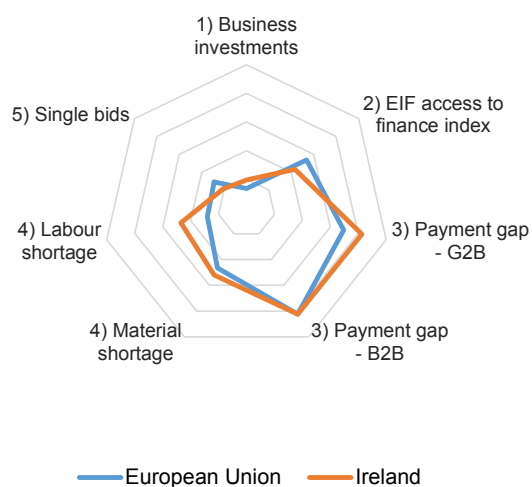
⁽⁸²⁾ Kren and Lawless (2023) Firm-level attitudes and actions to the "Twin Transition" challenges of digitalisation and climate change

⁽⁸³⁾ Department of Finance, SME Credit Demand Survey

⁽⁸⁴⁾ National Competitiveness and Productivity Council, Ireland's Competitiveness Challenge 2022

⁽⁸⁵⁾ OECD Economic Surveys Ireland 2022

Graph A12.2: **Business environment and productivity drivers**



Source: 1) % of GDP, 2021 Eurostat;
 2) composite indicator, 2021 European Investment Fund access to finance index;
 3) average payment delay in number of days, 2022 Intrum;
 4) % of firms in manufacturing facing constraints, 2022 European Commission business consumer survey;
 5) proportion of contracts awarded with a single bidder, 2022 Single Market Scoreboard.

While trade with Russia is limited, secondary effects will have an asymmetric impact on producer prices. Owing to its geographical location direct trade links with Russia, Belarus, and Ukraine are small and thus direct macroeconomic risks are limited. Nevertheless, some industries which are reliant on fertilisers and specialised energy inputs are exposed to specific shocks. The share of coal, coke and briquettes coming from Russia is between 60-70% and 25% of Ireland’s fertiliser imports came from Russian manufacturers ⁽⁸⁶⁾, increasing prices by 15.4% in February 2023 when compared to 2022 ⁽⁸⁷⁾.

⁽⁸⁶⁾ OECD Economic Surveys Ireland 2022

⁽⁸⁷⁾ CSO Ireland, Agricultural Price Indices February 2023

Table A12.1: Industry and the Single Market

POLICY AREA		INDICATOR NAME	2018	2019	2020	2021	2022	EU27 average (*)
HEADLINE INDICATORS	Economic Structure	Net private investment, level of private capital stock, net of depreciation, % GDP ⁽¹⁾	2.8	28	13	-3.7	2.2	3.7
		Net public investment, level of public capital stock, net of depreciation, % GDP ⁽¹⁾	0.7	0.9	1	0.7	0.9	0.4
	Cost competitiveness	Real labour productivity per person in industry (% yoy) ⁽²⁾	12.3	-0.6	20.5	14.7	17.8	1.4
RESILIENCE	Shortages	Material shortage (industry), firms facing constraints, % ⁽³⁾	17	13	14	38	52	47
		Labour shortage using survey data (industry), firms facing constraints, % ⁽³⁾	16	17	9	25	47	28
		Vacancy rate (business economy) ⁽⁴⁾	1.1	1	0.7	1.3	1.5	3.1
Strategic dependencies	Concentration in selected raw materials, Import concentration index based on a basket of critical raw materials ⁽⁵⁾	0.16	0.14	0.14	0.15	0.16	0.18	
	Installed renewables electricity capacity, % of total electricity produced ⁽⁶⁾	39.5	43.3	44.7	45.6	n.a.	50.8	
SINGLE MARKET	Single Market integration	EU trade integration, % ⁽⁷⁾	33.1	32.6	30.1	32.8	35.4	45.8
	Restrictions	EEA Services Trade Restrictiveness Index ⁽⁸⁾	0.04	0.04	0.04	0.04	0.04	0.05
	Public procurement	Single bids, % of total contractors ⁽⁹⁾	14	16	14	15	21	29
BUSINESS ENVIRONMENT - SMEs	Investment obstacles	Impact of regulation on long-term investment, % of firms reporting business regulation as major obstacle ⁽¹⁰⁾	20.1	16.1	13.5	18.4	17	29.6
	Business demography	Bankruptcies, Index (2015=100) ⁽¹¹⁾	n.a.	n.a.	n.a.	n.a.	n.a.	86.8
		Business registrations, Index (2015=100) ⁽¹¹⁾	117	118.7	93.1	102.3	81.4	121.2
	Late payments	Payment gap - corporates B2B, difference in days between offered and actual payment ⁽¹²⁾	-8	1	16	13	14	13
		Payment gap - public sector, difference in days between offered and actual payment ⁽¹²⁾	12	3	20	11	19	15
		Share of SMEs experiencing late payments in past 6 months, % ⁽¹³⁾	n.a.	43.2	39.3	34.9	38.6	43
Access to finance	EIF Access to finance index - Loan, Composite: SME external financing over last 6 months, index values between 0 and 1 ⁽¹⁴⁾	0.25	0.21	0.22	0.24	n.a.	0.46	
	EIF Access to finance index - Equity, Composite: VC/GDP, IPO/GDP, SMEs using equity, index values between 0 and 1 ⁽¹⁴⁾	0.19	0.2	0.13	0.16	n.a.	0.23	

(*) last available year

Source: (1) AMECO, (2) Eurostat, (3) ECFIN BCS, (4) Eurostat, (5) COMEXT and Commission calculations, (6) Eurostat, (7) Eurostat, (8) OECD, (9) Single Market Scoreboard, (10) EIB survey, (11) Eurostat: (12) Intrum, (13) SAFE Survey, (14) EIF SME Access to Finance Index.



This Annex outlines the performance of Ireland's public administration, which is essential for providing services and carrying out reforms. Despite the COVID-19 crisis, Ireland has maintained a high level of government effectiveness, compared to other Member States⁽⁸⁸⁾. The modernisation of Irish public services is an important part of the government agenda. The civil service renewal action plan⁽⁸⁹⁾ outlines specific initiatives until 2024 to boost digital transformation and embed innovation in the civil service, build a workforce fit for the future and improve the use of evidence in the design and delivery of policies and services.

E-government in Ireland scores around the EU average and shows significant progress for several aspects. Following the COVID-19 crisis, the share of people interacting with the government via the internet has increased sharply to 92% in Ireland and is currently among the highest in the EU (Table A13.1). Ireland also scores high on the open data maturity index, which can be positively affected by the planned development of a shared government data centre under Ireland's recovery and resilience plan.

Ireland's civil service has a strong educational profile and attracts young professionals. The share of civil servants with higher education was above the EU-27 average in 2022, unlike the participation of civil servants in adult training and gender parity in senior civil service positions, which has however improved significantly since 2017 (Table A13.1). To increase skills in the civil service, the government has been reviewing the general grading system, pay scales and recruitment processes for senior civil servants⁽⁹⁰⁾, and examining the effect of COVID-19 and remote working on productivity.

Regulatory governance in Ireland remains below the EU average. The OECD indicators on regulatory policy and governance show below-average performance on regulatory impact assessments, public consultation and *ex post* evaluation of legislation (Table A13.1).

⁽⁸⁸⁾ World Bank, Worldwide Governance Indicators, 2021.

⁽⁸⁹⁾ Department of Public Expenditure and Reform (2021) [Civil Service Renewal 2024 Action Plan](#).

⁽⁹⁰⁾ Department of Public Expenditure and Reform (2022) [Report of the Independent Hours](#).

Impact assessment is mandatory for major legal initiatives, but there is no oversight of the quality of the analysis. Ireland has been working to set up online public consultations on legislative proposals, however this is not yet systematic⁽⁹¹⁾. To boost evidence-based policymaking, the Department of Public Expenditure and Reform has been taking a series of steps to increase the use of foresight⁽⁹²⁾ and behavioural insights.

The lack of data on the efficiency of litigious and non-litigious civil and commercial cases means it is not possible to properly evaluate the overall efficiency of the judicial system. The main challenge is the length of proceedings. According to the 2021 annual report of the Courts Service, the length of proceedings in the High Court in 2021 was 797 days, 137 days more than in 2020. The quality of the judicial system overall is good. The number of judges in the High Court has increased, although the number of judges per person in Ireland remains low. The government continues to work on addressing concerns about litigation costs and the legal aid system. The level of digitalisation is advanced, and Ireland has published several digital strategies that may help close the gaps in the digitalisation of justice. No systemic deficiencies in judicial independence have been reported⁽⁹³⁾.

⁽⁹¹⁾ OECD (2022) Better Regulation Practices across the European Union.

⁽⁹²⁾ Department of Public Expenditure and Reform (2021) [Towards a Strategic Foresight System in Ireland](#).

⁽⁹³⁾ For a more detailed analysis of the performance of the justice system in Ireland, see the 2023 [EU Justice Scoreboard](#) (forthcoming) and the country chapter for Ireland in the 2023 [Rule of Law Report](#) (forthcoming).

