



Polish
Economic
Institute

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**Four decades of success.
Polish road to prosperity**

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Introduction

Four decades of economic change have transformed Poland from a poor Eastern Bloc state into a prosperous, modern country.

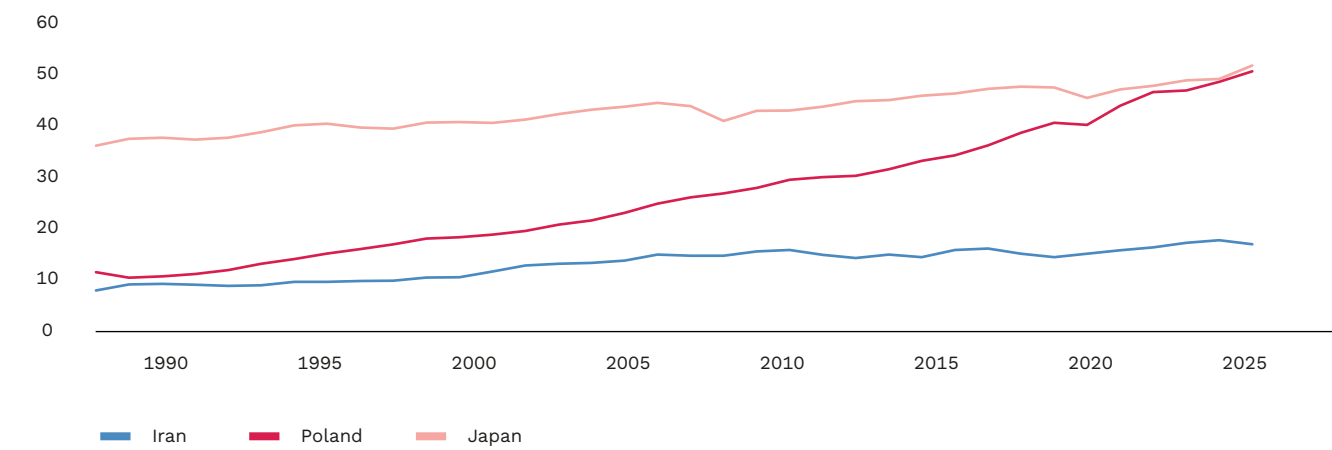
The driving force behind this transformation was economic growth, which enabled a leap in the country's level of development. Convergence towards Western European levels of development has proceeded almost uninterrupted and continues on many fronts. The institutional reforms launched after 1989 firmly anchored Poland in the Western political, economic and security order, as well as in the structures of transatlantic cooperation. They also enabled a far-reaching economic modernization that brought about a historic rise in living standards and prosperity.

A similar transformation took place across Central and Eastern Europe. The opposition's victory in the June 1989 elections opened the way to systemic change and the restoration of full sovereignty. Half a year later came the Velvet Revolution in Prague and the fall of the Berlin Wall, and Romanians overthrew the Ceaușescu dictatorship. The collapse of the USSR in 1991 sealed the end of communism.

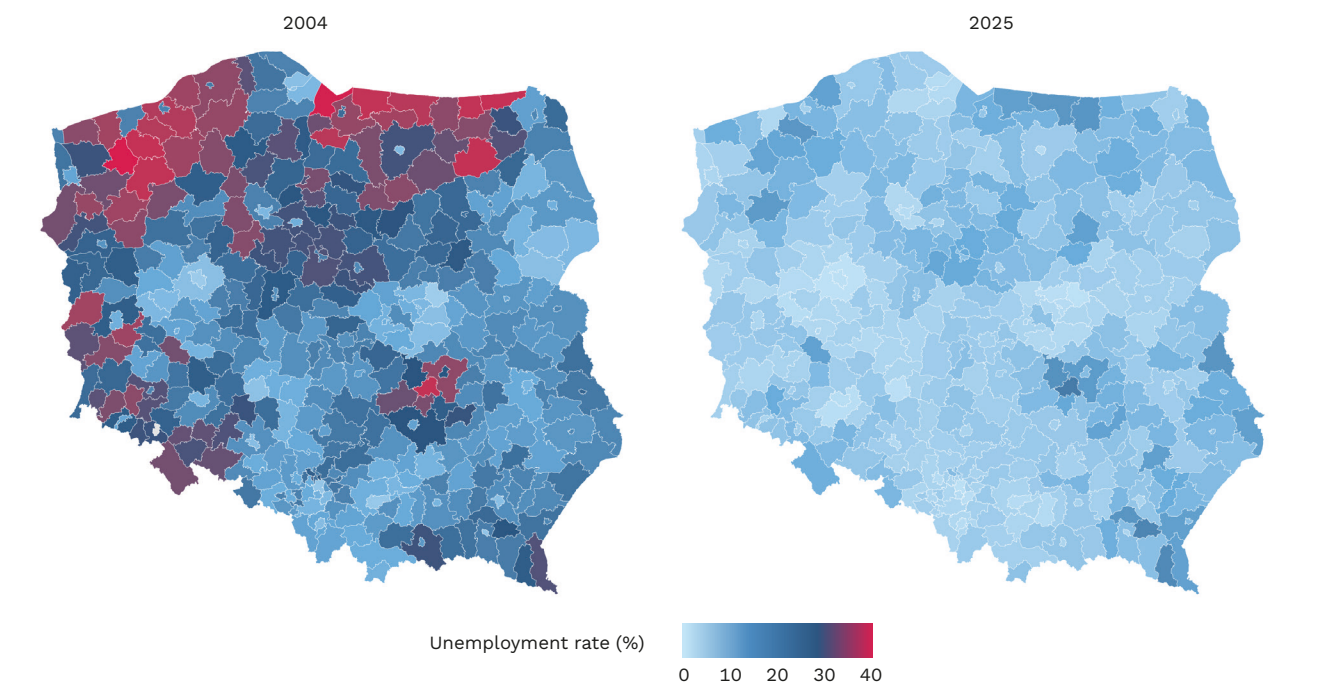
These events marked not only the return of freedom but also the beginning of prosperity. Through a difficult and costly transition, Central and Eastern Europe joined the group of developed countries for the first time and began rapidly closing its development gaps. The key decision of that period was a radical economic opening to the West. Many fast-growing economies in history have integrated into the global economy, but they did so in different ways, often through a one-sided opening focused on exports and the absorption of technology transfers. Poland stands out for its rapid two-way liberalization of trade, capital flows and access to the services market.

Poland stands out even among its regional peers. It has gone from being the poorest economy in the region in 1990 to one of the most prosperous today. Cumulative GDP per capita growth between 1990 and 2025 reached 266%, bringing about a radical improvement in living standards. Poland is also the largest economy in the region, accounting for two-fifths of the GDP of the EU's CEE member states. Given the size of its economy, Poland is a particularly useful case for analyzing the region's success. Most CEE countries are small economies with strong sectoral or geographic dependencies that cannot be replicated by rest of the world. Poland, by contrast, offers a comprehensive view of the region's transformation through the lens of a single country.

