

What's holding back competition in energy markets?

Category: Energy, Product market regulation, Uncategorized
written by oecdecoscope | April 1, 2026



Electricity and natural gas markets power modern economies. They fuel industrial production and transportation services, enable digital infrastructure, and meet households' everyday energy needs. Because electricity and gas are inputs needed in almost every economic activity, how these markets perform matters beyond the energy sector itself.

By Cassie Castle, OECD Economics Department

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A large body of evidence shows that well-designed, competitive energy markets can discipline prices, strengthen investment incentives, and support innovation. Competition forces firms to improve efficiency, adopt new technologies and respond to consumer needs. When competition is weak, those pressures fade (OECD, 2022). The result is not only higher energy bills, but wider consequences for businesses, households and economic performance.

According to a new OECD working paper based on the OECD

Product Market Regulation (PMR) indicators, countries have already undertaken significant reforms to support competition. For much of the 20th century, electricity and natural gas sectors were mostly organised as vertically integrated state-owned monopolies, with limited incentives for efficiency or innovation. A major wave of liberalisation reforms, particularly during the 1990s, transformed this model. Many countries made significant steps to unbundle monopoly networks, regulate third-party access to infrastructure and open generation and retail markets to new entrants.

Despite this progress, important gaps remain. The new OECD working paper examines the current state of the regulatory framework in the electricity and natural gas markets across 50 countries. It evaluates the extent to which these frameworks support competition by lowering entry barriers, ensuring non-discriminatory access to monopoly network services and reducing switching costs across the supply chain. Drawing on the latest update of the OECD PMR indicators, the paper shows that while legal liberalisation is widespread, key regulatory shortcomings continue to limit the full benefits of competition (see Figure).

The PMR Sector Indicator for Energy: Latest results

Four issues stand out:

First, in some countries the monopoly network infrastructure – transmission and distribution grids – remains weakly separated from competitive activities like generation, storage and retail supply. In electricity, around 10% of surveyed countries impose only accounting separation or no separation at all. In natural gas, this rises to around 16% of countries. Where vertical integration persists, firms have both the incentive to favour their own affiliates and restrict rivals'

access to essential networks. Stronger forms of unbundling, such as legal or ownership separation, provide more robust safeguards and are widely recognised as best practice.

Second, a number of countries continue to restrict households and small businesses from choosing their retail energy supplier and maintain broad retail price regulation beyond targeted support for vulnerable households. This is usually the case when the market is not yet fully competitive. Where entry barriers persist, switching costs are high, or wholesale markets do not function effectively, premature liberalisation can lead to poor outcomes for consumers. However, concerns about price volatility may offer an additional explanation for why regulated retail tariffs remain in place, sometimes alongside market-based offers, particularly following the 2021-2023 energy crisis. Sharp price swings prompted some countries to extend or maintain retail price regulation for small consumers, even in otherwise well-developed markets. The paper explores this tension further. While price controls can provide stability in periods of stress, open-ended measures risk distorting price signals, weakening competitive pressures over time and reducing the benefits of open markets.

Third, even where consumers are free to choose, many lack the tools to engage effectively in retail markets. Retail competition can only deliver meaningful benefits if consumers have access to the information needed to make informed decisions when choosing their supplier. Most countries require suppliers to provide detailed consumption and cost data in monthly bills, but only a few also offer independent price comparison tools. The low rate of roll-out of smart meters also limits the information available to consumers to understand their patterns of consumptions and select the most suitable tariff. Without active support to help consumers make informed choices, the time and effort required to compare offers and change supplier acts as a barrier, even when cheaper offers exist. Lowering these switching costs is

essential to making competition work in practice.

Fourth, in electricity markets, demand-side flexibility is increasingly important for grid stability and cost efficiency, helping manage peak demand and integrate variable renewables. However, explicit demand response is not universally available. Around 21% of the countries surveyed do not allow these programmes, and among those that do, roughly one-third restrict participation to industrial users, leaving smaller consumers, in particular households, largely excluded. Expanding household participation requires smart meter deployment to enable time-of-use and dynamic tariffs, alongside regulatory frameworks that permit dynamic pricing and aggregator participation. When these conditions are in place, households can shift consumption away from peak periods, reducing their energy bill, while limiting system costs and strengthening grid stability.

These findings point to an unfinished reform agenda. Legal liberalisation has advanced considerably, yet structural gaps still limit countries from enjoying the benefits of effective competition. Closing these gaps is becoming more urgent as energy systems shift toward higher shares of renewable and decentralised generation. Integrating variable supply requires greater flexibility through responsive demand and clear price signals. Competitive markets are key to delivering these adjustments efficiently. Completing the reform process is therefore not only about improving outcomes within the energy sector, but about supporting a more resilient energy system that underpins productivity and growth across the wider economy.

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For more information, please visit the OECD Product Market Regulation (PMR) webpage: <https://www.oecd.org/en/topics/product-market-regulation.html>

Defence spending: Economic gains or lasting fiscal challenges?

Category: Uncategorized

written by oecdecoscope | April 1, 2026



Rising defence spending may lift economic activity modestly in the short term, but it brings additional fiscal strain while effects on long-run growth are uncertain. Lasting economic benefits are more likely if governments improve procurement and pursue broader structural reforms alongside rearmament.

By Ben Congrave and Young-Hyun Shin, OECD Economics Department

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Many countries have begun to raise defence spending significantly. The goal is to bolster security, not boost GDP. Still, it is important that governments consider the economic consequences of larger defence budgets and how to most effectively implement them. A new OECD working paper finds that increased military expenditure should add modestly to economic activity in the near term, but will also add to fiscal pressures and leave countries' long-term growth challenges unresolved. Beyond the stabilising influence of improved security, lasting economic benefits from rearmament are far from guaranteed unless governments seize the moment to improve their procurement practices or pursue related structural reforms.