Table A13.1: Public administration indicators

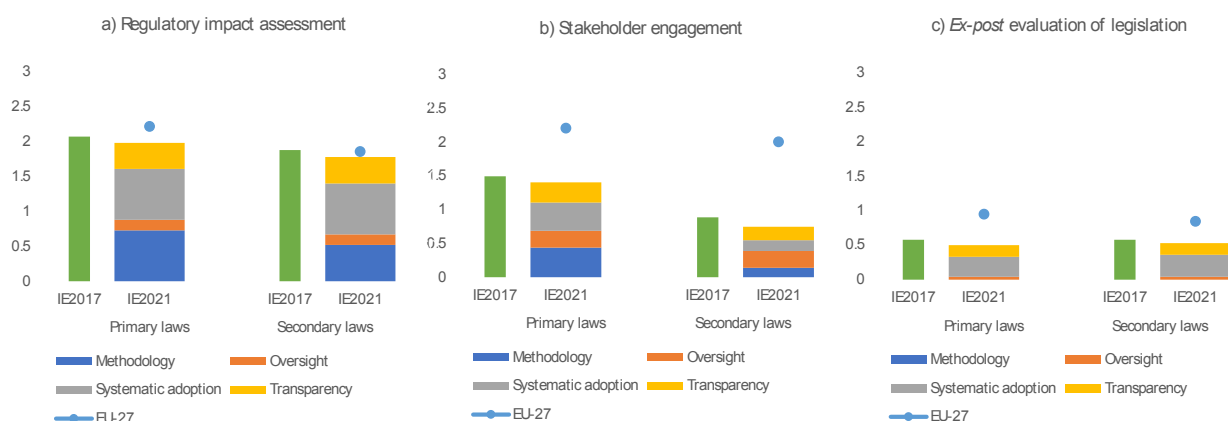
IE Indicator ⁽¹⁾	2017	2018	2019	2020	2021	2022	EU-27 ⁽²⁾
E-government and open government data							
1 Share of individuals who used the internet within the last year to interact with public authorities (%)	67.2	63.6	67.4	67.0	91.9 (b)	n/a	64.8
2 E-government benchmark overall score ⁽³⁾	n/a	n/a	n/a	69.5	70.7	71.6	72.9
3 Open data and portal maturity index	n/a	0.9	0.9	0.9	1.0	0.9	0.8
Educational attainment level, adult learning, gender parity and ageing							
4 Share of public administration employees with tertiary education (levels 5-8, %)	61.1 (b)	61.0	62.3	65.9	67.8 (b)	68.1	52.0
5 Participation rate of public administration employees in adult learning (%)	10.5 (b)	15.6	15.3	11.6	15.4 (b)	14.1	16.9
6 Gender parity in senior civil service positions ⁽⁴⁾	40.0	37.4	35.4	33.8	33.4	20.6	11.0
7 Ratio of 25-49 to 50-64 year olds in NACE sector O	1.7 (b)	1.8	1.6	1.7	1.9 (b)	1.6	1.5
Public financial management							
8 Medium term budgetary framework index	0.7	0.7	0.7	0.7	0.7	n/a	0.7
9 Strength of fiscal rules index	1.1	1.1	1.1	1.1	1.1	n/a	1.5
Evidence-based policy making							
10 Regulatory governance	1.25	n/a	n/a	n/a	1.16	n/a	1.7

(¹) High values denote a good performance, except for indicator # 6. (²) 2022 value. If not available, the 2021 value is shown. (³) Measures the user centricity (including for cross-border services) and transparency of digital public services as well as the existence of key enablers for the provision of those services. (⁴) Defined as the absolute value of the difference between the percentage of men and women in senior civil service positions.

Flags: (b) break in time series; (u) low reliability.

Source: ICT use survey, Eurostat (# 1); E-government benchmark report (# 2); Open data maturity report (# 3); Labour Force Survey, Eurostat (# 4, 5, 7), European Institute for Gender Equality (# 6); Fiscal Governance Database (# 8, 9); OECD Indicators of Regulatory Policy and Governance (# 10).

Graph A13.1: Ireland. a) Regulatory impact assessment, b) Stakeholder engagement and c) Ex post evaluation of legislation



Source: Indicators of Regulatory Policy and Governance Surveys 2017 and 2021, (<http://oe.cd/ireg>).

The European Pillar of Social Rights is the compass for upward convergence towards better working and living conditions in the EU. This Annex provides an overview of Ireland's progress in implementing the Pillar's 20 principles and the EU headline and national targets for 2030 on employment, skills, and poverty reduction.

The Irish labour market continued to recover in 2022, in line with economic activity, but challenges persist in integrating under-represented groups. The post-pandemic increase in the employment rate continued, reaching 78.2% (20-64 age group) in 2022, well over the EU average of 74.7%. This means that Ireland has reached its 2030 national employment target of 78.2%. The unemployment rate (15-74) decreased in Q4-2022 by 0.8 percentage points year-on-year to 4.4%, outperforming the EU average of 6.1%. While women's participation in the labour market steadily increased, it was still significantly lagging behind men's participation, with a gender employment gap of 11.3 pps in 2022. The increase is likely due to the combined effect of more flexible working opportunities and continued investments in early childhood education and care. These enable more women to work in addition to their caring responsibilities. Despite these efforts, caring duties still prevented 44.7% of women outside the labour force from working in 2022.

As the labour market tightens, activating those who are still facing barriers to employment will be key. At 13% in 2021 (EU: 8.9%), Ireland had one of the highest rates of people living in very low work intensity households (i.e. where working-age adults work less than 20% of their work-time potential). This is 1.5 pps higher than in 2020. The share of children living in such conditions also grew by 1.2 pps to 13.6%. Furthermore, a particularly high share of people with low skills (35.2%) and persons with disabilities (36.7%) live in workless households.⁽⁹⁴⁾ The employment rate of single parents, which stood

at 67.9% in 2021, is also one of the lowest in the EU.

Table A14.1: Social Scoreboard for Ireland

Policy area	Headline indicator	
Equal opportunities and access to the labour market	Early leavers from education and training (% of population aged 18-24, 2022)	3.7
	Share of individuals who have basic or above basic overall digital skills (% of population aged 16-74, 2021)	70.5
	Youth NEET rate (% of population aged 15-29, 2022)	8.7
	Gender employment gap (percentage points, 2022)	11.3
	Income quintile ratio (S80/S20, 2021)	3.83
Dynamic labour markets and fair working conditions	Employment rate (% of population aged 20-64, 2022)	78.2
	Unemployment rate (% of active population aged 15-74, 2022)	4.5
	Long term unemployment (% of active population aged 15-74, 2022)	1.3
	GDHI per capita growth (2008=100, 2021)	110.84
Social protection and inclusion	At risk of poverty or social exclusion rate (% of total population, 2021)	20
	At risk of poverty or social exclusion rate for children (% of population aged 0-17, 2021)	22.8
	Impact of social transfers (other than pensions) on poverty reduction (% reduction of AROP, 2021)	60.67
	Disability employment gap (percentage points, 2021)	41.3
	Housing cost overburden (% of total population, 2021)	2.5
	Children aged less than 3 years in formal childcare (% of population under 3-years-old, 2021)	16.6
	Self-reported unmet need for medical care (% of population 16+, 2021)	2
<div style="display: flex; justify-content: space-between; font-size: small;"> Critical situation To watch Weak but improving Good but to monitor On average Better than average Best performers </div>		

Update of 27 April 2023. Member States are classified on the Social Scoreboard according to a statistical methodology agreed with the EMCO and SPC Committees. It looks jointly at levels and changes of the indicators in comparison with the respective EU averages and classifies Member States in seven categories. For methodological details, please consult the Joint Employment Report 2023. Due to changes in the definition of the individuals' level of digital skills in 2021, exceptionally only levels are used in the assessment of this indicator; NEET: neither in employment nor in education and training; GDHI: gross disposable household income.

Source: Eurostat

The inclusion of persons with disabilities in the labour force is another longstanding challenge. The disability employment gap increased in 2021 to 41.3 pps, 2.5 pps worse than 2020 and well above the EU average of 23 pps. While the Roma and Traveller minorities represent only around 0.7% of the population and little data is available on their socio-economic status, they remain particularly vulnerable groups. The latest figures on

⁽⁹⁴⁾ N.B. these two groups may largely overlap as persons with disabilities generally have low educational attainment. See Kelly, E. and B. Maître (2021)



Travellers, from 2019⁽⁹⁵⁾, indicate that only 17% of Traveller women and 13% of men had paid jobs. The European Social Fund Plus (ESF+) will continue to reach out to these vulnerable groups, with specific measures providing a range of support from digital skills training to confidence-building. It is also important that public employment services develop targeted activation measures and keep on improving their effectiveness, including by regularly evaluating past and current activities.

Ireland is facing substantial labour and skills shortages. Many employers report difficulties in finding staff, mainly due to a shortage of candidates. This particularly affects the ICT, health and care sectors, construction, and other manual-labour occupations. The lack of available housing and high rents deter workers wishing to move to Ireland from abroad. Disadvantaged groups in the country would require considerable upskilling to be able to meet employers' demands. Participation in adult learning over the past 4 weeks stood at 11.8% in 2022. To reach the 2030 adult learning national target, more measures that encourage lifelong learning and close cooperation with social partners and civil society will be needed. However, many of these stakeholders report a lack of engagement from the government on labour and social issues.

The cost of early childhood education and care (ECEC) services below age 3 decreased significantly in recent years, however it remains among the highest in the EU for most family types.⁽⁹⁶⁾ This contributes to the low participation of children under 3 years in formal childcare. The high cost of ECEC is a barrier for lower income households to access these services and to women's labour market participation. Ireland's market-driven approach to childcare has left marginalised communities underserved as private providers do not operate in very disadvantaged areas.⁽⁹⁷⁾ Over recent years, Ireland introduced reforms with increased

⁽⁹⁵⁾ [European union agency for fundamental rights \(2020\) Travellers in Ireland](#)

⁽⁹⁶⁾ OECD(2023): Benefits and wages: Net childcare cost for parents using childcare

⁽⁹⁷⁾ Pobal(2022): Annual Early Years Sector Profile Report 2020/2021 (p40)

national funding and subsidies to ECEC, which significantly reduced costs, in particular for lone parents who now pay well below EU average. Allocation for the sector in 2023 exceeds EUR 1 billion, 5 years ahead of the schedule of the First 5 strategy. The ESF+ will also support upskilling of ECEC workers, further improving the quality of services.

One in five people in Ireland was at risk of poverty or social exclusion (AROPE) in 2021; although this is an overall improvement, disadvantaged groups became poorer. The AROPE rate for persons with disabilities grew by 4.3 pps to 39.3%, twice as high as for the general population and 10 pps higher than the EU average. The main reasons for this trend are low educational attainment, high early school leaving rates and EUR 8 700-12 300 in individual extra costs per year (e.g. for medicine, mobility and transport)⁽⁹⁸⁾. Single parents were most at risk of poverty or social exclusion at 57.7%, a 0.6 pp. increase from last year. This puts Ireland among the worst performing Member States for social protection of single parents. The latest data on Travellers indicated that 40% struggle to make ends meet. Targeted support to improve the social protection of vulnerable groups will be essential for Ireland to reach its national poverty reduction target for 2030.

Table A14.2: Situation of Ireland on 2030 employment, skills and poverty reduction targets

Indicators	Latest data	Trend (2015-2022)	National target by 2030	EU target by 2030
Employment (%)	78.2 (2022)		78.2	78
Adult learning ¹ (%)	46.0 (2016)		64.2	60
Poverty reduction ² (thousands)	0 (2021)		-90	-15 000

(1) Adult Education Survey, adults in learning in the past 12 months (2) Number of persons at risk of poverty or social exclusion, reference year 2019

Source: Eurostat, DG EMPL

The housing crisis has deteriorated, primarily due to the lack of available social and affordable housing. While Ireland performs well on housing cost overburden in the Social Scoreboard, access to housing

⁽⁹⁸⁾ Indecon International Research Economists (2021) [The Cost of Disability in Ireland](#)

remains a critical issue. Between 2009 and 2022, the number of homes available for rent significantly decreased ⁽⁹⁹⁾. Within this time, the population grew by over half a million while the housing stock grew by less than 130 000 estimated units. In addition, many private landlords have reportedly left the market in recent years. Consequently, there were almost 58 000 households on social housing waiting lists in 2022, with over 60% of households waiting for more than 2 years. Another 75 000 households were, at the end of 2022, reliant on short-term rent-supplement solutions, which involved leasing from the private market and can exacerbate already increasing housing and rental prices. The Residential Property Price Index reached 167.1 in February 2023, 2.1% above its highest level at the peak of the property boom in April 2007. Some efforts have been made with a new housing policy recently introduced to support persons with disabilities. Homelessness is at a historic high with 11 988 homeless people in the country in March 2023, including almost 3 500 children. The housing situation may aggravate further with the influx of displaced people from Ukraine (approximately 80 000 as of April 2023).