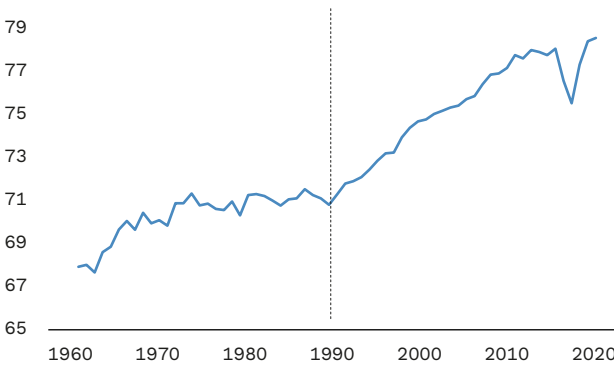
Poland: From Iran to the New Japan (thousand USD 2021 PPP, GDP per capita)



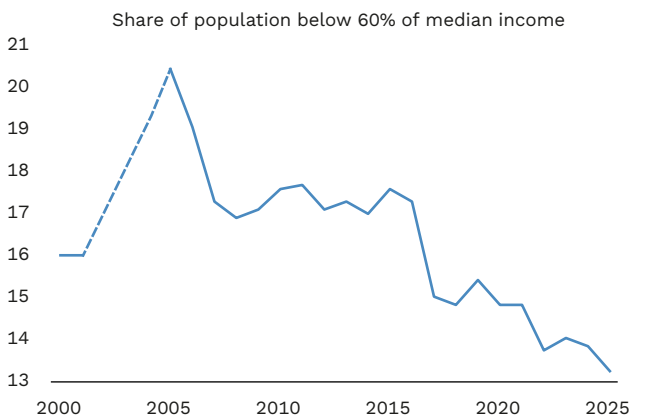
Nationwide decline in unemployment



Surge in life expectancy (at birth)



Steady drop in poverty risk



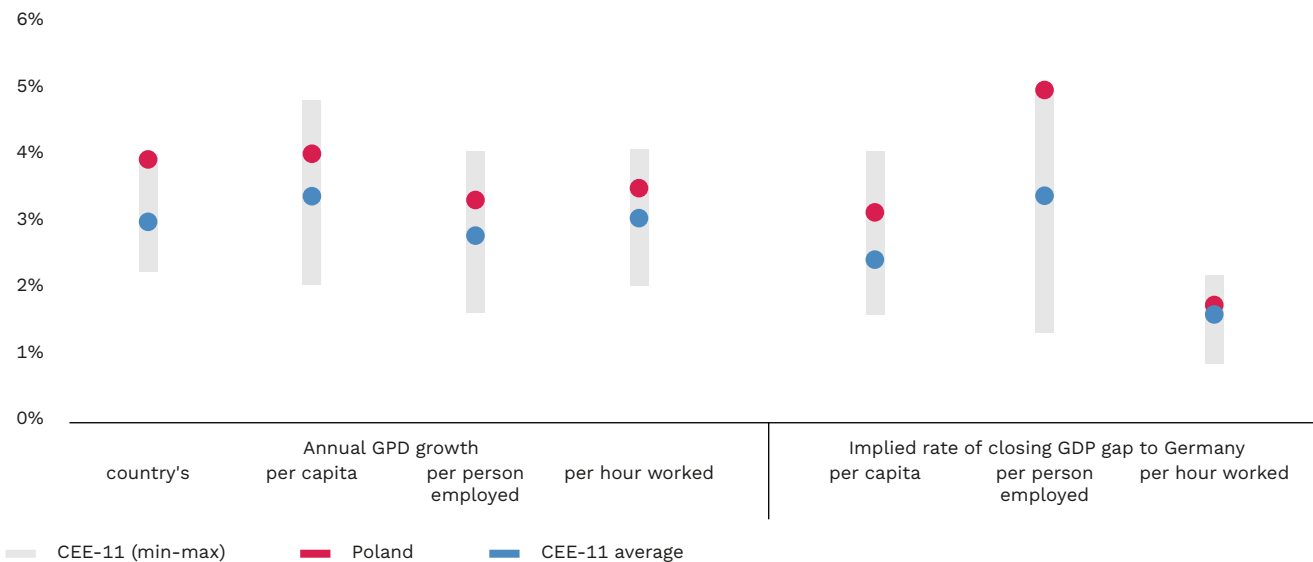
Key figures & findings

- **Since 1990, Poland has achieved one of the fastest rates of GDP per capita growth in the world.** Cumulative growth of 266% has lifted it from the poorest economy in CEE to one of the region's more prosperous ones.
- **People have been the main driver of this growth. Employment has reached a record high and now exceeds the EU average:** among 20–64-year-olds, the rate rose from 65% in 1998 to 79% in 2025. Among 55–64-year-olds, employment has risen by two-thirds for men and doubled for women.
- **Polish workers are also highly skilled.** Poland scores above average on every key measure of human capital. In 1998, just 9% of Poles aged 15–74 held a university degree; today, 32% do.
- **Poland is the R&D hub of Central and Eastern Europe,** accounting for 42 cents of every euro spent on research in the region.
- **Technological upgrading is visible in both manufacturing and exports.** Two of the three main engines of Polish industry are technologically advanced sectors: electrical equipment, and computers, electronics and optical products. **High-tech goods now make up 11.2% of goods exports, up from just 2.3% in 2002.**
- **Poland's economic model is free of excessive state intervention.** On the OECD's PMR index, which measures market distortions and barriers to growth, Poland outperforms more than 76% of OECD countries.

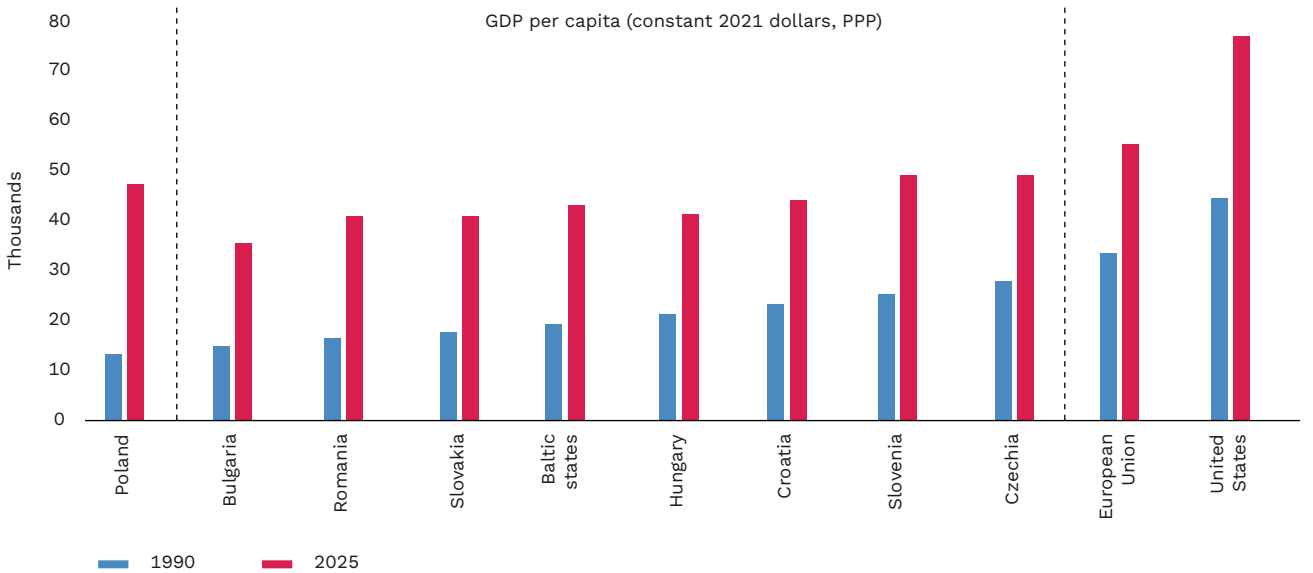
Convergence: dynamic growth in real GDP

- Central and Eastern Europe is a modern example of a successful economic transformation on a large scale.
- Poland leads the region, both as its largest economy and as one of its fastest growing.
- The Polish economy is now more than 250% larger than in 1990. GDP per capita has grown by 266%, from 12,800 to 46,900 international dollars (constant 2021 prices, PPP).
- In 1990, Poland was the poorest country in CEE; today, its GDP per capita is above the regional average. This reflects a larger labour force, but above all, higher productivity.
- In the 1990s, Poland's GDP stood at 20–40% of the level of wealthy economies; today, it is at 75–100%. In PPP terms, Polish GDP per capita has practically caught up with Japan, is closing in on the EU average and South Korea. Additionally, in 2019, we overtook Russia.
- The average Pole is now better off than around 85% of the world's population. This clear upward trend in relative prosperity began only with the economic transition. Since then, Poland has overtaken one in nine countries in terms of wealth, and the average Pole has overtaken one in thirteen people worldwide.