Relative to national income, defence spending is returning to levels last seen at the end of the Cold War in many OECD countries. Tilted towards weapons systems purchases, recent defence outlays aim to refill emptied stores of equipment and address gaps in capability exposed after years of underspending. In Europe, ammunition production has ramped up, while several countries are also restarting military service to build up reserve forces (among others, France and Germany) amid a degraded security environment.

Defence requirements will compete for resources with other national priorities, adding to fiscal pressure from greater outlays on pensions, health and long-term care, and climate measures. While governments have clearly explained the need for bigger defence budgets, less has been said on how to pay for them. Having borrowed to jump-start military build-ups after Russia's full-scale invasion of Ukraine in 2022, some countries have since raised taxes to prevent rapid debt accumulation. In this group are Estonia, Latvia and Poland, countries close to or already exceeding the 2035 target for core defence spending agreed among NATO allies in June 2025. Medium-term defence spending plans remain to be fully settled in other cases, including in higher-debt countries committed

to allocating 3.5% of GDP to their militaries by 2035 (for instance, Belgium, France, Italy, Portugal, Spain and the United Kingdom). Fiscal rules will accommodate borrowing for defence expenditure in the next few years, notably in the European Union. Yet tough budget choices must be made if governments are to meet their defence commitments while keeping public debt at manageable levels.

The economic consequences of larger defence budgets are uncertain and will differ across countries. Fiscal multipliers from defence spending – a measure of the cumulated GDP gains over a given horizon relative to changes in government spending – frequently fall within a range of around 0.6 to 1 (Ramey, 2019; Ilzetzki, 2025). Such estimates suggest output gains should be expected in the near term, albeit with some crowding out of private activity. But effects will depend on the state of the economy, industrial structure, the public finances and macroeconomic policy reactions to the shock. Initially, activity generated by deficit-financed military purchases should help move economies with spare capacity, and relatively low public debt, closer to potential. Growth benefits may, however, shrink over time as strains on resources push up prices and interest rates, and as governments consolidate their budgets.

Among countries producing military equipment, the direct economic benefits of defence spending may be concentrated in a small part of the economy. However, trade should help distribute gains within and across national borders. Arms imports will weaken the overall demand stimulus from government spending, particularly in economies lacking a substantial local defence industry, but should also help limit the immediate costs of rearmament. By the same token, measures to bolster domestic military production could safeguard output gains from government defence purchases, but potentially at greater cost to the budget and in terms of productivity.

In the long run, for military expenditure to have lasting

positive growth effects, it must expand the economy's productive capacity. Economies will benefit over time if defence spending enhances national security. Some types of defence spending can also have enduring beneficial effects on productivity – for instance, when military research leads to innovation in civilian industries. On the flip side, benefits may be reduced if defence firms draw labour and capital away from more productive uses, particularly if this raises the cost of inputs needed for private research and development. Fiscal corrections, essential in many countries if defence budgets stay large, could neutralise any growth boost from defence spending, or cause net income losses over the long run.

Effective procurement will be essential if defence ministries are to encourage innovation and strengthen the defence industrial base while containing the costs of capability upgrades. Many advanced economies are undertaking reforms to improve the speed and coordination of acquisitions, including by streamlining complex procedures (Germany, Canada), increasing the use of off-the-shelf systems and government-to-government agreements (Poland and the Baltic states), and moving away from unduly rigid contracting practices. Greater cross-border coordination, particularly in Europe, backed with harmonised standards, could enhance efficiency, unlock economies of scale and expand markets for highly productive firms while safeguarding interoperability. Combined with broader structural reforms to enhance competition and reduce barriers to market entry, such measures would increase the likelihood that higher defence spending delivers lasting gains in growth and living standards.

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Austria: Restoring the public finances in the face of ageing

Category: Uncategorized

written by oecdecoscope | April 1, 2026



Austria enjoys high living standards, strong institutions and a highly skilled workforce. But the economy was hit hard by the energy price shocks following Russia's war of aggression against Ukraine. After a strong rebound from the pandemic, activity slowed sharply in 2023–24, leading to a prolonged recession and a sizeable fiscal deficit that stood at 4.5% of GDP in 2025.

By Falilou Fall, OECD Economics Department

While Austria has historically taken a relatively prudent approach to the public finances and ran a small surplus in the years before the pandemic, the government debt ratio is now about 80% of GDP and on a rising trajectory. A sustained adjustment is now needed to put the public finances on a more prudent path to meet Austria's commitments under the revised EU governance framework.

Fiscal consolidation has begun and aims to bring the deficit below 3% of GDP by 2028 as part of 7-year steady fiscal adjustment to stabilise the debt ratio over the medium term. The measures adopted for 2025–26 mainly adjust existing programmes, but deeper reforms will be required in the coming years.

Ageing creates significant spending pressures (Figure 1). Austria's population is ageing rapidly, with fewer prime-age workers and more retirees. This trend risks slowing growth and putting additional strain on pensions, health care and long-term care systems. With rising defence needs and the impact of climate change on the public finances, a large fiscal adjustment will be required in the coming years.

Encouraging higher labour market participation among women and older workers will be essential. Expanding affordable childcare, promoting shared parental leave and reducing tax disincentives for second earners would help boost female employment. Tightening access to early retirement and better targeting subsidised part-time retirement schemes would also help extend working lives.

Pension spending is already among the highest in the OECD and is projected to rise further. Linking the retirement age to life expectancy and adjusting pension indexation rules would strengthen the system's long-term sustainability while protecting lower pensions.