⁽⁹⁹⁾ The assumption is based on the reduced number of rents on daft.ie online rent platform. [The Daft.ie Rental Price Report](#)

This Annex outlines the main challenges for Ireland's education and training system in light of the EU-level targets and other contextual indicators under the European Education Area strategic framework, based on the 2022 Education and Training Monitor.

Key reforms in early childhood education and care (ECEC) are ongoing. The main challenges have been low wages and poor working conditions for staff, and high fees for parents⁽¹⁰⁰⁾. Under the First 5 strategy (2019-2028), Ireland has recently progressed on reforms on the funding model⁽¹⁰¹⁾ and the workforce⁽¹⁰²⁾ to transform the private ECEC sector to a model that is increasingly publicly funded and managed. Public investment for the Core Funding scheme for year one (September 2022 - August 2023) is EUR 259 million. The providers who participate in the scheme (94%) froze parental fees at September 2021 level. New Employment Regulation orders improve the pay for 70% of ECEC workers, establishing for the first time minimum pay rates across a range of staff roles. The 2023 budget provides an additional EUR 121 million to reduce by 25% on average the weekly fee for families availing of the National Childcare Scheme (NCS). As of end March, the number of children benefiting from the NCS increased by over 100% compared with the same period in 2022⁽¹⁰³⁾. The ECCE programme is being reviewed in a precursor to putting it on a statutory footing.

The rate of early leavers from education and training is low but remains high for people with disabilities. The early school leaving rate at 3.7% in 2022 is among the lowest in the EU. However, the rate among people with disabilities is comparatively high at 10.7% (2018)⁽¹⁰⁴⁾. Research highlights qualitative differences in disabled people's

educational trajectories, with lower participation in university studies. The 2023 budget includes increased investment in special education (approximately 10%), with a total spend of EUR 2.6 billion to support students with special educational needs in both special and mainstream education. This will also expand the capacity for segregated special classes, particularly at post-primary level, and for special schools. In 2023, 686 new teachers and 1 194 additional special needs assistants will be funded, mostly going to special school settings. This raises concerns among stakeholders who advocate for more investment in inclusive teams in mainstream schools⁽¹⁰⁵⁾. Furthermore, analysis shows that children in some parts of the country are less likely to access schools that are not segregated (by religion, gender, economic capacity)⁽¹⁰⁶⁾.

Teacher supply has remained a significant challenge, in particular in urban centres. The recent survey confirmed that a vast majority of schools had experienced difficulties in teacher recruitment (91%) and retention (61%) in the previous 6 months⁽¹⁰⁷⁾. High costs of living (especially accommodation) in larger cities, particularly in Dublin, are a major disincentive for teachers taking up temporary posts, and for younger teachers. Teacher unions call for permanent, full-time positions for all teachers, moving away from low-hour temporary employment contracts⁽¹⁰⁸⁾.

The tertiary educational attainment rate rose again; however, the disability education gap remains wide. In 2022, the tertiary attainment rate rose by 0.3 pps compared with 2021, reaching 62.3%, the highest rate in the EU (average 42%). Despite progress, Irish people with disabilities still have

⁽¹⁰⁰⁾ OECD (2021), Strengthening Early Childhood Education and Care in Ireland: Review on Sector Quality, OECD Publishing, Paris, <https://doi.org/10.1787/72fab7d1-en>.

⁽¹⁰¹⁾ Department of Children, Equality, Disability, Integration and Youth (DCEDIY) (2021), Partnership for the Public Good: A new Funding Model for Early Learning and Care.

⁽¹⁰²⁾ DCEDIY (2021), The Workforce Plan for Early Learning and Care and School-Age Childcare 2022-2028.

⁽¹⁰³⁾ DCEDIY (2021), The Workforce Plan for Early Learning and Care and School-Age Childcare 2022-2028.

⁽¹⁰⁴⁾ EU-SILC UDB 2018, release 2020, version 1.

⁽¹⁰⁵⁾ Inclusion Ireland (2022), Budget 2023 Response on Education, <https://inclusionireland.ie/news-events/budget-2023-response-on-education/>

⁽¹⁰⁶⁾ Mancini, J.M. (2022) 'Children from these communities' <https://www.tandfonline.com/doi/full/10.1080/03323315.2022.2118152>

⁽¹⁰⁷⁾ TUI (2022) <https://www.rte.ie/news/2022/1026/1331392-secondary-schools-recruitment/>

⁽¹⁰⁸⁾ O'Donovan, B. (2022) 'Staffing issues may limit school's subject choice – TUI'. <https://www.rte.ie/news/ireland/2022/0822/1318200-union-warns-of-teacher-recruitment-and-retention-crisis/>

Table A15.1: EU-level targets and other contextual indicators under the European Education Area strategic framework

Indicator	Target	2015		2022			
		Ireland	EU27	Ireland	EU27		
¹ Participation in early childhood education (age 3+)	96%	78.7%	91.9%	100.0% ²⁰²⁰	93.0% ²⁰²⁰		
² Low achieving 15-year-olds in:	Reading	< 15%	10.2%	20.0%	11.8% ²⁰¹⁸ 22.5% ²⁰¹⁸		
	Mathematics	< 15%	15.0%	22.3%	15.7% ²⁰¹⁸ 22.9% ²⁰¹⁸		
	Science	< 15%	15.3%	21.1%	17.0% ²⁰¹⁸ 22.3% ²⁰¹⁸		
Early leavers from education and training (age 18-24)	³ Total	< 9%	6.8%	11.0%	3.7%	9.6%	
	³ By gender	Men		8.6%	12.5%	4.7%	11.1%
		Women		4.9%	9.4%	2.8% ^u	8.0%
	⁴ By degree of urbanisation	Cities		5.2%	9.6%	: ^u	8.6%
		Rural areas		7.2%	12.2%	3.7% ^u	10.0%
		Native		6.9%	10.0%	3.6%	8.3%
	⁵ By country of birth	EU-born		: ^u	20.7%	: ^u	20.3%
		Non EU-born		6.5% ^u	23.4%	: ^u	22.1%
	⁶ Equity indicator (percentage points)		:	:	11.8 ²⁰¹⁸	19.3 ²⁰¹⁸	
	⁷ Exposure of VET graduates to work based learning	Total	≥ 60% (2025)	:	:	27.9% ^u	60.1%
Tertiary educational attainment (age 25-34)	⁸ Total	45%	54.0%	36.5%	62.3%	42.0%	
	⁸ By gender	Men		47.1%	31.2%	59.1%	36.5%
		Women		60.3%	41.8%	65.3%	47.6%
	⁹ By degree of urbanisation	Cities		63.2%	46.2%	70.1%	52.2%
		Rural areas		46.6%	26.9%	54.1%	30.2%
		Native		53.2%	37.7%	58.2%	43.0%
	¹⁰ By country of birth	EU-born		48.0% ^u	32.7%	54.4%	39.5%
		Non EU-born		66.3%	27.0%	76.6%	35.7%
	¹¹ Share of school teachers (ISCED 1-3) who are 50 years or over		25.2%	38.3%	20.9% ²⁰²⁰	39.2% ²⁰²⁰	

Source: (1,3,4,5,7,8,9,10,11) = Eurostat; 2 = OECD (PISA); 6 = European Commission (Joint Research Centre). Notes: Data are not yet available for the remaining EU-level targets under the European Education Area strategic framework, covering underachievement in digital skills and participation of adults in learning. The equity indicator shows the gap in the share of underachievement in reading, mathematics and science (combined) among 15-year-olds between the lowest and highest quarters of socio-economic status. For IE, the ECE rate includes participation in ECEC centres, and also in primary schools, which are attended by many 4–5 year olds.

a 20% higher chance of having a low education (primary or lower-secondary level) than their non-disabled peers⁽¹⁰⁹⁾. The new national access plan (2022-2028)⁽¹¹⁰⁾ offers funding and support for students from disadvantaged socio-economic backgrounds, mature students, Irish travellers, Roma, and students with special educational needs, including those with intellectual disabilities.

Ireland has announced a policy to create a sustainable funding system for higher education. The ‘Funding the Future’ framework⁽¹¹¹⁾ prioritises increased funding for

student support, aims to make higher education funding sustainable and seeks to improve the quality, relevance and equity of higher education. While the budget for 2023 includes for the sector a EUR 150 million increase over 2022, university representatives claim that it will not be sufficient to close the core funding gap (estimated at EUR 307 million). High accommodation costs make some students defer their studies. Under the Recovery and Resilience Facility, a consortium of technological universities has been awarded an initial EUR 18.1 million (out of EUR 40 million) to support teaching and learning reforms, addressing also regional skills needs.

⁽¹⁰⁹⁾ Disability, Work and Inclusion in Ireland: Engaging and Supporting Employers, OECD, <https://doi.org/10.1787/74b45baa-en>.

⁽¹¹⁰⁾ Higher Education Authority (2022) National Access Plan: A Strategic Action Plan for Equity of Access, Participation and Success in Higher Education 2022-2028 <https://hea.ie/policy/access-policy/national-access-plan-2022-2028/>

⁽¹¹¹⁾ Department of Further and Higher Education, Research, Innovation and Science (2022),

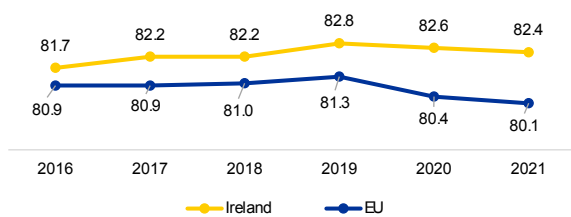
<https://www.gov.ie/en/policy-information/49e56-future-funding-in-higher-education/>.

ANNEX 16: HEALTH AND HEALTH SYSTEMS

A healthy population and an effective, accessible and resilient health system are prerequisites for a sustainable economy and society. This Annex provides a snapshot of population health and the health system in Ireland.