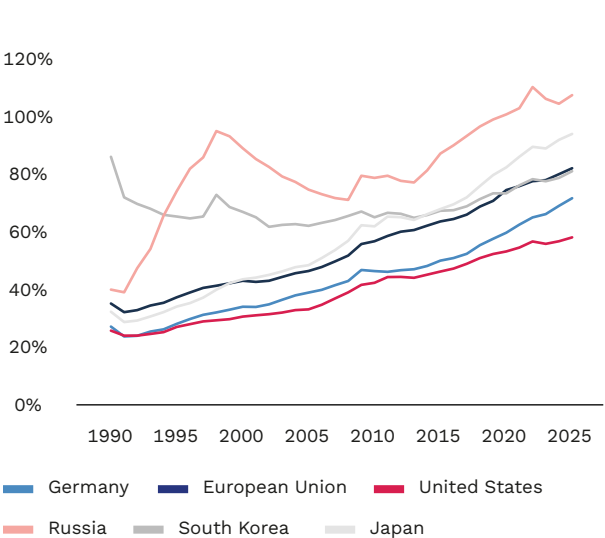
Entire region converges: Poland outpaces CEE average



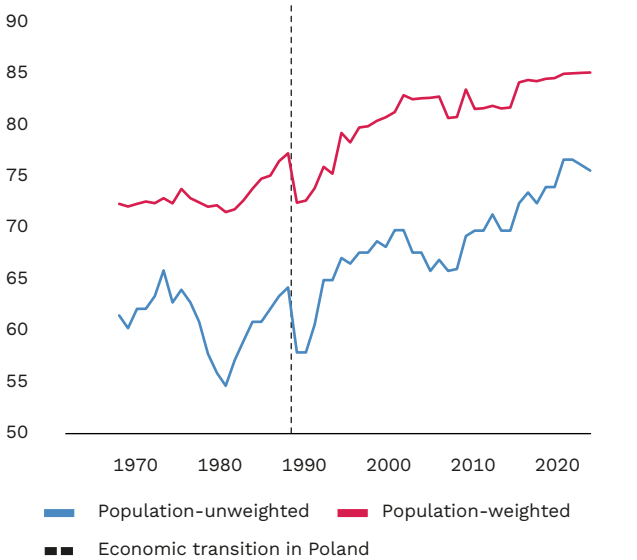
From the poorest CEE economy in 1990 to above the regional average today



Poland's GDP per capita catching up with most advanced economies (Poland as % of selected countries below)



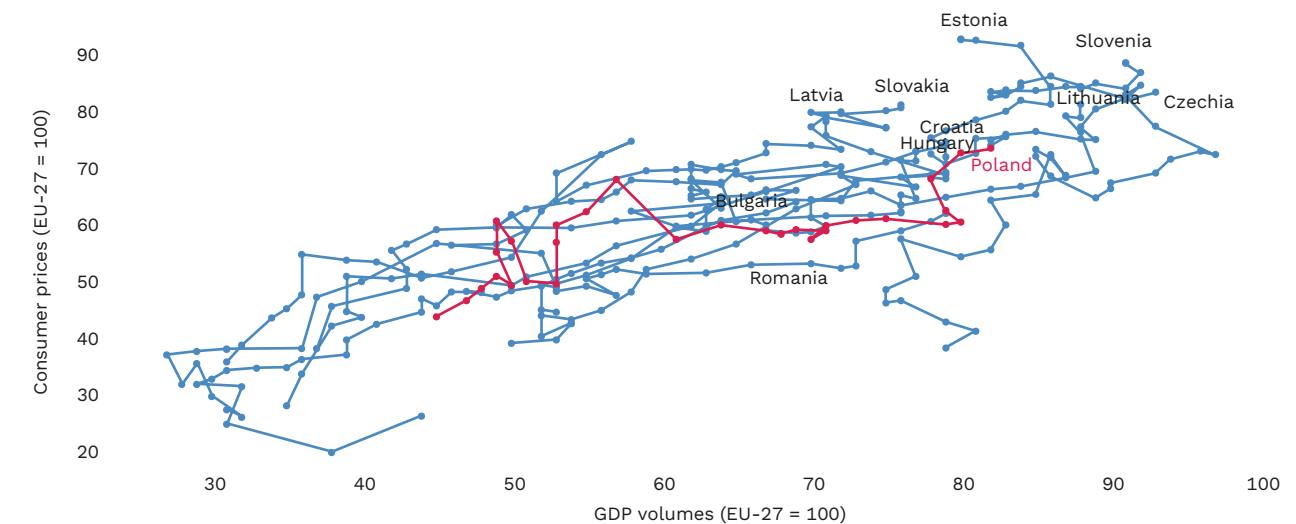
Today, Poland's per capita income surpasses 85% of the global population (% of countries with lower GDP per capita than Poland)



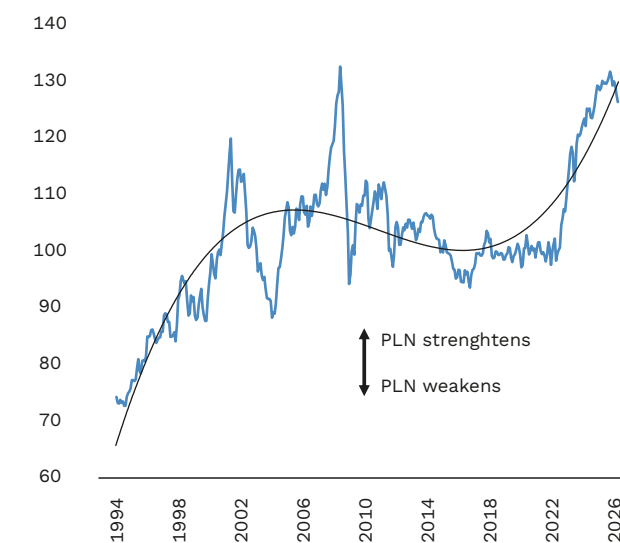
Prices & currencies: alignment along with GDP

- **Real convergence has been accompanied by nominal convergence, meaning wages and prices are gradually catching up.** Poland's real GDP per capita has reached 81% of the EU average, while its prices remain 27% below it.
- **The same has happened across CEE, whether or not countries adopted the euro.** Prices are highest in Estonia (91.8% of the EU average), Slovenia (87.7%) and Czechia (82.7%), and lowest in Hungary (72.5%), Bulgaria (62.7%) and Romania (61.7%).
- **Poland was unusual in that nominal convergence stalled between 2008 and 2021.** This kept labour costs low for foreign investors even as domestic living standards rose, which may have boosted real GDP growth. Now, the stronger zloty is significantly increasing Poles' purchasing power abroad.
- **Nominal convergence mainly affects service prices,** since services are the most labor-intensive and depend on local productivity and wages. **Investment prices also remain very cheap in Poland (81.5% of the EU average, the fourth-lowest in the EU),** which probably explains why a low investment rate has not held back growth.
- In 1990, Poland's GDP gap with Germany was mostly a matter of volumes in real output; today, a growing share of it comes down to exchange rates.

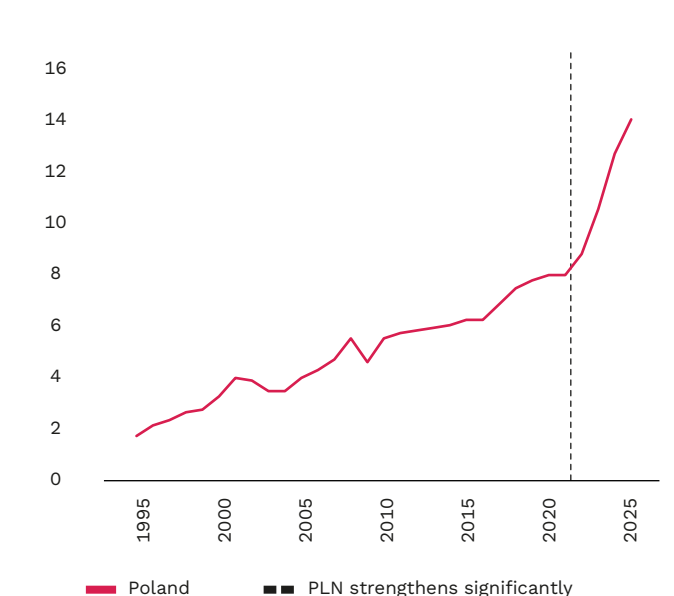
GDP growth is accompanied by a narrowing gap in price levels and exchange rates