Health and long-term care systems will face rising demand as

the population ages. Strengthening primary care, improving coordination across the health system and promoting the use of generic medicines could enhance efficiency. In long-term care, improving working conditions, broadening the workforce and better targeting support will be key to maintaining service quality and financial sustainability.

Public spending in Austria is high compared with many European peers, reflecting its social protection system (Figure 2). Improving the efficiency of public expenditure—particularly in social protection and areas such as public employment, subsidies and procurement—could help create fiscal space to address the spending pressures, alongside efforts to better manage the cost of ageing.

Better targeting of social benefits could improve efficiency and fairness. Social assistance already plays an important redistributive role, but family benefits are largely universal. Gradually phasing out transfers for higher-income households would make the system more progressive.

At the same time, the retirement of large cohorts of civil servants provides an opportunity to reorganise and digitalise public administration. More systematic spending reviews and reforms to the fiscal equalisation framework would further strengthen incentives for efficiency.

Tax reform would support fiscal sustainability and growth. Austria's tax system relies heavily on labour income while making relatively limited use of property and inheritance taxation. Shifting part of the tax burden away from labour—especially for low-income workers—towards more growth-friendly tax bases as VAT and property could improve both equity and efficiency.

Together, these reforms would help Austria restore fiscal

space, strengthen economic resilience and ensure that high living standards can be maintained as the country navigates the challenges of ageing, energy transition and slower potential growth.

Visit the **OECD's Austria Economic Snapshot** page for further information.

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The investor base for sovereign debt: Recent developments and potential implications

Category: Public finance, Uncategorized
written by oecdecoscope | April 1, 2026



Long-term sovereign bond yields have risen as fiscal pressures mount and central banks step back from bond markets. With private investors playing a larger role, borrowing costs may remain higher and markets may become more volatile, raising important questions for debt management and financial stability.

By Masatoshi Ando, Ben Conigrave, Álvaro Pina and Caroline Roulet, OECD

Long-term sovereign bond yields have risen in recent years and the spread between 30- and 10-year bond yields has widened (Figure 1, Panel A). This reflects investor concerns about the sustainability of public debt given persisting budget imbalances in many advanced economies and rising spending pressures from defence, ageing and climate change. At the same time, as discussed in the December 2025 OECD Economic Outlook, there have been marked changes in the mix of investors purchasing government bonds since the pandemic. These changes in the investor base likely contribute to the upward pressure on yields and may also be a source of future market volatility.

One key factor has been the shift from quantitative easing to quantitative tightening by the major central banks. The balance sheets of central banks expanded after the onset of the global financial crisis, and were boosted significantly further during the pandemic, primarily through sovereign debt purchases. More recently, with the shift to quantitative tightening in many jurisdictions, central banks have reduced their sovereign bond holdings either passively, by not reinvesting maturing securities, or by actively selling bonds. The share of total outstanding domestic sovereign debt held by the central bank is now largely back to pre-pandemic levels, including in the United States and the euro area (Figure 1, Panel B).

Figure 1. Long-term yields have risen and central bank bond holdings have shrunk

Note: Panel A shows weekly data, with the latest observation dated 20 February 2026. In panel B, ECB denotes the European

Central Bank, US Fed the US Federal Reserve, BOC the Bank of Canada, and RBA the Reserve Bank of Australia. Domestic sovereign bonds held by central banks at the end of each year are expressed as a share of total domestic sovereign bonds outstanding. Data for 2025 data refer to Q3.

Source: Australian Bureau of Statistics; Bank of Canada; European Central Bank; Federal Reserve; Reserve Bank of Australia; Statistics Canada; LSEG; and OECD calculations.

A counterpart to this is that the private sector has absorbed a rising share of new bond issuance, with the composition of investors becoming more dispersed and heterogenous (Figure 2). Over the year to 2025Q3 there were higher net purchases relative to GDP by banks and money market funds in all four economies displayed, and by other financial intermediaries such as investment funds and securities dealers in Australia, the euro area and the United States. In contrast, net purchases of sovereign bonds by traditional institutional investors, including pension funds and insurers, often declined relative to GDP.

The shift in the balance of sovereign bond purchases from central banks to price-sensitive private sector investors could affect the required rate of return on sovereign bonds (OECD, 2025; IMF, 2025). Yields might be more elevated to sustain demand for government debt in coming years, particularly in countries where fiscal trajectories may be viewed as unsustainable, pushing up the cost of government borrowing.

A related risk is that sovereign bond markets become more volatile. Some non-bank financial institutions have comparatively light regulatory frameworks, allowing them to operate with higher leverage. An example is hedge funds, which have been playing a growing role in the sovereign debt markets of many countries, including the US. High leverage could reduce their capacity to absorb new bond issuance at times of market stress due to a need for higher liquidity to meet

potential investor redemptions and to offset changes in the value of their existing collateral (ECB, 2023; Sengupta and Jacobs, 2025). Higher bond market volatility may itself raise liquidity needs due to margin calls or redemptions from leveraged investment funds, potentially forcing asset sales including sovereign bonds.

Reforms affecting pension funds and associated financial intermediaries, coupled with a more uncertain environment, will also reduce the demand for very long-term bonds. For example, UK regulatory adjustments for liability-driven investment (LDI) funds introduced after the 2022 gilt market dislocation (LDI funds allow pension funds to match the interest sensitivity of their assets and liabilities through the use of derivatives) – including tighter leverage limits, higher liquidity buffers, and more conservative collateral management practices – reduced their capacity to maintain large, leveraged positions in long-dated gilts (BIS, 2025). In Japan, higher yields and elevated policy uncertainty have made life insurers moderate their demand for very long-term sovereign bonds, at least temporarily (Reuters, 2025). The shift from defined benefit to defined contribution schemes in countries such as the Netherlands and the United Kingdom has also reduced the emphasis on duration matching of fixed liabilities for pension funds, diminishing their demand for long-term sovereign bonds (PIMCO, 2023).