Life expectancy at birth in Ireland is among the highest in the EU, although it decreased since 2019. After decreasing by about 2.5 months in 2020 due to the mortality impact of the COVID-19 pandemic, in 2021, life expectancy at birth in Ireland slipped further down to 82.4 years –still one of the highest values across the EU. This further decrease can be explained by the fact that, in 2021, COVID-19 mortality almost doubled compared to 2020⁽¹¹²⁾. In 2020, the leading causes of death were cancer followed by diseases of the circulatory system (“cardiovascular diseases”). Mortality from preventable and treatable causes in Ireland is lower than in most other EU countries. However, behavioural risk factors such as obesity and excessive alcohol consumption are significant public health concerns. This is partly reflected in the above-average incidence of cancer in the Irish population, although age-standardised mortality rates from cancer are close to the EU average.

Graph A16.1: Life expectancy at birth, years



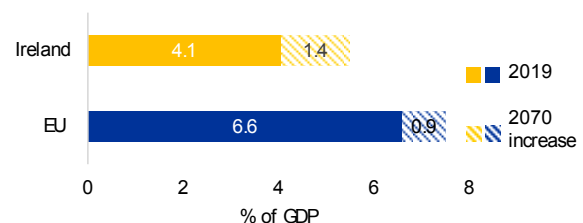
Source: Eurostat

Health spending relative to GDP in Ireland increased but remained below the EU average in 2020. Between 2013 and 2019, Ireland’s level of health spending per capita grew by an average 2.1% per year in real terms, below the 3% average yearly increase across the EU. Between 2019 and 2020, health spending per capita climbed by 9.2%, nearly double the increase in the EU on average. This rise was predominantly driven by government

⁽¹¹²⁾Based on data provided directly by Member States to ECDC under the European Surveillance System (data current as of 13 April 2023).

funding. Health spending remains high at 13.2% of GNI* (7.1% of GDP) compared to 10.9% of GDP on average across the EU in 2020⁽¹¹³⁾. Expressed in euro per capita, health spending in Ireland amounted to EUR 3 740, about 14% higher than the EU average. Spending on medical goods (mainly retail pharmaceuticals) is lower than the EU average, both as a share of total spending (12.5% compared to 18.2% in the EU overall) and expressed in euro per capita (EUR 470 compared to EUR 596 in the EU overall). Although household out-of-pocket expenditure constitutes a slightly lower-than-average fraction of health expenditure, payment towards voluntary health insurance represents nearly 11% of total health spending, which is more than double the EU average. This is a result of the fact that almost half of the population acquires private health insurance⁽¹¹⁴⁾ to bypass the long, persistent waiting lists in the public system, which faces significant capacity constraints. Public spending on health is projected to rise by 1.4 percentage points (pps) of GDP by 2070, compared to 0.9 pps for the EU overall, highlighting possible fiscal sustainability concerns in the long term (see Annex 11 and Graph A16.2).

Graph A16.2: Projected increase in public expenditure on healthcare over 2019-2070



AWG reference scenario

Source: European Commission / EPC (2021)

Spending on preventive care rose in step with the trend observed across the EU in 2020. Between 2019 and 2020, spending on

⁽¹¹³⁾The effects of multi-national firm activity on Ireland’s GDP hinder the comparability of this statistic. Modified gross national income (GNI*) can be used as an alternative indicator of the size of the domestic economy.

⁽¹¹⁴⁾Houses of the Oireachtas (2022). Retrieved from https://data.oireachtas.ie/ie/oireachtas/libraryResearch/2022/2022-12-15_bill-digest-health-insurance-amendment-bill-2022_en.pdf, page 6.

Table A16.1: Key health indicators

	2017	2018	2019	2020	2021	EU average (latest year)
Treatable mortality per 100 000 population (mortality avoidable through optimal quality healthcare)	73.3	75.9	71.0	69.7	NA	91.7 (2020)
Cancer mortality per 100 000 population	266.6	262.1	261.5	255.5	NA	242.2 (2020)
Current expenditure on health, % GDP	7.2	6.9	6.7	7.1	NA	10.9 (2020)
Current expenditure on health, % GNI*	11.6	11.6	11.3	13.2	NA	
Public share of health expenditure, % of current health expenditure	73.0	74.1	74.6	78.8	NA	81.2 (2020)
Spending on prevention, % of current health expenditure	2.7	2.6	2.7	3.3	NA	3.4 (2020)
Acute care beds per 100 000 population	278	279	269	270.6	NA	3.9 (2020)
Doctors per 1 000 population *	3.3	3.3	3.3	3.5	4.0	8.3 (2020)
Nurses per 1 000 population *	NA	NA	NA	NA	12.8	8.2 (2018)
Consumption of antibacterials for systemic use in the community, daily defined dose per 1 000 inhabitants per day (total consumption for CY and CZ) **	19.3	20.7	21.0	17.1	16.3	14.5 (2021)

Note: The EU average is weighted for all indicators, except for (*) and (**), for which the EU simple average is used. The simple average for (*) uses data for 2020 or most recent year if former not available. Doctors' density data refer to practising doctors in all countries except EL, PT (licensed to practice) and SK (professionally active). Nurses' density data refer to practising nurses in all countries except FR, PT, SK (professionally active) and EL (nurses working in hospitals only).

Source: Eurostat; except: ** ECDC

preventive care in Ireland rose by 36%, compared to a 26% increase for the EU overall. The relative share of health expenditure dedicated to prevention also rose from 2.7% to 3.3% – a proportion slightly below the EU average. Across the EU, significant increases in prevention-focused health spending in 2020 were primarily driven by extraordinary expenditure on disease detection, surveillance, control and response programmes as part of the public health response to COVID-19.

The government is taking action to address the long-standing issues of doctor shortages and long wait times that affect the healthcare system. Despite a significant increase in doctor density over the last decade, Ireland still has fewer practising doctors than the EU average. By contrast, it has a relatively high density of nurses. Shortages persist, despite the large and increasing number of medical graduates formed by Irish universities – one of the largest across the EU in per-capita terms. However, the benefits of this large number of domestic graduates are reaped only partially, because a large share of medical graduates are international students with limited options to complete their postgraduate practice in Ireland. Taxing working conditions and the comparative advantages of practising overseas in other English-speaking, high-income countries are key drivers that motivate an increasing number of early-career Irish-trained doctors to emigrate. The low number of doctors retained in Ireland and the subsequent difficulties in filling vacant posts limit the healthcare system's capacity to provide care, resulting in long waiting lists in both hospital

and outpatient settings. In early 2022, Ireland adopted a EUR 350 million action plan to shorten waiting lists for acute planned care. However, preliminary figures⁽¹¹⁵⁾ indicate that waiting lists decreased only modestly due to continued COVID-19 disruption and massive pent-up demand arising in the post-acute phase of the pandemic.

Ireland allocated 7.6% of the resources under its RRP to investments and reforms in healthcare. Ireland's RRP envisages a set of investments in the country's digital health infrastructure worth EUR 75 million that are to be completed by the end of 2025. These investments include developing and setting up e-pharmacy and integrated financial management systems at national level to improve the use of resources in the Irish healthcare system. In the area of reforms, through its RRP, Ireland introduced the new Sláintecare Consultant Contract⁽¹¹⁶⁾, from 8 March 2023. It is expected to gradually phase out private practice in public hospitals, alleviate recruitment difficulties, and reduce inequalities in access to care engendered by the two-tier (public/private) design of the Irish healthcare system.

⁽¹¹⁵⁾National Treatment Purchase Fund (2022). Retrieved from <https://www.ntpf.ie/home/plannedprocedures.htm>.

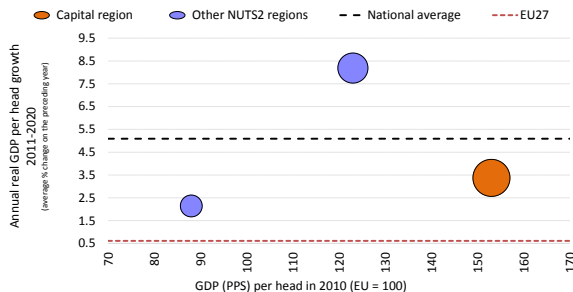
⁽¹¹⁶⁾Department of Health (2022). Retrieved from <https://www.gov.ie/en/press-release/33536-minister-for-health-announces-government-approval-of-new-slaointecare-consultant-contract/>.

ANNEX 17: ECONOMIC AND SOCIAL PERFORMANCE AT REGIONAL LEVEL

This Annex showcases the economic and social regional dynamics in Ireland, providing an update on the economic, social and territorial cohesion in and among the Irish regions compared with the rest of the EU and the main regional economic recovery challenges.

Ireland had the second highest GDP per capita in the EU in 2021 but internal regional disparities remained high. Ireland outperforms the EU average in terms of GDP per capita by a significant margin, at 219% of the EU average in 2021⁽¹¹⁷⁾. However, high disparities become apparent at the NUTS 2 and NUTS 3 levels. The Southern region's GDP per capita level was 261% of the EU average, and the Eastern and Midland (EM) region's 239%, while the Northern and Western (NW) region lagged far behind, at 83%. There are also stark disparities within NUTS 2 regions. E.g. the Midland NUTS 3 region had a GDP per capita of just 55% of the EU average in 2020, whereas the Dublin NUTS 3 area was at 270%.

Graph A17.1: Average GDP per capita growth (2011-2020) vs GDP per capita in 2010



Source: DG REGIO calculations based on JRC (ARDECO) and Eurostat data

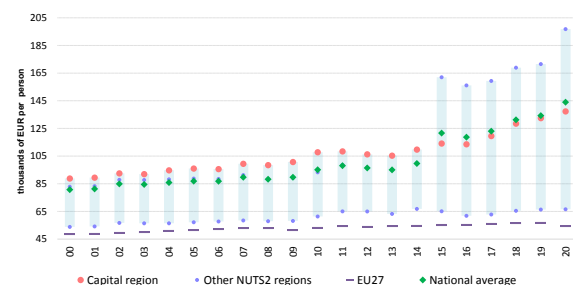
Ireland has benefited from high growth over the period 2011-2020, but it did not bring about convergence between regions. The Southern and the EM regions grew by 8.2% and 3.4% in 2011-2020, which was well above the EU average of 1%, but the NW region grew only in line with the EU average. The divergence is, again, even more apparent at the level of NUTS 3 regions, with the NUTS 3 Midland region being the only one in Ireland

⁽¹¹⁷⁾ Ireland's per capita modified Gross national income (GNI*) per capita was, however, 120% of the EU per capita GDP average in 2021, reflecting the weight of multinationals enterprises in the Irish economy.

with a negative growth rate (of -1.3%). Strong growth therefore led to increasing regional disparities rather than to convergence in Ireland over the period.