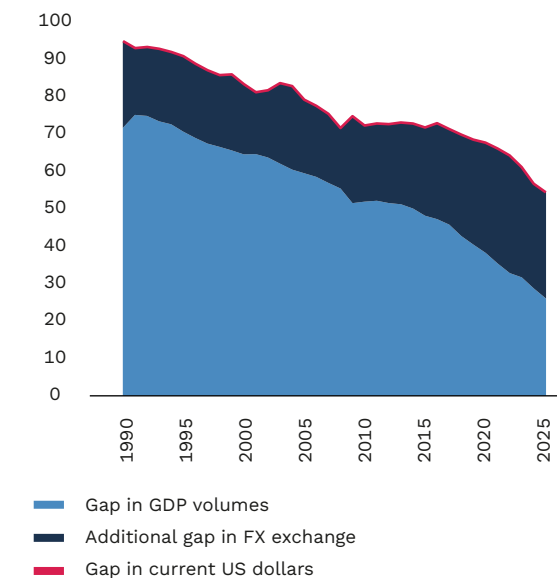
Poland experienced an unprecedented strengthening of the Polish zloty (2020 = 100)



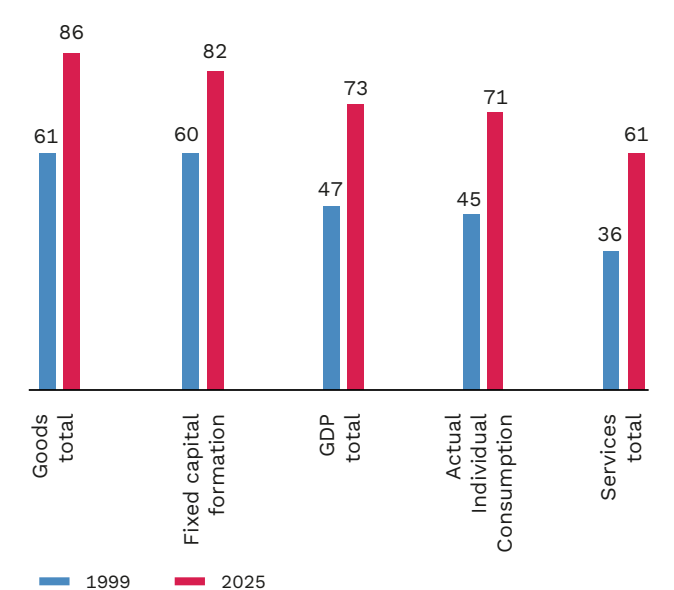
The appreciation of the zloty boosted the international purchasing power of Poles (hourly wages in EUR)



The GDP gap between Poland and Germany is increasingly an exchange rate phenomenon (in %)



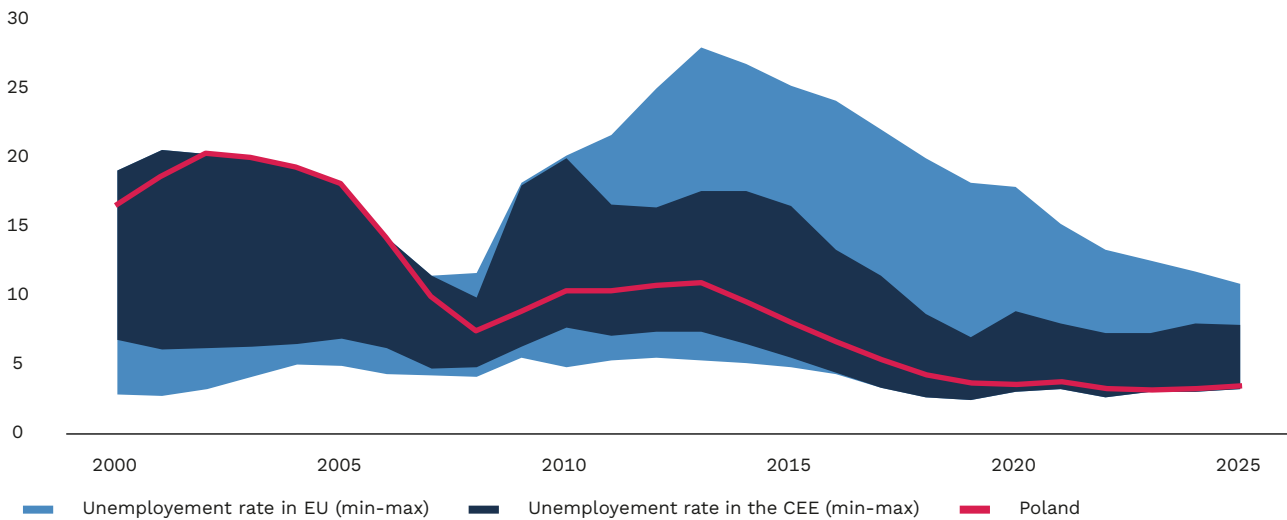
Price convergence mainly concerns services, and therefore wages (EU-27 = 100)



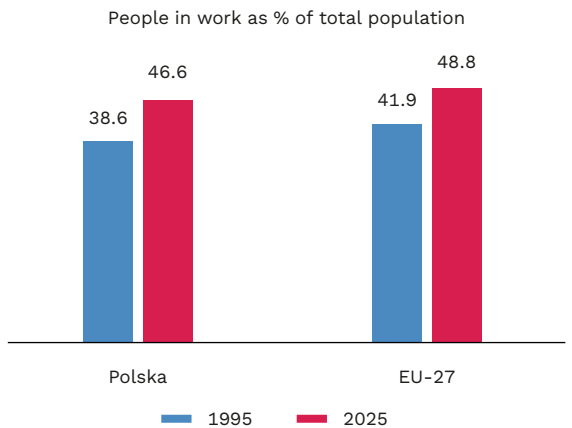
Labour market: a region of high economic activity

- The labour market's shift from the highest to the lowest unemployment rate in the EU is one of the biggest changes in the Polish economy.** A similar, if slightly smaller, shift took place across CEE.
- High unemployment was a product of the shock of transition, caused both by direct job losses and by cultural changes in attitudes towards work.
- Today, Poland's employment rate is at a record high.** Among 20–64-year-olds, it rose from 65% in 1998 to 79% in 2025. Currently, 91% of men and 83% of women aged 25–54 are in work. Among 55–64-year-olds, employment has risen by two-thirds for men and doubled for women.
- The Polish model is defined by relatively short but intensive working lives.** Poles enter the labour market fairly late and retire early. As a result, the share of the total population in work remains below the EU average, despite above-average employment among 20–64-year-olds and a younger population than the EU as a whole.
- Further gains in labour productivity remain an important source of Poland's growth potential.** Rising employment and only a modest decline in hours worked explain part of Poland's success. In 2025, Poland's GDP per capita in PPP terms was 73% of Germany's, while GDP per hour worked was just 58% of the German level. Without the PPP adjustment, the gap is even wider.