For a given maturity distribution of debt issuance, such reforms potentially raise yields and volatility at the long end of the yield curve, though the increasing demand for safer assets such as government bonds from funded pension systems as the population ages will have the opposite impact. Some debt management offices have also shifted issuance toward shorter maturities to mitigate rising interest expenditures, although this may heighten refinancing risks and governments' sensitivity to fluctuations in short-term interest rates.

Figure 2. Net purchases of sovereign bonds by investor type in

selected advanced economies

Quarterly averages

Note: The figure shows net purchases of general government debt securities of all maturities, consolidated to eliminate intra-government transactions. Quarterly averages are presented for three periods: the latest quantitative easing (QE) episode, the subsequent period of quantitative tightening (QT), and the most recent four quarters with available data for all four jurisdictions (which often overlaps the QT period). QE and QT periods follow central bank announced implementation dates. When both QE and QT take place in the same quarter, none is retained unless one clearly outweighs the other. “Other financial intermediaries” include non-money market investment funds (among which hedge funds), securities dealers and non-bank money lenders. “Institutional investors” refers to insurance companies and pension funds. “Real sectors” encompass households, non-profit organisations, and non-financial corporations. Data are seasonally adjusted and expressed as a share of contemporaneous quarterly GDP. For the United States, net purchases by households are likely overstated, and those by foreign hedge funds (included in the rest of the world) concomitantly understated, since 2023 (Barth et al., 2025).

Source: Australian Bureau of Statistics; European Central Bank; Federal Reserve; Statistics Canada; OECD National Accounts Databases; and OECD calculations.

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Aprovechar el talento del Perú convirtiendo educación en movilidad social

Category: Uncategorized

written by oecdecoscope | April 1, 2026



La población joven del Perú tiene un gran potencial, pero una parte importante sigue sin aprovecharse. La movilidad intergeneracional ha mejorado en educación, pero sigue siendo débil en ingresos. Esta desconexión explica por qué una población joven y cada vez más educada no se ha traducido en un mayor crecimiento de la productividad ni en oportunidades económicas más amplias.

Por Paula Garda, Departamento de Economía de la OCDE

Leer la versión en inglés

A pesar del aumento del nivel educativo entre generaciones, los débiles resultados de aprendizaje y transiciones escuela-trabajo, la elevada informalidad y las persistentes brechas de género limitan la movilidad ascendente e impiden que el capital humano se utilice plenamente. Abordar estas limitaciones permitiría aumentar la productividad, ampliar el empleo formal y elevar el potencial de crecimiento de largo plazo del Perú.

El acceso a la educación ha mejorado, pero sus resultados siguen siendo débiles

El nivel de educación alcanzado ha mejorado sustancialmente entre generaciones. La movilidad educativa intergeneracional, que mide si los hijos alcanzan niveles educativos superiores a los de sus padres, aumentó un 56% entre las cohortes nacidas

en las décadas de 1940 y 1980 (Figura 1). Este avance es mayor que en la mayoría de los países pares de América Latina y refleja una expansión sostenida del acceso a la educación durante décadas.

Sin embargo, el progreso ha sido desigual. Solo el 59% de los jóvenes de 15 a 19 años está matriculado en el sistema educativo, lo que refleja elevadas tasas de abandono escolar, especialmente en las zonas rurales, donde largos desplazamientos, presiones económicas y una entrada temprana al mercado laboral alejan a muchos estudiantes de la escuela.

Los avances educativos no se han traducido en una movilidad de ingresos similar. La movilidad intergeneracional de ingresos, que mide si los hijos ganan más que sus padres en la adultez, aumentó solo un 15%, muy por debajo de la movilidad educativa. Esto muestra que una mayor educación no ha generado aumentos proporcionales de ingresos entre generaciones. El lugar donde crece un niño y si sus padres trabajan en la informalidad siguen influyendo fuertemente en sus perspectivas de ingresos en la adultez. Los residentes rurales, las mujeres y los hijos de trabajadores informales tienen una probabilidad significativamente menor de superar los ingresos de sus padres, lo que limita tanto la equidad como el crecimiento de largo plazo.

Cuando la escuela no conduce a mejores ingresos

Los resultados de aprendizaje siguen siendo débiles pese al mayor acceso a educación. Las puntuaciones del Perú en PISA están muy por debajo del promedio de la OCDE, situando al país cerca de la parte inferior entre las economías participantes. Los estudiantes de hogares más pobres obtienen resultados considerablemente peores que sus pares, lo que refleja brechas en la calidad docente, la infraestructura y el acceso a

servicios básicos, especialmente en las escuelas rurales.

Los bajos niveles de aprendizaje contribuyen a transiciones difíciles de la escuela al trabajo. Alrededor de uno de cada cinco jóvenes peruanos no estudia ni trabaja ni recibe formación. Las tasas de jóvenes que no estudian ni trabajan son más altas entre las mujeres, debido en parte a la maternidad temprana y al acceso limitado a servicios de cuidado infantil, lo que restringe la inserción laboral al inicio de la vida activa.

Incluso quienes trabajan suelen quedar atrapados en empleos informales. Más del 71% del total de los trabajadores y más del 85% de los jóvenes ocupados son informales (Figura 2). Los empleos informales ofrecen poca capacitación, bajos salarios y ausencia de protección social, lo que reduce los incentivos para acumular habilidades. Como resultado, la informalidad se transmite con frecuencia entre generaciones, atrapando a las familias en empleos de baja productividad y debilitando el crecimiento de la productividad.