Wide differences in levels of labour productivity between Ireland's regions persist (Graph A17.2). The NW region has the lowest labour productivity growth of the three regions at 0.82% on average in 2011-2020. The Southern region is the most productive and had the highest real productivity growth, at 7.61%. Labour productivity in the EM region grew by 2.45% in the period, with some of its counties performing much better than others (the NUTS 3 Midlands area was again an underperformer with a 0.9% decrease in real productivity over the period. This mirrors wide differences in productivity levels between indigenous firms and large multinational corporations. Ireland remains dependent on the activities of a limited number of multinational firms, which are concentrated in the Southern and EM regions. Lower productivity levels and lower growth for indigenous companies have contributed to growing regional disparities.

Graph A17.2: Real GVA per worker (2000-2020)



(1) The light red circle shows the capital city region. The blue circles show the remaining NUTS 2 regions. The green diamond shows the national average. The purple line shows the EU-27 average.

Source: Eurostat, DG REGIO elaboration

Regional disparities are less apparent when it comes to employment indicators. There are no significant regional differences in unemployment rates, partly due to a high level of worker mobility between regions. In 2021, the NW region's employment rate of 74.8% was not very far from the Southern region's 72.9% and the EM region's 76.3%. All regions experienced a slight decrease in employment due to the COVID-19 pandemic. However, as mentioned above, productivity levels per



Table A17.1: Selected indicators at regional level in Ireland

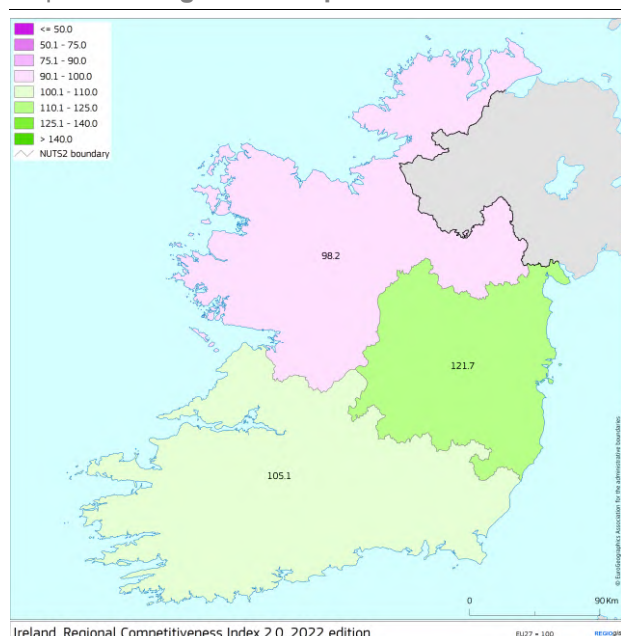
NUTS region name	GDP per head (PPS)	Productivity (GVA (PPS) per person employed)	Real productivity growth	GDP growth	GDP per head growth	At-risk-of-poverty income rate	At-risk-of-poverty or social exclusion	Population aged 30-34 with high educational attainment	Early school leavers	Employment in high-technology sectors	Transport performance by car	Regional Competitiveness Index (RCI)
	EU27 = 100 2021	EU27 = 100	% change on the preceding year	% change on the preceding year	% change on the preceding year	% of population	% of population	% of population aged 30-34	% of population aged 18-24	% of total employment	Pop. within a 1h30 / pop. within 120 km radius x 100	Index - values range between 0 and 100
European Union	100.0	100.0	0.2	0.8	0.6	16.8	21.7	41.6	9.7	4.8	81.5	100.0
Éire/ Ireland	219.0	230.0	4.2	6.0	5.1	12.9	20	62.0	3.3	10.1	75.9	112.0
Northern and Western	83.0	93.0	0.8	2.7	2.1	19.6	26.4	57.6	6.2	5.8	54.7	98.2
Southern	261.0	285.0	7.6	8.9	8.1	15.4	22.3	62.8	4.9	9.8	66.6	105.1
Eastern and Midland	239.0	242.0	2.5	4.6	3.4	9.1	16.4	62.9	3.5	11.8	90.0	121.7

Source: EUROSTAT

person employed vary significantly between region. This reflects differences in the labour market between regions and it also partly explains stark differences in disposable income of households across regions. The median household disposable income was EUR 52 900 in the EM region, EUR 41 394 in the Southern region and EUR 38 183 in the NW region ⁽¹¹⁸⁾.

whereas the Northern and Western region scores below the EU average, with only 98.2, mainly due to smaller markets and weaker infrastructure. The NW region was the only region in Ireland to be considered a ‘moderate innovator’ in the EU’s 2021 regional innovation scoreboard, whereas the other two regions ranked as ‘strong innovators’. This is also mirrored in a lower share of employment in high-technology sectors in the NW region compared with the two other regions (the Southern and EM regions had shares of 9% and 10.5% respectively, but the NW region had a share of less than 6%).

Map A17.1: Regional Competitiveness Index 2022



There are stark regional differences in accessibility levels. The NW region is less urbanised than the other two and is less accessible (90% and 67% of the population living within a radius of 120 km can be reached in less than 90 minutes in the EM and Southern regions respectively, but this ratio drops to less than 55% in the NW region (data collected in 2018).

Regional disparities are also reflected in poverty levels. The NW region’s population is at a higher risk of relative poverty than in the other two regions: in 2021, 26.4 % of the NW region’s population was at risk of poverty and social exclusion compared with 22.3 % in the Southern region and 16.4 % in the EM region. This also reflects the existing rural-urban divide (26% of the rural areas’ population is at risk of poverty or social exclusion in 2021, compared with 16% in cities). Homelessness nevertheless remains largely an urban

Ireland is a strong innovator, but there is an innovation divide between regions. The Eastern and Midland region scores 121.7 in the Regional Competitiveness Index 2022;

⁽¹¹⁸⁾ SILC 2021

problem. In November 2022, over 70% of people living in crisis accommodation were registered in the Dublin area ⁽¹¹⁹⁾.

⁽¹¹⁹⁾gov.ie - Homeless Report - November 2022 (www.gov.ie).

In recent years, Ireland has developed into a significant international financial centre, in particular for investment banks, money-market funds, and investment funds. Irish financial firms fall into two quite distinct groups: internationally oriented investment banks, fund-management companies and insurance firms on one side, and retail banks serving the domestic market on the other. Currently, there are five retail banks operating in Ireland, two of which are in the process of withdrawing from the market (KBC and Ulster Bank). The three remaining retail banks are domestically owned, and were until recently all part-owned by the government, which acquired stakes in these banks during the Irish banking crisis in 2009. The government still holds shares in Permanent TSB and AIB. In addition to the traditional banks, there are also 204 credit unions that do not fall under EU banking regulation. These provide basic banking services to their members, mainly consumer loans and – increasingly – mortgages and small business loans. The retail space is also served by non-bank lenders that do not take deposits but have become significant providers of credit to SMEs. As a legacy of the financial crisis, the retail banks still face restrictions on staff remuneration, but these restrictions are being eased.

Irish companies also make use of market funding. The market-funding ratio for Irish companies was very high at 85.6% in 2021, but this masks a difference between large international corporations and smaller indigenous companies. Smaller indigenous companies rely almost exclusively on loans from banks or the burgeoning number of non-bank lenders. Meanwhile, sustainable financing also expanded in 2021, as Irish corporates issued significantly more green, social, and sustainable bonds

Investment banks account for about half of Irish banking assets but have limited links to the domestic economy. The investment banking sector has grown significantly in recent years, as these institutions looked for a new EU base after the UK left the EU. The combined assets of the three main investment banks in Ireland grew to EUR 251 billion at the end of 2021 from EUR 32 billion at year-end 2015. These banks play an important role for both the Irish and the wider European

economy, providing services to their corporate clients. As they serve mainly international customers, these investment banks are less impacted by the domestic economy.

Overall, Irish retail banks have come a long way from the financial crisis. The Irish banking crisis of 2008-2012 left Irish banks burdened with many non-performing loans (NPLs). The retail banks' NPL ratio peaked at 31.9% in Q4 2014. Since then, they have made progress in reducing their stock of NPLs, mainly through portfolio sales and securitisation. However, their NPL ratio of 3.2% is still above the EU average of 1.8% of all loans, while provision rates of 30.6% are quite low.

The pandemic's impact on the banking sector seems to be contained. The Irish banking sector withstood the pandemic without major setbacks to their asset quality. Government grants for households and businesses supported their solvency⁽¹²⁰⁾. However, the risks on banks' balance sheets have increased as evidenced by the increase loans classified as stage 2⁽¹²¹⁾. Meanwhile, household deposits have supported the liquidity position of banks, which remains strong with a liquidity-coverage ratio and net-stable-funding ratio that is well in excess of regulatory requirements and European averages. Irish retail banks have long-standing issues with profitability due to: (i) their reliance on interest income in a low-interest-rate environment; (ii) the difficulties of achieving scale given the size of their home market; and (iii) the high risk profile of their assets. However, some developments are expected to improve their profitability in the future, in particular the general rise in the level of interest rates and consolidation in their home market, which should improve economies of scale. For the entire sector, including the investment-banking sector, return on equity

⁽¹²⁰⁾ The Employment Wage Subsidy Scheme (September 2020 to May 2021) provided affected businesses with a subsidy covering their employees' wages. It succeeded the Temporary Wage Subsidy Scheme (26 March to 31 August 2020).

⁽¹²¹⁾ According to the classification by the International Financial Reporting Standards 9 (IFRS 9) loans the credit quality of which has been judged to have deteriorated since the loan was initially made.

Table A18.1: Financial soundness indicators

	2017	2018	2019	2020	2021	2022	EU	Median
Total assets of the banking sector (% of GDP)	353.5	337.4	351.0	371.8	332.2	312.0	276.8	207.9
Total assets of the banking sector (% of GNI*)	575.4	568.1	594.1	693.2	605.4			
Share (total assets) of the five largest banks (%)	45.5	46.1	49.7	55.7	60.0	-	-	68.7
Share (total assets) of domestic credit institutions (%) ¹	51.2	48.6	44.4	40.7	44.3	39.3	-	60.2
NFC credit growth (year-on-year % change)	1.2	3.9	2.3	8.4	23.1	15.8	-	9.1
HH credit growth (year-on-year % change)	-1.5	-0.8	0.1	-1.5	-1.6	-1.2	-	5.4
Financial soundness indicators: ¹								
- non-performing loans (% of total loans)	9.9	5.5	3.4	3.4	2.4	1.7	1.8	1.8
- capital adequacy ratio (%)	25.2	25.4	24.9	25.4	25.5	23.3	18.6	19.8
- return on equity (%) ²	5.0	4.9	3.7	-2.2	4.5	2.6	6.1	6.6
Cost-to-income ratio (%) ¹	64.5	66.1	70.9	71.5	73.4	69.4	60.6	51.8
Loan-to-deposit ratio (%) ¹	95.3	90.2	91.5	83.9	72.7	72.8	88.6	78.0
Central bank liquidity as % of liabilities	1.8	0.7	0.4	1.3	3.9	0.3	-	2.9
Private sector debt (% of GDP)	249.1	230.7	209.3	187.3	168.1	-	-	120.7
Private sector debt (% of GNI*)	405.4	388.5	354.3	349.2	306.4	-	-	-
Long-term interest rate spread versus Bund (basis points)	48.4	55.4	58.6	44.9	43.7	60.9	-	93.3
Market funding ratio (%)	80.7	80.9	82.9	83.8	85.6	-	50.8	40.0
Green bonds issued to all bonds (%)	-	1.0	1.1	1.2	1.9	2.3	3.9	2.3
	1-3	4-10	11-17	18-24	25-27			

Colours indicate performance ranking among 27 EU Member States.