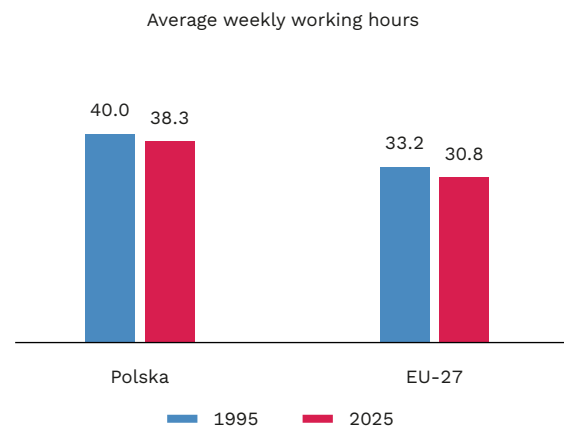
Poland and CEE: from highest to lowest unemployment rate in the EU (%)



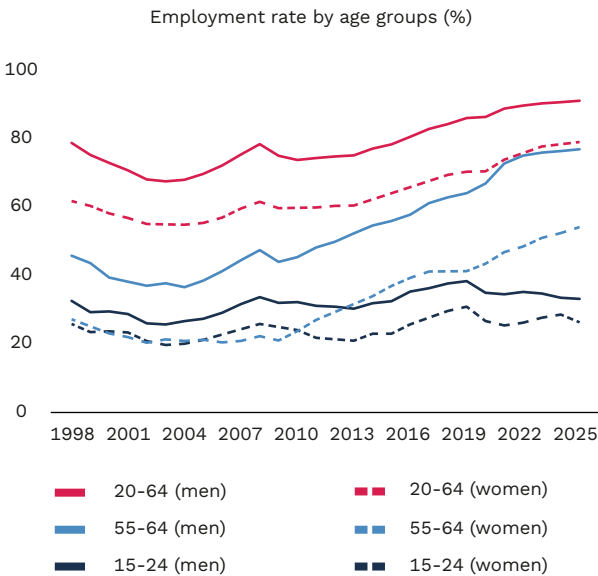
Employment rate has grown significantly, but remains below the European average



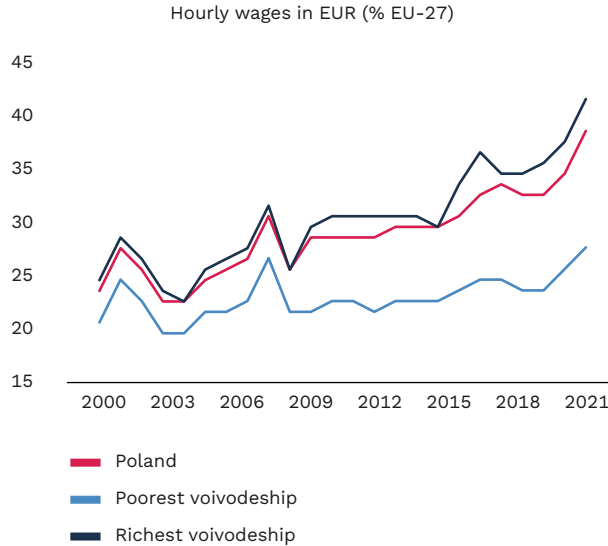
Poles are working fewer hours than they used to, but much more intensively than the European average



Employment increased across all age groups and both genders (except students)



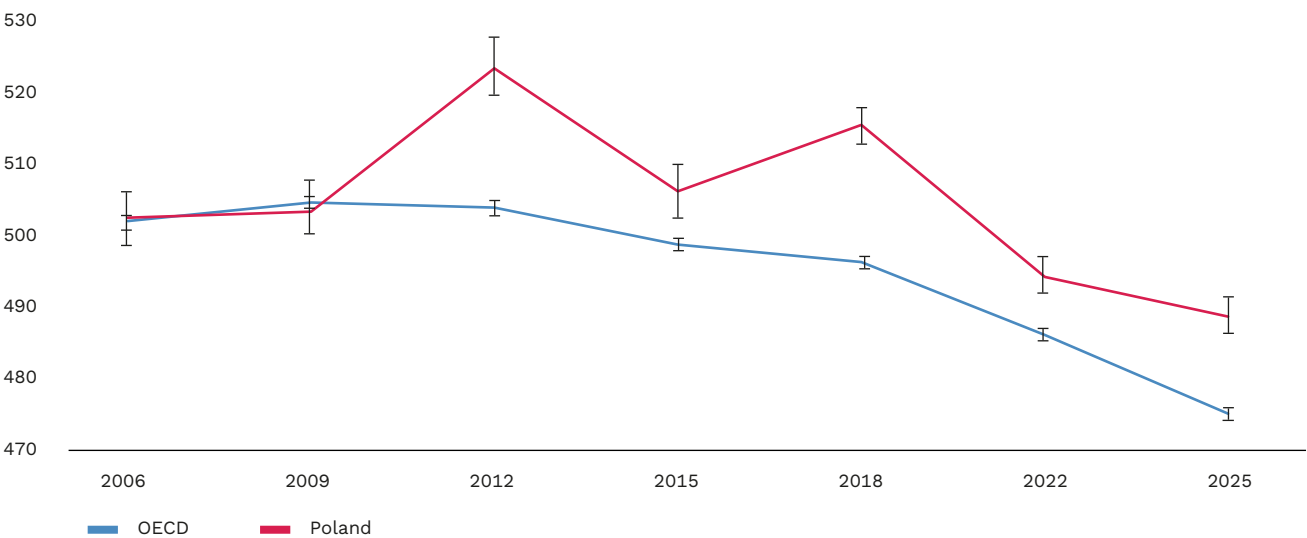
As recently as 2000, hourly wages were just 25% of the EU average. Today they are higher, but the gap remains substantial (a voivodeship is the largest administrative region in Poland)



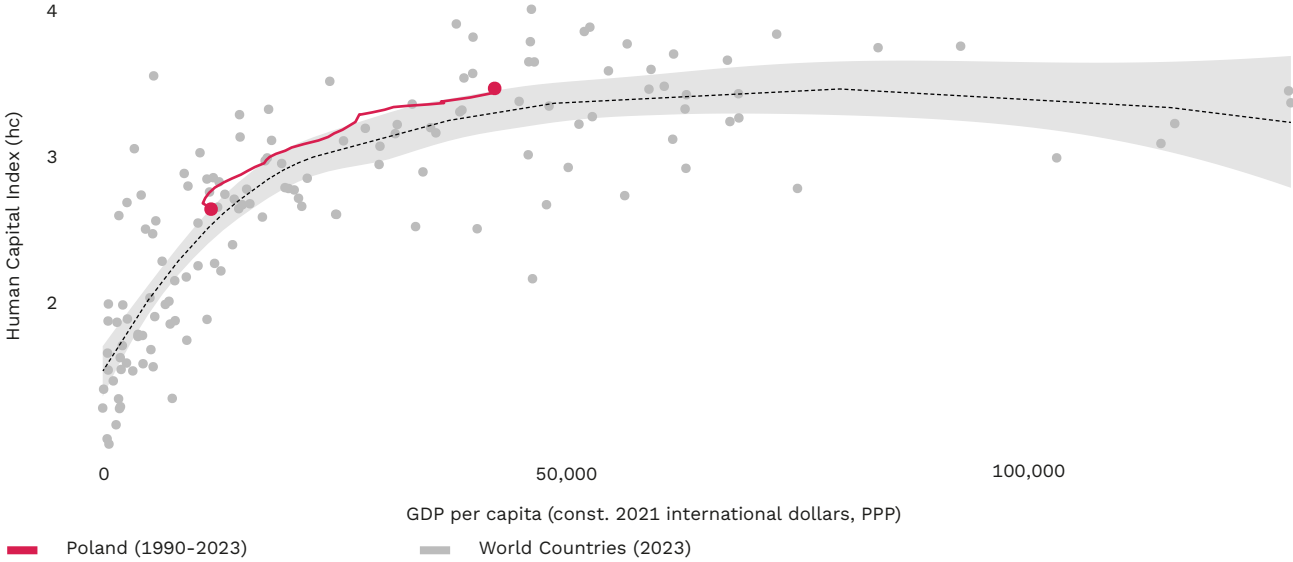
Education: the key role of human capital

- **Poland and the wider region have high levels of human capital.** Talented students and a well-educated society made the region attractive to foreign investors, who in turn filled the capital gap and brought technology transfers.
- **Poland performs above average on every key measure of human capital.** It ranks 23rd in the world and 11th in the EU in the Penn World Table index, and level with Western Europe in the World Bank index. In PISA tests, Polish students consistently score above the OECD average.
- **Higher education has become widespread across all age groups analysed.** In 1998, just 9% of Poles aged 15–74 held a university degree; today, 32% do. Among younger groups, the share is even higher: 45% of 25–34-year-olds and 51% of 35–44-year-olds.
- **In most age and gender groups, Poles are better educated than the European average.** This is especially true of women aged 35–44: over 60% hold a university degree, more than 12 percentage points above the EU average.
- **Polish universities are relatively small and** rarely function as modern research institutions. However, their size and geographic spread make it easier for them to fulfil their educational role, with roughly 18,000 people of student age per university.