Las brechas de género refuerzan estas dinámicas. Las mujeres han cerrado en gran medida las brechas educativas con respecto a los hombres, pero aún enfrentan una brecha de empleo de 17 puntos porcentuales y ganan en promedio un 19% menos. Las responsabilidades desiguales de cuidado y la limitada disponibilidad de servicios de cuidado infantil y de personas mayores empujan a muchas mujeres hacia empleos informales o a tiempo parcial, reduciendo los ingresos a lo largo de la vida y la oferta laboral.

Prioridades de política para impulsar la movilidad

intergeneracional

Desbloquear todo el potencial del Perú requiere actuar en varios frentes:

- **Mejorar la calidad de la educación y las bases tempranas.** Ampliar el acceso a la educación inicial para niños menores de tres años, especialmente en zonas rurales y vulnerables, mejoraría los resultados cognitivos y favorecería una mayor participación laboral femenina. Fortalecer la formación docente, aplicar criterios meritocráticos en la contratación y mejorar la infraestructura escolar rural es esencial para cerrar brechas de aprendizaje y reducir el abandono escolar.
- **Fortalecer la transición de la escuela al empleo formal.** La educación y formación técnica y profesional sigue siendo limitada. Solo el 2% de los jóvenes está matriculado en programas de educación profesional y técnica (EFTP), muy por debajo de los países de la OCDE. Ampliar la EFTP, mejorar su gobernanza y alinear los programas con las necesidades del mercado laboral facilitaría el acceso al empleo formal. La educación de segunda oportunidad, combinada con servicios de empleo y apoyo social focalizado, puede ayudar a reincorporar a los jóvenes que no estudian ni trabajan.
- **Crear empleo formal.** Mejorar las competencias ayudaría a reducir la informalidad, pero se necesita una agenda integral que combine reformas educativas, del mercado laboral y del entorno empresarial para que la formalidad sea la norma y no la excepción. Trasladar las contribuciones a la seguridad social desde un esquema basado en el tamaño de la empresa hacia un esquema progresivos basados en los ingresos laborales, más bajos para trabajadores de más bajos salarios, reduciría los incentivos para que las empresas permanezcan pequeñas o informales. Simplificar regulaciones laborales y

empresariales, fortalecer la fiscalización y mejorar la productividad de las pymes y su acceso al financiamiento favorecería la creación de empleos de mayor calidad.

Mejorar la movilidad intergeneracional impulsaría el crecimiento económico. Cuando los niños pueden desarrollar plenamente su potencial independientemente de su origen familiar, el país se beneficiaría de una fuerza laboral más numerosa y mejor calificada. Al mejorar la calidad de la educación, ampliar el empleo formal y reducir las brechas de género, el Perú puede convertir a su población joven en el motor de un crecimiento más fuerte y ampliamente compartido.

Para más información: Panorama económico de la OCDE para el Perú.

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Wired for power: The energy behind the AI revolution

Category: Digitalisation, Energy, Uncategorized
written by oecdecoscope | April 1, 2026



Artificial intelligence is fast becoming a defining driver of electricity demand in Europe. As AI deployment accelerates, the key

constraint is shifting from computing power to the capacity of electricity grids to absorb large, continuous and localised loads. This blog examines how updating and modernising grid planning, connection rules and energy regulation are emerging as important enablers of AI's future in the EU.

By Ruben Maximiano and Wouter Meester, OECD Economics Department.

AI's energy reality

Dieser Blog ist auch auf Deutsch verfügbar: Strom – die treibende Kraft der KI-Revolution

AI is often discussed as though it operates independently of physical systems. In practice, AI depends on vast amounts of electricity. Its future will be determined not only by advances in algorithms and computing power, but also by kilowatt-hours – by the ability of electricity systems to deliver power reliably and at scale.

Training and running frontier models requires continuous and increasingly large volumes of power. According to the IEA, a typical AI-focused data centre already consumes as much electricity as 100 000 households, whilst the largest new facilities could require 20 times more, placing them on par with the consumption of small countries (IEA, 2025).

As a result, an important binding constraint on AI deployment is no longer generation alone. It is increasingly the capacity of electricity systems to absorb, transport and manage large, continuous and geographically concentrated loads without conflicting with other usages. As the recent OECD *Diagnostic Tool for Reducing Regulatory Barriers to Solar, Wind and Pumped Hydro Storage in the EU* report shows, tackling these also involve better regulations.

The importance of energy to AI roll-out is visible in corporate energy sourcing strategies. Big Tech companies now account for the majority of Corporate Power Purchase Agreements (PPAs) in Europe (see figure 1). Yet the scale and speed of AI deployment are already outpacing what traditional PPAs can guarantee. Hyperscalers are turning to direct investment in generation, including solar, wind and nuclear, to secure long-term supply.

Taken together, these developments point to the conclusion that the next frontier of AI policy is not only about how much electricity is produced, but also about how grids are planned, reinforced and that to a significant extent depends on how grid investment and grid connection rules are regulated.

To address such barriers systematically in the EU, the OECD report *Diagnostic Tool for Reducing Regulatory Barriers to Solar, Wind and Pumped Hydro Storage in the EU*, identifies the regulatory bottlenecks that slow deployment of renewables in the EU and constrain grid availability, with clear parallels for policymakers seeking to adapt energy rules to enable AI deployment. As this blog is based on this work it refers mainly to EU practices and energy mix.

Global AI and local grids

While global electricity demand from AI remains moderate (expected to reach 3% globally by 2030 and 4.5% in the EU)(IEA 2025, Ember 2025), its impact is highly concentrated. Data centres cluster in locations offering robust fibre connectivity, favourable cooling conditions, low electricity prices, and fast, reliable grid access. This concentration amplifies pressure on local grids and exposes the limits of existing planning and connection frameworks.