(1) Last data: Q3 2022. (2) Data is annualized.

GNI* is gross national income excl. depreciation of intellectual property and leased aircraft and income of re-domiciled PLCs.

Source: ECB, Eurostat, S&P Global Capital IQ Pro.

was 2.9% year-to-date in Q3 2022. Irish banks are well capitalised with a solvency ratio of 24.3%.

Higher energy prices and interest rates may strain asset quality. Although profit margins have narrowed in the face of rising energy costs, the business sector is quite resilient to macroeconomic shocks, given that almost half of SMEs report having no debt balances. Large corporations were able to sustain their leverage ratios on average over the pandemic years. However, a small number of large corporations (10% of companies in this group) have leverage ratios in excess of 0.8, which makes them vulnerable to increased financing costs.

The resilience of the household sector has been bolstered by rising nominal incomes, increased savings, and growth in the valuations of property. Furthermore, half of all outstanding mortgages are on fixed rates, delaying the pass-through of higher interest rates. The debt-service-to-income ratio hit a twenty-year low in 2022, further highlighting the resilience of the household sector⁽¹²²⁾. Moreover, households with negative financial margins account for less than 5% of total outstanding mortgage debt.

A strong housing market buoyed mortgage lending in 2022. Mortgage lending saw a brisk rebound after the pandemic amidst accelerating house-price growth, as housing supply fell short of demand. The volume of outstanding mortgages exceeds pre-pandemic levels and stood at EUR 83.4 billion in June 2022, 9.0% above the level in December 2019. The increase in mortgage lending volumes came despite banks' disposal of many mortgage NPLs over the same period. In 2022, the central bank completed a review of the mortgage-measures framework, maintaining a combination of macroprudential limits on mortgage lending. As of 1 January 2023, the maximum loan-to-income (LTI) ratio for first-time buyers was lifted from 3.5 to 4, while the maximum loan-to-value (LTV) ratio has been maintained at 90%. For subsequent buyers (i.e. non-first-time buyers), the LTI ratio remains at 3.5%, while the LTV ratio was raised to 90% from 80% previously.

Lending to SMEs has now recovered from pandemic lows, but remains subdued due to the high cost of borrowing. Lending to SMEs strengthened in the first half of 2022 as government support schemes were phased out, but lending levels have remained below their pre-pandemic levels. In the SME Credit Demand Survey⁽¹²³⁾, most companies claimed

⁽¹²²⁾ Central Bank of Ireland, Financial Stability Review 2022-II.

⁽¹²³⁾ Department of Finance, SME Credit Demand Survey April-September 2022.

to have sufficient internal funds. Interest rates on loans for non-financial corporations in Ireland are among the highest in the euro area.

Ireland has become a hub not only for banks but also for the insurance business.

Several firms work on an outward cross-border basis so that less than 30% of premiums by value are written in Ireland. As elsewhere, the unexpectedly high inflation is likely to generate significant losses for non-life insurance businesses in Ireland.

This Annex provides an indicator-based overview of Ireland's tax system. It includes information on the tax structure (the types of tax that Ireland derives most of its revenue from), the tax burden on workers, and the progressivity and redistributive effect of the tax system. It also provides information on tax collection and compliance, and on the risks of aggressive tax planning activity.

Ireland's tax revenues have high downside risks. Tax revenues as percentage of GNI* are below the EU aggregate as a percentage of GDP for labour taxes and property taxes (respectively 16.2% and 1.9% of GNI* in 2021). This also includes tax revenues from recurrent property taxes, which are particularly conducive to growth. However, revenues from environmental taxes are almost at the same level (2.1% of GNI* for Ireland and 2.2% of GDP for the EU in 2021). Overall, the Irish tax base is narrow and excessively reliant on corporate taxes. However, promising reforms on recurrent property taxes were enacted, such as: revaluation of properties for the purposes of the tax, inclusion in the tax base of previously

excluded properties built since 2013, and a regular revaluation every four years.

Ireland's labour tax burden is relatively low at various wage levels, but more progressive than the EU average. The labour tax wedge for Ireland in 2022 was lower than the EU average at various wage levels (i.e. for single people at the average wage (100%) as well as at 50% and 67% of the average wage) (see Graph A19.2). Second earners at a wage level of 67% of the average wage, whose spouses earn the average wage, are also subject to a lower tax wedge than the EU average, but they are taxed more heavily than single people at the same wage level. The tax system is more progressive than the EU average. As a result, the tax-benefit system reduces income inequality – as measured by the Gini coefficient – by significantly more than the EU average in 2021 (Table A19.1).

Ireland's budgetary situation has improved recently, as a result of high corporate tax revenues. Tax receipts improved further in 2022, due to corporate tax receipts that

Table A19.1: Taxation indicators

	Ireland					EU-27				
	2010	2019	2020	2021	2022	2010	2019	2020	2021	2022
Tax structure	Total taxes (including compulsory actual social contributions) (% of GDP)	27.8	21.9	19.9	21.1	37.9	39.9	40.0	40.6	
	Total taxes (including compulsory actual social contributions) (% of GNI*)	36.1	37.1	37.1	38.5					
	Labour taxes (as % of GDP)	12.2	9.5	8.8	8.9	20.0	20.7	21.3	20.9	
	Labour taxes (as % of GNI*)	15.8	16.0	16.4	16.2					
	Consumption taxes (as % of GDP)	9.9	6.8	5.7	6.0	10.8	11.1	10.7	11.2	
	Consumption taxes (as % of GNI*)	12.8	11.5	10.5	11.0					
	Capital taxes (as % of GDP)	5.7	5.7	5.5	6.2	7.1	8.1	8.0	8.5	
	Capital taxes (as % of GNI*)	7.4	9.6	10.2	11.2					
	Total property taxes (as % of GDP)	1.4	1.1	0.9	1.1	1.9	2.2	2.2	2.2	
	Total property taxes (as % of GNI*)	1.8	1.9	1.7	1.9					
	Recurrent taxes on immovable property (as % of GDP)	0.8	0.5	0.3	0.4	1.1	1.2	1.2	1.1	
	Recurrent taxes on immovable property (as % of GNI*)	1.0	0.9	0.6	0.7					
	Environmental taxes as % of GDP	2.5	1.4	1.2	1.2	2.4	2.4	2.2	2.2	
Environmental taxes as % of GNI*	3.2	2.4	2.2	2.1						
Progressivity & fairness	Tax wedge at 50% of average wage (Single person) (*)	16.3	20.9	21.5	21.8	22.1	33.9	32.3	31.9	32.1
	Tax wedge at 100% of average wage (Single person) (*)	30.9	33.2	34.0	34.5	34.7	41.0	40.1	39.9	39.6
	(*) EU-27 simple average		12.4	12.4	12.4		19.5	19.4	19.1	
	Difference in Gni coefficient before and after taxes and cash social transfers (pensions excluded from social transfers) (2) (*)	20.5	16.3	14.9	16.6		8.6	7.7	8.1	7.8
Tax administration & compliance	Outstanding tax arrears: total year-end tax debt (including debt considered not collectable) / total revenue (in %) (*)		5.8	9.4			31.6	40.7		
	VAT Gap (% of VAT total tax liability, VTTL)		10.3	12.5			11.0	9.1		

(1) Forward-looking effective tax rate (OECD).

(2) A higher value indicates a stronger redistributive impact of taxation.

(*) EU-27 simple average

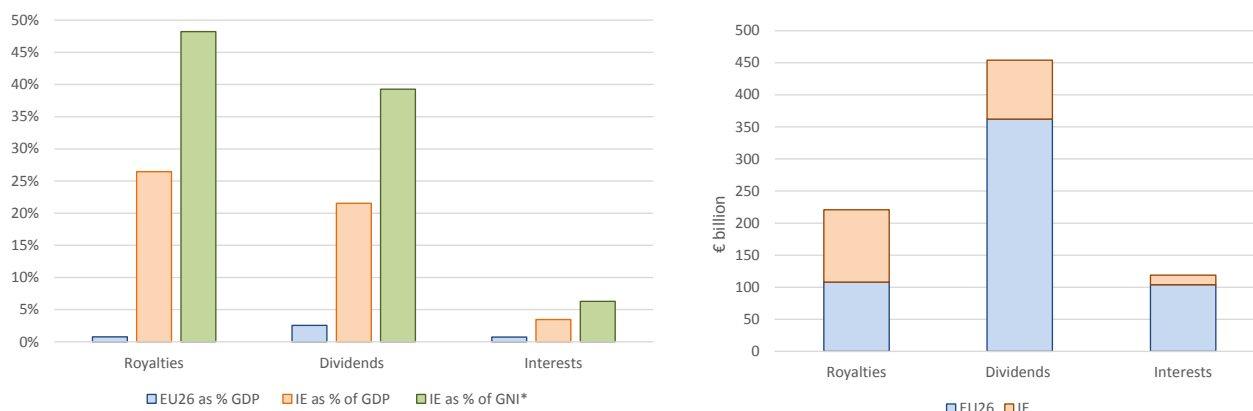
For more data on tax revenues as well as the methodology applied, see European Commission, Directorate-General for Taxation and Customs Union, *Taxation trends in the European Union: data for the EU Member States, Iceland, Norway and United Kingdom: 2021 edition*, Publications Office of the European Union, 2021, <https://data.europa.eu/doi/10.2778/843047> and the *Data on Taxation* webpage (https://ec.europa.eu/taxation_customs/taxation-1/economic-analysis-taxation/data-taxation_en).

For more details on the VAT gap, see European Commission, Directorate-General for Taxation and Customs Union, *VAT gap in the EU: report 2022*, Publications Office of the European Union, 2022, <https://data.europa.eu/doi/10.2778/109823>.