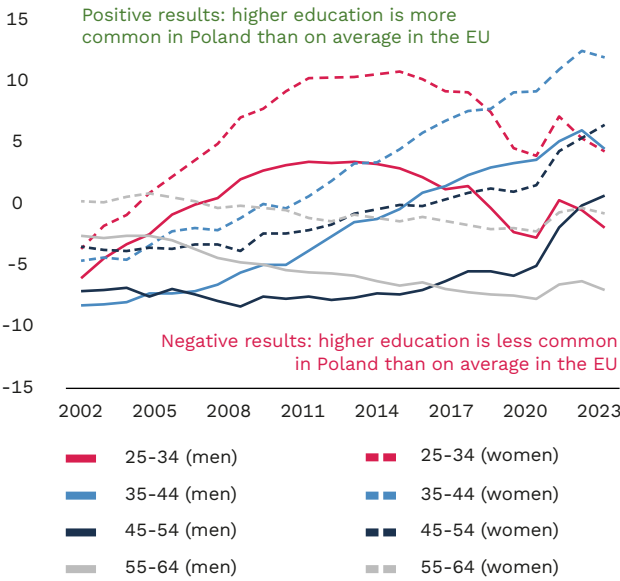
Poland consistently achieves PISA scores significantly above the developed country average



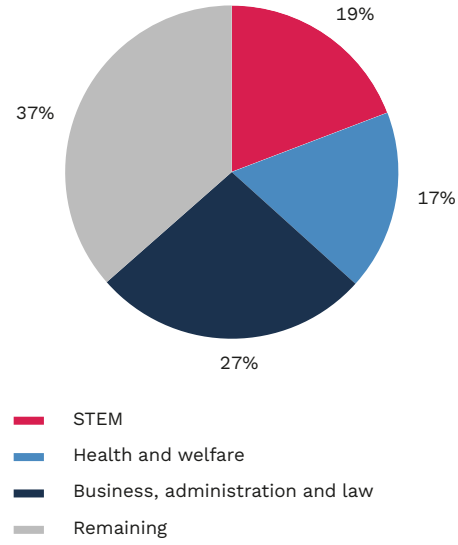
Poland and CEE are characterized by above-average human capital



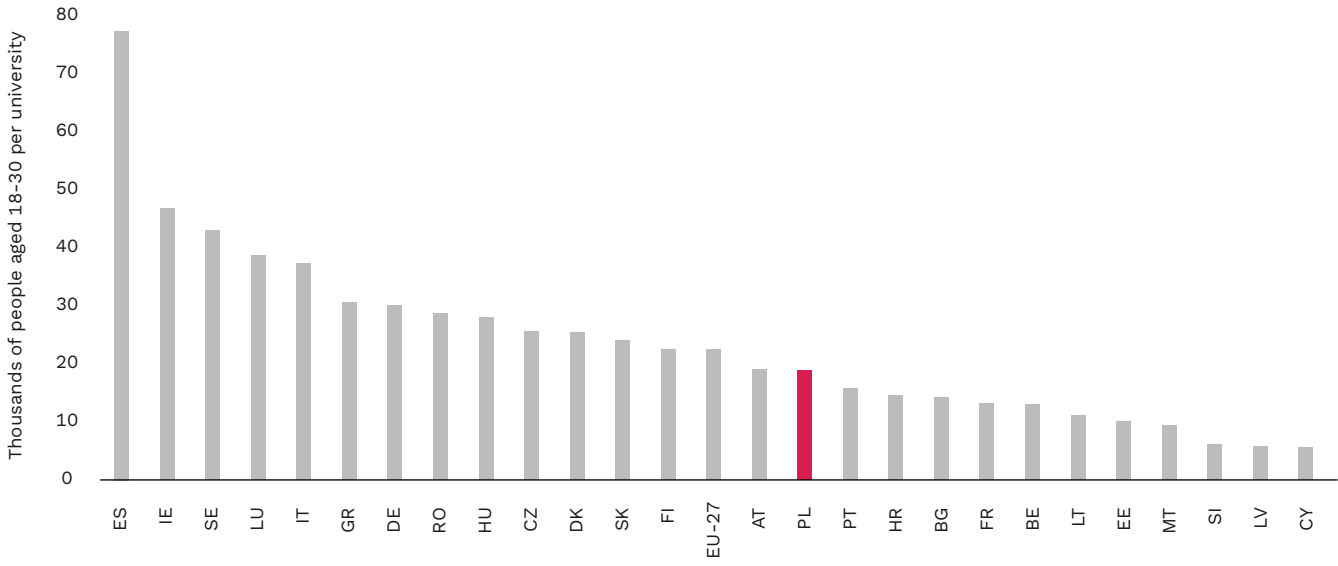
Availability of higher education has surged across all age groups



Polish graduates are skewed towards STEM and business-related fields (in 2024)



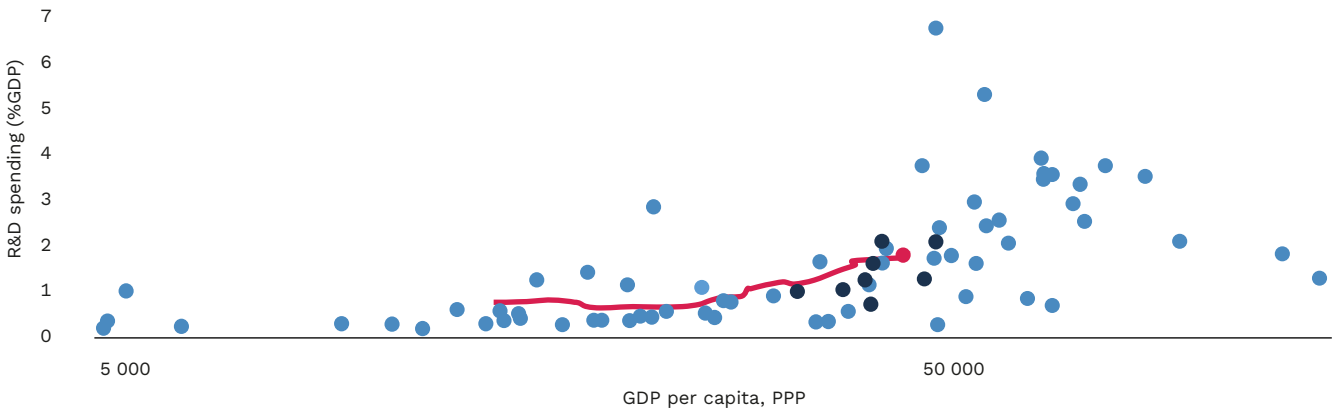
Polish universities are relatively small compared to the population



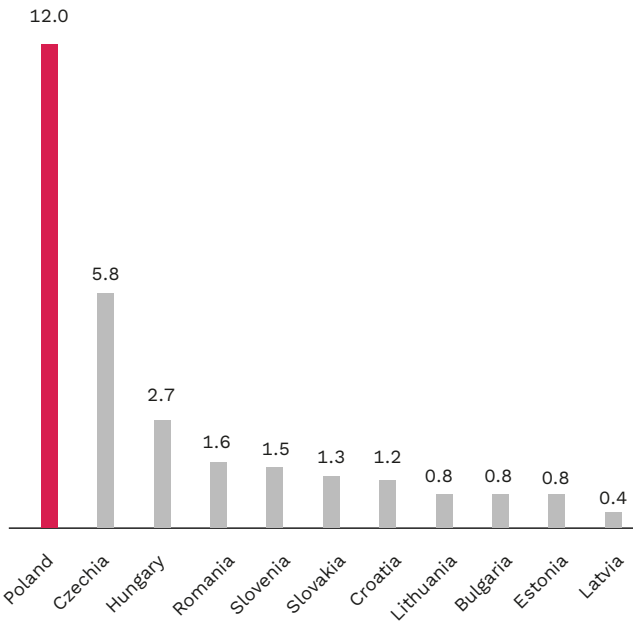
Research and science: successful imitation

- **Neither Poland nor the wider CEE region has so far been a center of global science.** The region's progress in research over recent decades has come mainly from higher spending and integration into the global research system.
- **In Poland, R&D intensity has risen two-and-a-half-fold in 30 years, from 0.6% of GDP in 1996 to 1.4% in 2024.** The number of researchers has grown at a similar pace, from 0.14% to 0.37% of the population. This growth also reflects the sharp rise in the number of highly educated people: over 10 million Poles now fall into the broad category of those with the potential to work in high tech and R&D.
- **Lower R&D spending than in developed countries mainly reflects Poland's stage of development.** Poland's catch-up strategy also relied on importing and adapting existing technologies. The spending gap lies mostly in private funding, which will grow as companies continue to scale up.
- **Poland could become the research hub of CEE.** Of every euro spent on research in the region, 42 cents is spent in Poland. Poland also has the fourth-largest pool of scientists and engineers in the EU (1.7 million people), more than 30% larger than that of Italy or the Netherlands.
- **For now, however, Polish universities rank slightly below the level typical of countries with similar income.** There are many reasons for this, including the relatively small size of universities and a lack of concentrated funding.