Ireland illustrates these risks. In 2023, data centres accounted for around 21% of electricity consumption in 2023 up from 5% in 2015. Much of this has been concentrated around

Dublin, where data centres consume roughly half of electricity produced. The resulting strain on the network raised security-of-supply concerns and led to the Transmission System Operator stop accepting applications for new data centres in Dublin until 2028 (Ember, 2025, CRU, 2025). In response, the national regulator is introducing a number of regulatory changes, including requirements for new data centres to install dispatchable generation or storage facilities on site.

The countries with more abundant and affordable electricity and stronger grids have a comparative advantage for the location of data centres. For instance, the Nordic countries have become attractive AI destinations due to abundant energy, strong grids and low-carbon baseload (Ember 2025). More broadly, IEA analysis suggest that jurisdictions offering significantly faster grid-connection timelines could capture up to 20% more data-centre growth by 2030 (IEA, 2025).

How AI stresses electricity systems

These pressures materialise across three interconnected timescales. In the long term, large AI campuses require transmission and distribution networks with sufficient hosting capacity, yet grid expansion and permitting often take 5 to 10 years. This makes anticipatory planning and co-ordination between data-centre siting, grid investment and local generation essential. Just as important is grid optimisation: improving system efficiency through digitalisation and AI-based system management.

In the medium term, inefficient connection rules have become a binding constraint. Long queues, speculative applications and first-come, first-served rules delay viable projects and distort planning. In real time, AI workloads introduce rapid power swings – far faster than traditional industrial loads - challenging frequency stability and voltage control.

Addressing these pressures requires regulatory frameworks that

enable not only physical grid reinforcement, but also optimisation through digitalisation, flexibility procurement and stability services, and that allow system operators to invest in software and operational solutions alongside traditional capital assets.

The Diagnostic Tool shows that key elements of the regulatory system that contribute to address these pressures, would include:

- Anticipatory grid investment supported by clear cost-recovery rules.
- Criteria-based connection queues to prioritise ready and system-beneficial projects.
- Hosting-capacity maps to guide efficient siting.
- Flexible access arrangements, including non-firm and hybrid connections.
- Tariff and market design that value flexibility and stability services.

How countries are responding

Countries are increasingly adapting electricity regulation to manage the highly localised grid impacts of AI-driven demand. Governments are experimenting across different parts of the power system. In Europe, Italy is improving locational planning through detailed hosting-capacity maps; Portugal is reallocating unused capacity and simplifying storage licensing; the UK is reforming connection queues by prioritising projects that are “first ready, first connected”; the Netherlands is deploying congestion-management zones and prioritisation criteria; and Finland is integrating data centres into heat-recovery and clean-power strategies.

Despite this diversity, common policy lessons seem to emerge. Grid access can no longer be treated as a simple administrative queue and requires prioritisation based on

readiness. Locational transparency is critical to guide efficient investment. Flexibility and digital optimisation must complement traditional grid reinforcement. Finally, grid planning and permitting need to become anticipatory rather than reactive. Countries applying these principles are better positioned to accommodate AI-scale demand while preserving reliability and affordability.

Powering the age of intelligence

AI is reshaping electricity demand at a scale that is now central to economic strategy. Ensuring reliable, affordable and low-carbon supply is becoming a prerequisite for attracting and sustaining digital investment. In the age of AI, competitiveness, autonomy and resilience will increasingly be determined not only by data and algorithms, but by the rules that govern the compute infrastructure and their electricity systems.

The OECD–EU Diagnostic Tool offers governments a practical roadmap to modernise regulatory frameworks and align them with the needs of an electricity-intensive digital economy.

***We will be launching the Diagnostic Tool today, 29th January. You may register here.**

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Why Regulating Lobbying Matters for Competition: New Insights from the OECD PMR Indicators

Category: Product market regulation, Uncategorized
written by oecdecoscope | April 1, 2026



By Cristiana Vitale, OECD Economics Department.

Effective competition is central to vibrant economies. It keeps prices low for consumers, encourages firms to improve their products, foster an efficient use of resources, and helps innovative new firms enter markets. But market competition depends on well-designed regulation and critically, on the way policymakers interact with the stakeholders affected by those rules. A new OECD working paper highlights how stakeholder consultation is a key part of an effective regulatory framework, but inadequate transparency and accountability in interactions with interest groups risk tilting the playing field in favour of well-resourced incumbent firms.

A growing body of research shows that well-connected firms often use political influence to shape rules in ways that protect their market position by pushing for complex regulatory requirements that are disproportionately costly for smaller or newer competitors, or to obtain preferential access to contracts and loans. Political connections can help less productive firms survive while preventing more innovative ones from scaling up. The consequences are clear: markets become less contestable, innovation slows, and productivity growth suffers.

The latest update of the OECD Product Market Regulation (PMR) indicators, which track laws and regulations across 47 countries, shows that most governments require stakeholders to be consulted when new laws and regulations are drafted. This could improve policy design as stakeholder engagement helps policymakers to better understand the real-world effects of regulatory intervention. But the same data also reveal major gaps in how countries manage lobbying activities and ensure integrity standards, leaving policymaking vulnerable to undue influence (see Figure 1 below).

It is notable that more than one-half of the surveyed countries lack basic integrity safeguards for public officials involved in regulatory processes. One-third lack comprehensive conflict-of-interest rules, and over one-third do not require any cooling-off period if senior officials leave office for the private sector. Strikingly, the two countries in the survey that have none of these two integrity standards are OECD members.

Transparency in lobbying interactions is even more limited. Only two countries—Chile and Poland—meet all four key disclosure requirements assessed in the PMR data, including maintaining a public lobbyist registry and requiring policymakers to disclose both their meeting agendas and the identities of the interest groups they meet. Twelve countries have none of these obligations.