Source: European Commission, OECD. CSO



Graph A19.1: Outbound foreign direct investment (FDI) payments from Ireland and the rest of the EU-27 relative to the size of their economies (in % of GDP and GNI * on the left) and in absolute terms (in billions of euro on the right), in 2021



Source: CSO data, European Commission

reached record levels. Ireland's business structure reliant on a large share of its gross value-added generated by foreign-owned (mainly US-owned) firms, underpinned that development - given multinational firms based in Ireland have been highly profitable recently.

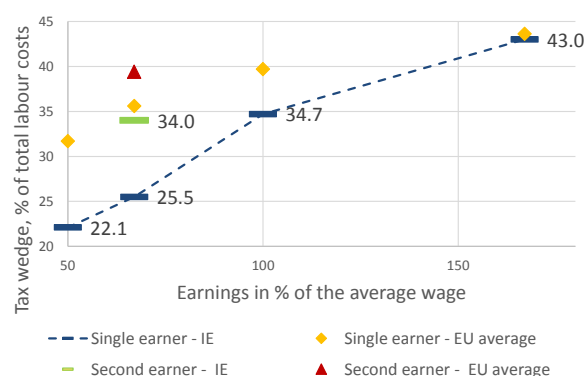
Ireland has incomplete laws on withholding taxes imposed on outbound interest, dividends and royalty payments, but it is committed to reforms as part of its Recovery and Resilience Plan (RRP). The Commission has long criticised Ireland for favouring aggressive tax planning (ATP). Graph A19.1 shows the importance of outbound payments (especially royalty payments) for the Irish economy. They amounted to a quarter of Ireland's GDP in 2021. Half of all the EU's outbound royalty payments to non-EU countries come from Ireland. The RRP contains a commitment to introduce new legislation for outbound payments from 2024 in order to prevent the tax-free transfer of profits to non-EU countries via excessive interest and royalty payments.

Irish legislation in 2013 and 2014 to tackle ATP ended 'double Irish' structures which were mainly used by US-based MNEs to shelter profits from taxation in Ireland. Irish reform activity was followed by the 2017 Tax Cuts and Jobs Act (TCJA) in the US which had introduced a low-taxed income category for intangible assets (GILTI) and this created a strong incentive for US-based MNEs to repatriate patents from low-tax jurisdictions and tax havens all over the world back to the US. Ireland therefore saw a radical change during

2020 in the direction of royalty payments from zero-tax jurisdictions back to the US.

Ireland is doing well on digitalisation of the tax administration, which can help reduce compliance costs. The Annual report on taxation 2021 shows that Ireland scores highly on filing tax with 100% and 97% of respectively corporate income and personal income tax returns being filed electronically. The VAT gap (an indicator of the effectiveness of VAT enforcement and compliance, where a low gap indicates high effectiveness) in Ireland slightly increased to 12.5% in 2020, above the EU-wide gap of 9.1%.

Graph A19.2: Tax wedge for single and second earners as a % of total labour costs, 2022



Second earner tax wedge assumes first earner at 100% of the average wage and no children. For the methodology of the tax wedge for second earners see OECD (2016) "Taxing Wages 2014-2015".

Source: European Commission



Table A20.1: Key economic and financial indicators

	2004-07	2008-12	2013-19	2020	2021	2022	forecast	
							2023	2024
Real GDP (y-o-y)	5.7	-1.5	8.2	6.2	13.6	12.0	5.5	5.0
Potential growth (y-o-y)	4.4	-0.3	8.6	8.5	6.4	7.3	6.8	6.0
Private consumption (y-o-y)	6.0	-1.4	2.8	-11.9	4.7	6.6	4.1	3.9
Public consumption (y-o-y)	4.4	-2.2	3.4	10.5	6.1	1.6	0.3	-0.5
Gross fixed capital formation (y-o-y)	8.3	-6.2	24.8	-16.5	-39.0	25.9	1.8	2.8
Exports of goods and services (y-o-y)	6.7	1.8	12.7	11.2	14.1	15.0	6.7	5.5
Imports of goods and services (y-o-y)	8.2	-0.5	15.2	-2.1	-8.3	19.0	5.5	4.5
Contribution to GDP growth:								
Domestic demand (y-o-y)	5.6	-2.7	8.2	-11.2	-14.6	7.8	1.4	1.6
Inventories (y-o-y)	0.0	0.0	0.2	0.7	0.3	1.0	0.0	0.0
Net exports (y-o-y)	-0.3	2.0	-0.8	16.9	28.3	2.1	3.7	3.1
Contribution to potential GDP growth:								
Total Labour (hours) (y-o-y)	0.8	-1.7	1.8	1.2	1.3	1.8	1.8	1.2
Capital accumulation (y-o-y)	2.2	0.8	3.6	1.7	-0.4	0.4	0.4	0.5
Total factor productivity (y-o-y)	1.4	0.6	3.2	5.6	5.5	5.1	4.6	4.3
Output gap	1.8	-2.6	0.4	-6.1	0.3	4.6	3.3	2.3
Unemployment rate	4.8	13.0	8.8	5.9	6.2	4.5	4.3	4.3
GDP deflator (y-o-y)	2.0	-0.8	2.2	-1.6	0.7	5.3	4.6	2.5
Harmonised index of consumer prices (HICP, y-o-y)	2.5	0.6	0.3	-0.5	2.4	8.1	4.6	2.6
HICP excluding energy and unprocessed food (y-o-y)	2.1	0.0	0.6	-0.1	1.6	5.0	5.3	4.1
Nominal compensation per employee (y-o-y)	5.3	0.6	2.0	3.7	2.6	4.2	5.6	5.8
Labour productivity (real, hours worked, y-o-y)	2.4	2.9	4.3	17.5	6.6	3.1	1.8	3.1
Unit labour costs (ULC, whole economy, y-o-y)	3.8	-1.2	-2.9	-5.1	-4.2	-0.8	2.4	1.8
Real unit labour costs (y-o-y)	1.7	-0.4	-5.0	-3.6	-4.8	-5.8	-2.0	-0.7
Real effective exchange rate (ULC, y-o-y)	2.7	-3.3	-4.1	-9.2	-4.6	-4.3	-3.0	-1.8
Real effective exchange rate (HICP, y-o-y)	1.6	-2.0	-0.9	0.1	0.2	-4.2	.	.
Net savings rate of households (net saving as percentage of net disposable income)	14	7.8	4.1	21.6	20.2	.	.	.
Private credit flow, consolidated (% of GDP)	30.7	7.1	-4.7	-3.6	2.6	.	.	.
Private sector debt, consolidated (% of GDP)	177.1	260.4	260.0	187.3	168.1	.	.	.
of which household debt, consolidated (% of GDP)	85.7	107.5	58.7	34.4	29.7	.	.	.
of which non-financial corporate debt, consolidated (% of GDP)	91.4	152.9	201.2	152.9	138.4	.	.	.
Gross non-performing debt (% of total debt instruments and total loans and advances) (1)	.	.	10.3	3.0	2.1	.	.	.
Corporations, net lending (+) or net borrowing (-) (% of GDP)	2.3	8.0	-7.0	-12.8	10.7	1.0	3.7	4.6
Corporations, gross operating surplus (% of GDP)	33.9	33.9	49.4	58.8	59.4	61.0	62.1	62.7
Households, net lending (+) or net borrowing (-) (% of GDP)	-8.5	2.4	1.6	7.2	6.1	4.4	4.0	3.2
Deflated house price index (y-o-y)	8.4	-13.4	7.2	-0.5	4.2	5.5	.	.
Residential investment (% of GDP)	12.3	3.9	1.9	2.1	2.1	2.6	.	.
Current account balance (% of GDP), balance of payments	-3.9	-3.4	-1.6	-6.8	14.2	8.8	11.1	11.9
Trade balance (% of GDP), balance of payments	10.4	15.0	19.3	18.9	39.4	37.3	.	.
Terms of trade of goods and services (y-o-y)	-1.1	-0.7	0.0	-0.2	-2.5	0.5	0.8	0.1
Capital account balance (% of GDP)	0.2	0.1	-5.8	-3.2	0.9	-1.6	.	.
Net international investment position (% of GDP)	-31.4	-120.3	-173.2	-177.0	-145.5	-120.7	.	.
NENI - NIIP excluding non-defaultable instruments (% of GDP) (2)	1.3	-224.8	-278.7	-294.4	-335.1	-228.3	.	.
IIP liabilities excluding non-defaultable instruments (% of GDP) (2)	950.9	1384.5	1378.5	1360.5	1399.2	1120.1	.	.
Export performance vs. advanced countries (% change over 5 years)	9.6	-1.9	4.2	52.4	46.3	.	.	.
Export market share, goods and services (y-o-y)	-2.8	-4.0	11.0	23.2	-4.0	10.7	4.0	1.6
Net FDI flows (% of GDP)	11.2	-4.0	-10.7	-30.3	12.5	0.7	.	.
General government balance (% of GDP)	1.5	-15.0	-1.8	-5.0	-1.6	1.6	1.7	2.2
Structural budget balance (% of GDP)	.	.	-1.9	-1.8	-1.7	-0.8	-0.1	1.0
General government gross debt (% of GDP)	25.4	84.1	80.4	58.4	55.4	44.7	40.4	38.3

(1) Domestic banking groups and stand-alone banks, EU and non-EU foreign-controlled subsidiaries and EU and non-EU foreign-controlled branches.

(2) Net international investment position (NIIP) excluding direct investment and portfolio equity shares.

In some cases, modified GNI (GNI*), which excludes globalisation effects, might more accurately reflect the income standards of Irish residents than GDP. Nominal GNI* was 54.8% of GDP in 2021. See Central Statistics Office, 'Modified GNI' for more detail.

Source: Eurostat and ECB as of 2 May 2023, where available; European Commission for forecast figures (Spring forecast 2023).

This Annex assesses fiscal sustainability risks for Ireland over the short, medium and long term. It follows the same multi-dimensional approach as the European Commission's 2022 Debt Sustainability Monitor, updated based on the Commission 2023 spring forecast.

1 - Short-term risks to fiscal sustainability are low overall. The Commission's early-detection indicator (S0) does not signal major short-term fiscal risks (Table A21.2).⁽¹²⁴⁾ Gross financing needs are expected to remain low at around 4% of GDP in the short term (2023-2024), considerably below the recent peak in 2020 (Table 1 of Table A21.1). Financial markets' perceptions of sovereign risk are positive, as confirmed by the ratings of the main agencies.

2 - Medium-term risks to fiscal sustainability are low overall.

The baseline DSA for Ireland shows that the government debt ratio is projected to continue declining over the medium term, to around 21% of GDP in 2033 (Graph 1).⁽¹²⁵⁾⁽¹²⁶⁾ The assumed structural primary

balance (a surplus of 1.6% of GDP) contributes to these developments. It appears rather ambitious compared with past fiscal performance. At the same time, the baseline projections up to 2033 benefit from a favourable (although declining) snowball effect, with real GDP growth averaging 3.4% in 2025-2033. Government gross financing needs are expected to remain low over the projection period, at around 3% of GDP.