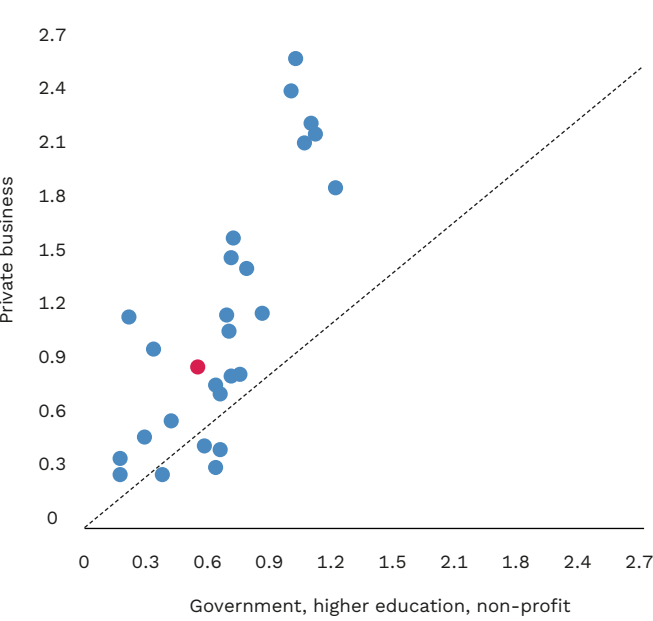
Polish R&D expenditure grows systematically along with the rise in GDP per capita



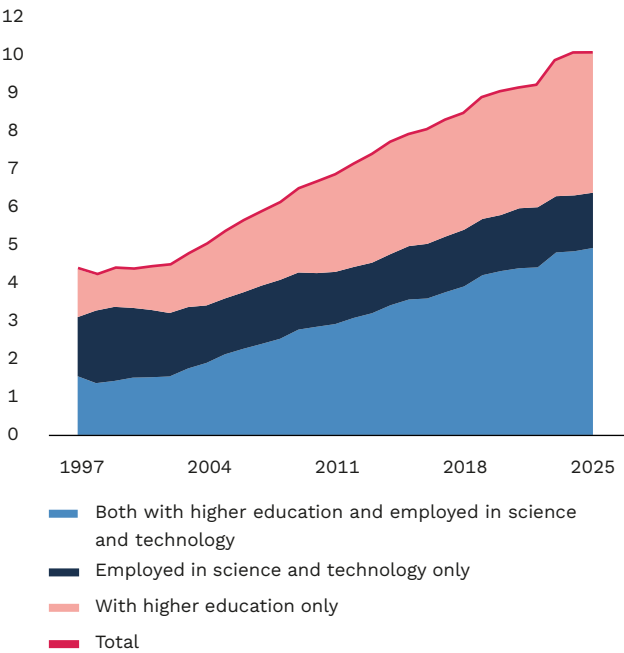
Poland accounts for nearly half of R&D spending in CEE (in EUR billion, 2024)



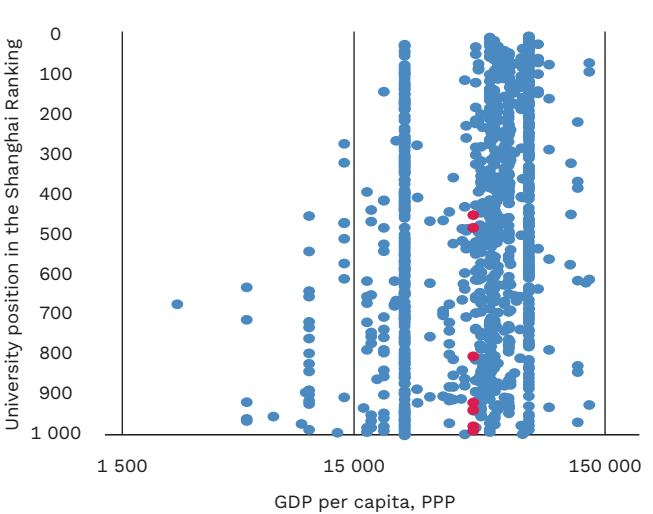
The R&D spending gap mainly concerns private funds (% of GDP, 2024)



Number of people available as high-tech workers has more than doubled over 28 years



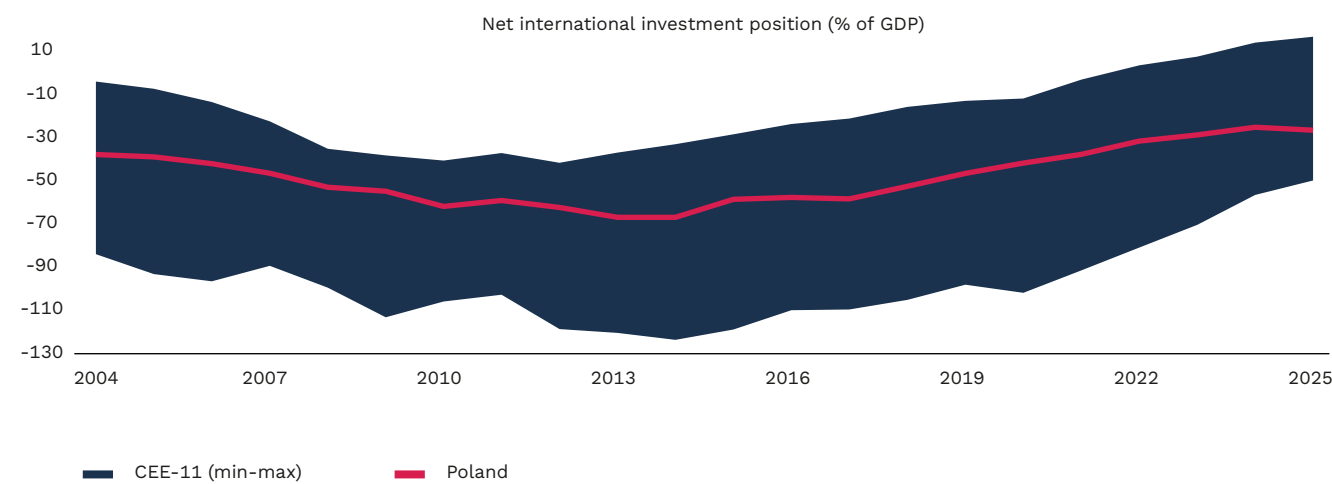
Countries at our level of development usually have universities higher in the Shanghai Ranking