Even when lobbying registries exist, they often cover only some types of interest groups or are voluntary. Public officials' disclosure obligations are also rare: just 28% of countries require officials to reveal which interest groups they meet, and only 23% require meeting agendas to be published online.

As governments increasingly use industrial policies to promote innovation, encourage decarbonisation, and support strategic sectors, strong safeguards against undue influence are becoming more important. Lobbying is not inherently negative; policymakers benefit from engaging with stakeholders who understand the real-world effects of regulations. However, unregulated lobbying can redirect subsidies and support toward well-connected incumbents rather than potential innovators. This undermines the effectiveness of public spending and entrenches market power instead of encouraging technological dynamism and reducing barriers to the entry and growth of new companies.

With evidence of rising market concentration across advanced economies, the risk that lobbying will impede competition is likely to grow. The new PMR data reveal a clear message: while most countries value stakeholder engagement, many do too little to ensure transparency and integrity in lobbying practices. Strengthening rules on conflicts of interest, expanding disclosures by both lobbyists and public officials, and ensuring open registers of interest groups would help restore trust and support competitive markets.

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Estancados a los 52? Repensar el subsidio de desempleo para las personas mayores en España

Category: Uncategorized

written by oecdecoscope | April 1, 2026



*Por Aida Caldera, Claudia Ramírez y Dimitris Mavridis,
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Versión en inglés

El mercado laboral español se ha recuperado con fuerza en los últimos años y creó 3,5 millones de empleos entre 2018 y 2025, pero muchos trabajadores mayores siguen desempleados. Aunque el empleo entre las personas mayores aumentó del 41% en 2004 al 61% en 2024, alrededor de la mitad de los desempleados de larga duración son trabajadores de 50 años o más. Alrededor de medio millón de solicitantes de empleo de 52 años o más llevan años sin trabajar –muchos desde la crisis de la vivienda– y afrontan grandes obstáculos para reinserirse en el mercado laboral.

Ayudar a estas personas a reinserirse en un empleo que aproveche sus capacidades no es solo una necesidad social o económica; es también una oportunidad. A medida que aumenta la esperanza de vida y más personas llegan a edades avanzadas en buen estado de salud, España puede hacer más para apoyar a los trabajadores mayores a mantenerse activos. Pero para lograrlo es necesario repensar reglas de prestaciones que han quedado desfasadas y reforzar los sistemas de apoyo. Con una población que envejece y una natalidad baja, alargar las carreras laborales de trabajadores sanos y con experiencia es crucial para fortalecer el crecimiento y las finanzas públicas hoy, y para proteger las pensiones en el futuro.

¿Qué está pasando?

Una de las razones detrás del alto desempleo de larga duración

entre los trabajadores mayores de 52 años en España es el diseño del subsidio por desempleo. El sistema de prestaciones por desempleo en España se apoya en dos pilares. El primer pilar es la prestación contributiva, que sustituye una parte de los ingresos previos durante un máximo de 24 meses, siempre que el trabajador haya acumulado suficientes cotizaciones. Cuando se agota la prestación contributiva, o si no se cumplen los requisitos, entra en juego el subsidio por desempleo, que ofrece una cuantía fija.

El subsidio por desempleo tiene características específicas para las personas de 52 años o más. La ayuda puede mantenerse hasta la jubilación, y la elegibilidad se basa en la renta individual y no en la del hogar. Más importante aún, el Servicio Público de Empleo Estatal (SEPE) cotiza a la Seguridad Social por cuenta del beneficiario como si estuviera trabajando a jornada completa. Para quienes tienen 52 años o más, el tiempo en subsidio genera derechos de jubilación de forma similar al empleo, con cotizaciones registradas al 125% de la base mínima de cotización. Así, hoy alrededor del 70% de quienes reciben un subsidio por desempleo de larga duración tienen 50 años o más (Figura 1).

Aunque este apoyo protege a quienes realmente lo necesitan, su diseño puede, de forma no intencionada, debilitar los incentivos a volver al trabajo, incluso para quienes desearían hacerlo. Para muchos beneficiarios mayores, aceptar un empleo a un salario bajo implica perder tanto el subsidio como las cotizaciones a la pensión que se acreditan durante el desempleo, de modo que la ganancia neta de trabajar puede ser muy reducida. La evidencia reciente muestra que el desempleo de larga duración aumenta bruscamente a los 52 años, el punto en el que se accede al subsidio especial. Mientras que a los 50 años menos del 5% de los beneficiarios lleva más de un año en desempleo, a los 52 esa cifra supera el 40% (AIReF, 2024).

Una reforma reciente reconfiguró el subsidio por desempleo

Una reforma importante que reconfigura el subsidio asistencial por desempleo comenzó a aplicarse en 2025. Amplió la elegibilidad a personas previamente excluidas, extendió la duración de la ayuda para algunos beneficiarios, aumentó las cuantías de base, e introdujo una reducción gradual con el tiempo para incentivar a retomar un empleo. También se introdujo un nuevo complemento al empleo que permite conservar una parte decreciente del subsidio durante hasta 180 días cuando se vuelve a trabajar. Sin embargo, no modificó el régimen especial del subsidio para demandantes de empleo de 52 años o más, donde persisten los mayores desincentivos a la reincorporación laboral.

Prioridades de reforma

Para facilitar carreras laborales más largas y reducir el desempleo de larga duración entre los trabajadores mayores, España podría reformar la asistencia no contributiva para las personas mayores de 52 años. Es clave igualar el apoyo entre edades, con un enfoque y una activación más precisos. En concreto, España podría reformar el subsidio por desempleo mediante:

- armonizar las reglas para que la ayuda no se vuelva indefinida a partir de una edad concreta;
- limitar la generación de derechos de pensión únicamente a la fase del seguro contributivo, evitando la acumulación de pensión durante la asistencia;
- introducir una prueba de recursos por hogar para orientar los recursos hacia los más necesitados en vez de los mayores de edad;
- reducir gradualmente el nivel de la prestación, con el tiempo y/o en función de los ingresos laborales, para evitar incentivos de “todo o nada”;
- establecer límites razonables de duración; y

- aplicar de forma sistemática requisitos de búsqueda activa de empleo y medidas de activación.