The baseline projections are stress tested against four alternative scenarios to assess the impact of changes in key assumptions (Graph 1). For Ireland, reverting to historical fiscal trajectories under the 'historical structural primary balance (SPB)' scenario would lead to a higher government debt ratio. If the SPB gradually converged to a deficit of 1.8% of GDP (its historical 15-year average), the projected debt-to-GDP ratio would be 41% of GDP in 2033, 21 pps. above the baseline. A permanent worsening of the macro-financial conditions, as reflected under the 'adverse interest-growth rate differential' scenario (i.e. 1 pp. higher than the baseline) would result in a debt-to-GDP ratio somewhat higher than the baseline projection. A temporary worsening of financial conditions, as captured by the 'financial stress' scenario, would result in a debt projection similar to the baseline. The 'lower structural primary balance (SPB)' scenario (i.e. SPB level permanently reduced by half of the cumulative forecast change), would lead to a government debt-to-GDP ratio that is about 8 pps. higher by 2033 than the baseline.

Additionally, stochastic debt projections indicate low risks (Graph 2).⁽¹²⁷⁾ These stochastic simulations point to a 9% probability of the debt ratio in 2027 being greater than in 2022, entailing low risk given the initial low debt level. In addition, such shocks point to some uncertainty (i.e. the difference between the 10th and 90th debt distribution percentiles) surrounding the government debt baseline projections.

⁽¹²⁴⁾ The S0 is a composite indicator of short-term risk of fiscal stress. It is based on a wide range of macro-financial and fiscal variables that have proven to perform well in the past in detecting situations of upcoming fiscal stress.

⁽¹²⁵⁾ The assumptions underlying the Commission's 'no-fiscal policy change' baseline notably comprise: (i) a structural primary surplus, before ageing costs, of 1.6% of GDP as of 2024; (ii) inflation converging linearly towards the 10-year forward inflation-linked swap rate 10 years ahead (which refers to the 10-year inflation expectations 10 years from now); (iii) the nominal short- and long-term interest rates on new and rolled over debt converging linearly from current values to market-based forward nominal rates by T+10 (as for all Member States); (iv) real GDP growth rates from the Commission 2023 spring forecast until 2024, followed by EPC/OGWG 'T+10 methodology projections between T+3 and T+10, i.e. for 2025-2033 (on average 3.4%); (v) ageing costs in line with the 2021 Ageing Report (European Commission, Institutional Paper 148, May 2021). For information on the methodology, see the 2022 Debt Sustainability Monitor (European Commission, Institutional Paper 199, April 2023).

⁽¹²⁶⁾ Table 1 shows the baseline debt projections and its breakdown into the primary balance, the snowball effect (the combined impact of interest payments and nominal

GDP growth on the debt dynamics) and the stock-flow adjustment.

⁽¹²⁷⁾ These projections show the impact on debt of 2000 different shocks affecting the government's primary balance, economic growth, interest rates and exchange rates. The cone covers 80% of all simulated debt paths, therefore excluding tail events.

3 - Long-term risks to fiscal sustainability are medium overall. ⁽¹²⁸⁾

The S2 sustainability gap indicator (at 3.4 pps. of GDP) points to medium risks, suggesting that Ireland would need to improve its structural primary balance to ensure debt stabilisation over the long term. This results from the projected increase in ageing costs, in particular for spending on pensions (2.3 pps. of GDP), long-term care (1.6 pps.) and health care (1.2 pps.) (Table 2). Hence, while several investments and reforms in the RRP contribute to supporting the efficiency of the Irish health care system, additional measures may be required to further improve the efficiency and fiscal sustainability of the Irish long-term care system.

Given low long-term debt vulnerabilities, as highlighted by the S1 indicator, overall long-term risks are assessed as medium. Indeed, the S1 sustainability gap indicator signals that a limited consolidation effort of 1 pp. of GDP would suffice to bring debt to 60% of GDP by 2070. This result is driven by the projected ageing costs (3.5 pps.), partly offset by the favourable initial budgetary position (-2 pps.) and moderate debt level (-0.5 pps.) (Table 2).

Finally, several additional risk factors need to be considered in the assessment. On the one hand, risk-increasing factors include the recent increase in interest rates, a relatively large share of short-term public debt as well as public debt held by non-residents and the negative net international investment position, though this largely reflects the presence of multinationals and the International Financial Services Centre. Finally, alternative metrics to GDP suggest higher fiscal sustainability risks. On the other hand, risk-mitigating factors include relatively stable financing sources (with a diversified and large investor base), the currency denomination of debt, and historically still low borrowing costs. In addition, the structural reforms under the NGEU/RRF, if fully implemented, could have a further positive impact on GDP growth in the coming years, and therefore help to mitigate debt sustainability risks.

⁽¹²⁸⁾ The S2 fiscal sustainability gap indicator measures the permanent fiscal effort (SPB adjustment) in 2024 that would be required to stabilise public debt over the long term. It is complemented by the S1 fiscal sustainability gap indicator, which measures the permanent fiscal effort required in 2024 to bring the debt-to-GDP ratio to 60% in the long term (by 2070). For both the S1 and S2 indicators, the risk assessment depends on the amount of fiscal consolidation needed: 'high risk' if the required effort exceeds 6 pps. of GDP, 'medium risk' if it lies between 2 pps. and 6 pps. of GDP, and 'low risk' if the effort is negative or below 2 pps. of GDP. The overall long-term risk classification brings together the risk categories derived from S1 and S2. S1 may notch up the risk category derived from S2 when it signals a higher risk than S2. See the 2022 Debt Sustainability Monitor for further details.

Table A21.1: Debt sustainability analysis - Ireland

Table 1. Baseline debt projections	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Gross debt ratio (% of GDP)	58.4	55.4	44.7	40.4	38.3	34.0	30.7	28.2	26.0	24.2	22.8	21.7	21.1	20.6
Changes in the ratio	1.4	-3.1	-10.7	-4.3	-2.2	-4.3	-3.3	-2.5	-2.2	-1.8	-1.4	-1.0	-0.7	-0.5
of which														
Primary deficit	4.0	0.8	-2.2	-2.3	-2.8	-2.2	-1.7	-1.1	-0.9	-0.7	-0.6	-0.4	-0.2	-0.1
Snowball effect	-1.4	-6.6	-7.8	-3.6	-2.3	-2.0	-1.6	-1.4	-1.3	-1.1	-0.8	-0.6	-0.4	-0.4
Stock-flow adjustments	-1.1	2.7	-0.7	1.6	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Gross financing needs (% of GDP)	12.1	5.8	3.4	4.1	4.3	2.8	2.7	2.3	2.3	2.3	2.1	2.5	2.6	2.7

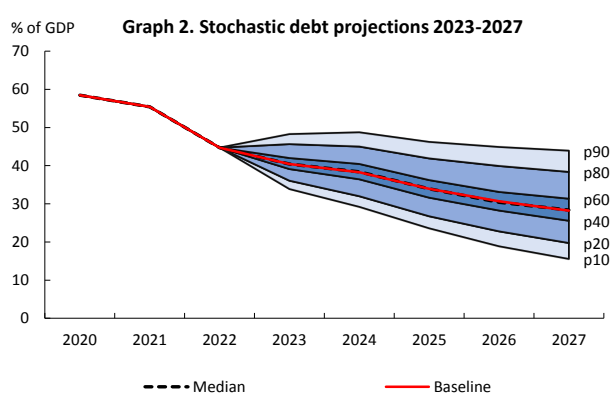
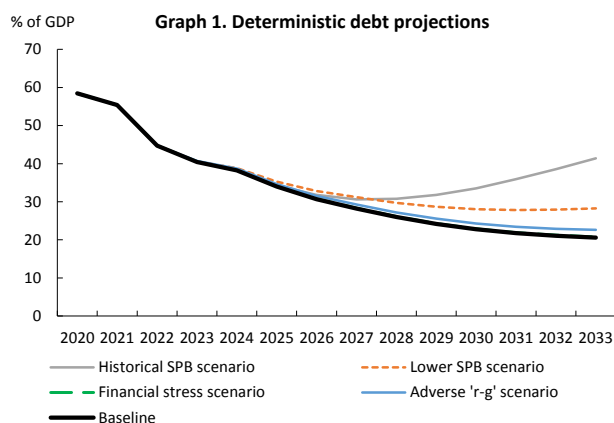


Table 2. Breakdown of the S1 and S2 sustainability gap indicators

	S1	S2
Overall index (pps. of GDP)	1.0	3.4
of which		
Initial budgetary position	-2.0	-1.5
Debt requirement	-0.5	
Ageing costs	3.5	4.9
of which		
Pensions	1.9	2.3
Health care	0.8	1.2
Long-term care	0.9	1.6
Others	-0.1	-0.1

Source: Commission services.

Table A21.2: Heat map of fiscal sustainability risks - Ireland

Short term	Medium term - Debt sustainability analysis (DSA)							Long term			
	Overall (S0)	Overall	Deterministic scenarios					Stochastic projections	S2	S1	Overall (S1 + S2)
			Baseline	Historical SPB	Lower SPB	Adverse 'r-g'	Financial stress				
		Overall	LOW	LOW	LOW	LOW	LOW				
LOW	LOW	Debt level (2033), % GDP	20.6	41.4	28.3	22.6	20.7		MEDIUM	LOW	MEDIUM
		Debt peak year	2022	2022	2022	2022	2022				
		Fiscal consolidation space	46%	72%	61%	46%	46%				
		Probability of debt ratio exceeding in 2027 its 2022 level						9%			
		Difference between 90th and 10th percentiles (pps. GDP)					28.4				

(1) Debt level in 2033. Green: below 60% of GDP. Yellow: between 60% and 90%. Red: above 90%. (2) The debt peak year indicates whether debt is projected to increase overall over the next decade. Green: debt peaks early. Yellow: peak towards the middle of the projection period. Red: late peak. (3) Fiscal consolidation space measures the share of past fiscal positions in the country that were more stringent than the one assumed in the baseline. Green: high value, i.e. the assumed fiscal position is plausible by historical standards and leaves room for corrective measures if needed. Yellow: intermediate. Red: low. (4) Probability of debt ratio exceeding in 2027 its 2022 level. Green: low probability. Yellow: intermediate. Red: high (also reflecting the initial debt level). (5) The difference between the 90th and 10th percentiles measures uncertainty, based on the debt distribution under 2000 different shocks. Green, yellow and red cells indicate increasing uncertainty.

Source: European Commission (for further details on the Commission's multidimensional approach, see the 2022 Debt Sustainability Monitor)

Source: Commission services.