Al mismo tiempo, la reforma podría acompañarse de una mayor inversión en mejora de competencias. Los vouchers de formación cofinanciados por las empresas, especialmente en sectores con escasez de mano de obra o inmersos en transiciones digitales, podrían ayudar a los trabajadores mayores a reincorporarse y prosperar en el mercado laboral. Ampliar los acuerdos de flexibilidad del tiempo de trabajo y mejorar la concienciación entre los empleadores sobre el valor de los trabajadores con experiencia también favorecería la vuelta al empleo.

El mercado laboral español está mejorando, y muchas reformas recientes aún no han mostrado todo su impacto. Con la combinación adecuada de incentivos, oportunidades de recualificación y opciones de trabajo flexible, España puede aprovechar el potencial de los trabajadores con experiencia, impulsar la inclusión y afrontar sus retos demográficos y fiscales.

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Stuck at 52? Rethinking unemployment assistance for older jobseekers in Spain

Category: Uncategorized

written by oecdecoscope | April 1, 2026



By Aida Caldera, Claudia Ramírez and Dimitris Mavridis, OECD Economics Department

Spanish Version

Spain's labour market has undergone a strong recovery in recent years adding 3,5 million jobs over 2018-2025, but many older workers are still left behind. While employment among older workers has risen overall, from 41% in 2024 to 61% in 2024, close to half of the long-term unemployed are aged 50 or older. Nearly half a million jobseekers aged 52 and over have been out of work for years, many since the housing crisis, and face major barriers to re-employment.

Helping these older workers return to meaningful work is not just a social or economic need, it's an opportunity. As life expectancy rises and more people reach older age in good health, Spain can do more to support those older workers to stay active. But doing so means rethinking outdated benefit rules and expanding support systems. With an ageing population and low birth rates, extending the careers of healthy, experienced workers is crucial to strengthen growth and public finances today, and to safeguard pensions for the future.

What is going on?

One reason behind the problem of long-term unemployment among older workers in Spain is how unemployment assistance is designed for workers aged 52 and over. Spain's unemployment benefit system has two pillars. First, unemployment insurance (UI) replaces a portion of previous earnings for up to 24 months, provided workers have accumulated enough contributions. When the unemployment insurance runs out, or if workers don't qualify, unemployment assistance (UA) steps in, offering a flat-rate payment.

The unemployment assistance has special features for workers aged 52 and over. The financial support can continue until retirement, and eligibility is based on the individual's income rather than the household's. More importantly, the Public Employment Service (SEPE) pays pension contributions on the beneficiary's behalf as if they were working full time. For those aged 52 and over, time spent receiving unemployment assistance builds pension rights just like actual employment, with contributions recorded at 125% of the minimum contribution base. Today around 70% of those that receive a subsidy for long-term unemployment are aged 50 or older (Figure 1).

While this support helps people who really need it, its design may unintentionally reduce incentives to work, even for those who might want to. For many older recipients, accepting a low-paid job means losing both the benefit and the pension contributions credited while unemployed, which means that the net gain from working can be minimal. Recent evidence shows that long-term unemployment increases sharply at age 52, the point when people become eligible for the special subsidy. While fewer than 5% of assistant recipients are unemployed for over a year at age 50, that figure rises to more than 40% by age 52 (AIREF, 2024).

A recent reform reshaped unemployment assistance

A major reform reshaping unemployment assistance started to be implemented in 2025. It broadened eligibility to groups previously excluded, extended benefits for some recipients, raised payments while gradually reducing them over time to keep incentives strong, and introduced a new employment supplement that allows people to keep part of their subsidy for up to 180 days when they return to work. However, it did not change the special unemployment assistance scheme for jobseekers aged 52 and over, where the strongest work disincentives remain.

Policy priorities

To support longer working lives and reduce long term unemployment among older workers, Spain could reform the non-contributory assistance for workers aged 52 and over. It is key to equalize support across ages, with stronger targeting and clearer activation. Concretely, Spain could reform non-contributory unemployment assistance by:

- aligning rules so support does not become indefinite at a specific age;
- restricting pension accrual to the unemployment insurance phase only, avoiding pension build-up during assistance;
- introducing household means-testing to target resources to those most in need rather than age;
- tapering benefit levels gradually, over time and/or with earnings, to reduce “all-or-nothing” incentives;
- setting reasonable duration limits; and
- enforcing active job search and activation requirements consistently.

At the same time, the reform should go hand in hand with greater investment in upskilling. Training vouchers co-

financed by employers, especially in sectors facing labour shortages or undergoing digital transitions, could help older workers re-enter and thrive in the workforce. Expanding flexible working-time arrangements and improving awareness among employers of the value of experienced workers would support reemployment.

Spain's labour market is improving, and many recent reforms have yet to show their full impact. With the right mix of incentives, re-training opportunities and flexible work options, Spain can unlock the potential of experienced workers, support inclusion and address its demographic and fiscal challenges.

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How the Lucky Country Can Stay That Way: Improving Productivity Growth, Housing Affordability and Fiscal

Sustainability in Australia

Category: Uncategorized

written by oecdecoscope | April 1, 2026



Australia's "Lucky Country" status depends on lifting productivity, improving housing affordability, and strengthening fiscal sustainability; this blog draws on the OECD Economic Survey 2026 to highlight key reforms in competition, housing supply, tax mix and resilience.