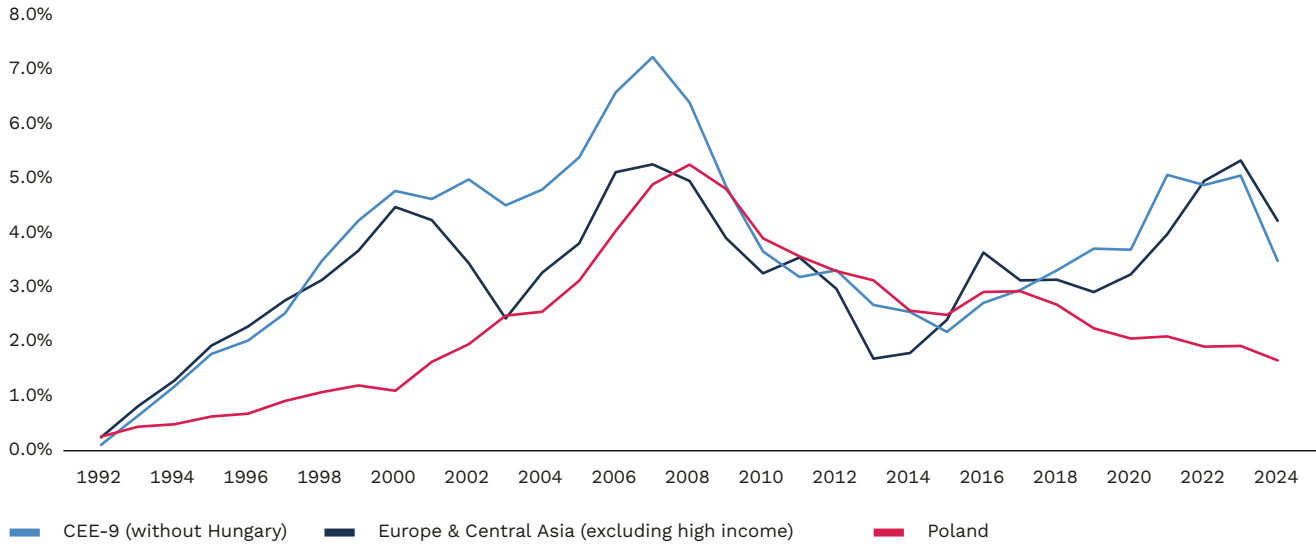
Foreign investment: a gateway to the global economy

- **Foreign direct investment into Poland and the rest of CEE has been a lasting driver of growth, through economic integration, comparative advantages, and the transfer of technology and skills.**
- **On average, Poland attracted foreign investment worth around 3.5% of GDP per year,** like the CEE region. The region's appeal rests on skilled and relatively affordable workers, combined with the stability that comes with EU membership.
- **More than half of FDI inflows to Poland are reinvested earnings.** Equity accounted for as much as 76% of FDI into Poland in 2004–2025: 25% in new capital and 51% in reinvested earnings. This points to both the profitability and the attractiveness of the region.
- **Above all, FDI inflows brought technology transfers,** steadily increasing Poland's involvement in high-value-added activities and trade.
- **FDI also helped close the capital shortfall that Central and Eastern Europe faced at the start of its transition more quickly.**
- **Today, foreign capital is becoming less important for Poland's growth.** Poland's net international investment position improved from -69% of GDP in 2013 to -30% in 2025. Poland remains open to foreign investment, and the improvement comes mainly from the steady expansion of Polish capital abroad.

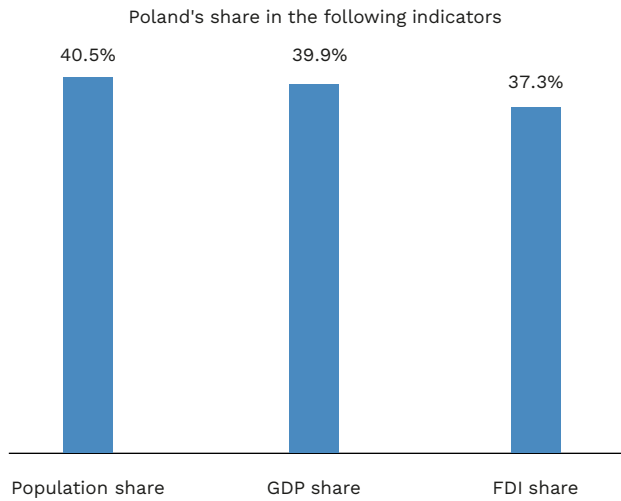
Poland is becoming less dependent on foreign capital despite continued investment inflows



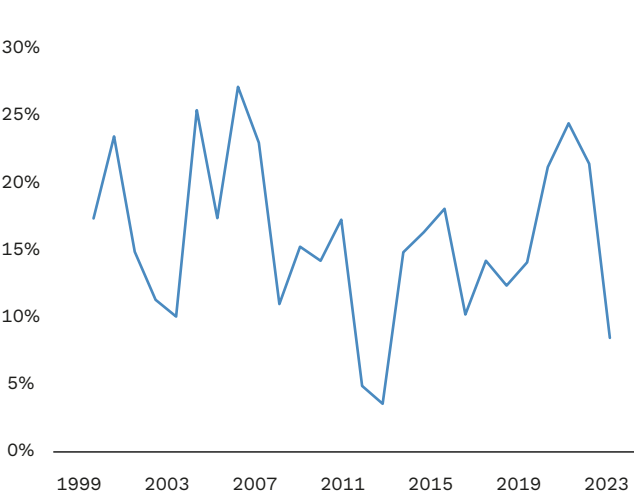
Poland and the region attract an above-average amount of FDI



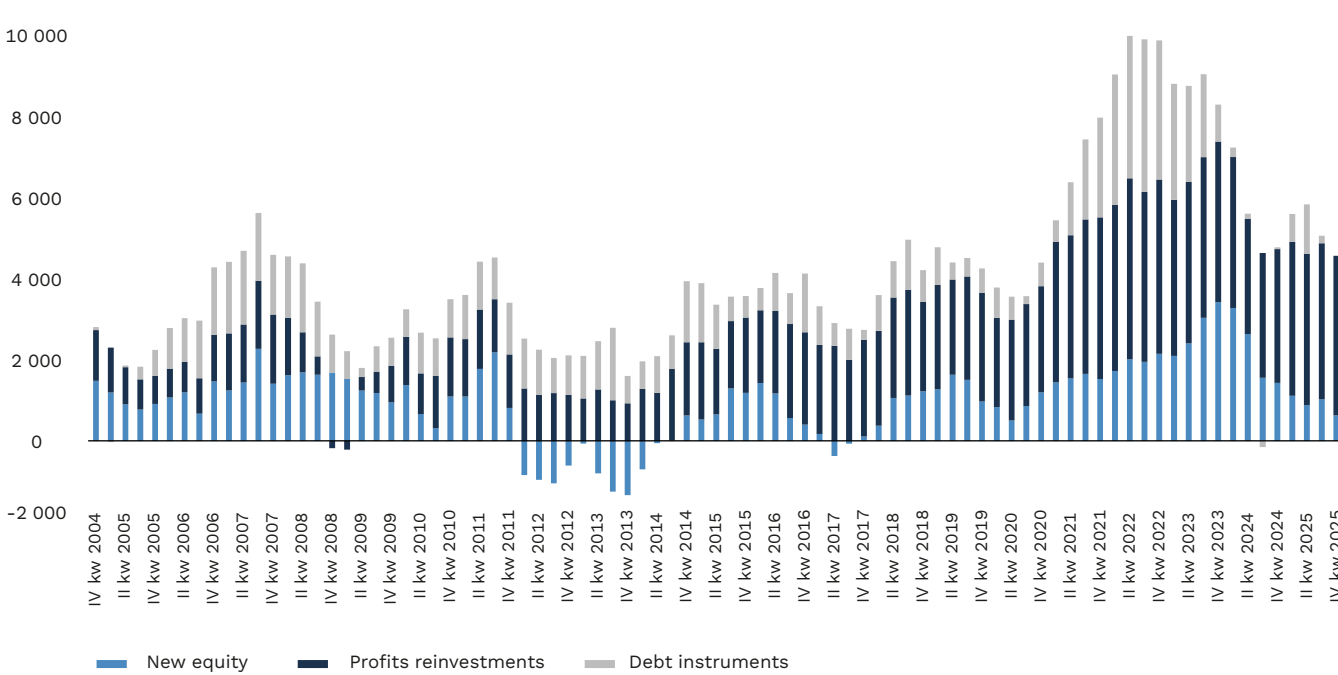
Other countries in the region receive slightly more FDI on average than Poland



The volume of FDI located in Poland oscillated around 15% of gross investment



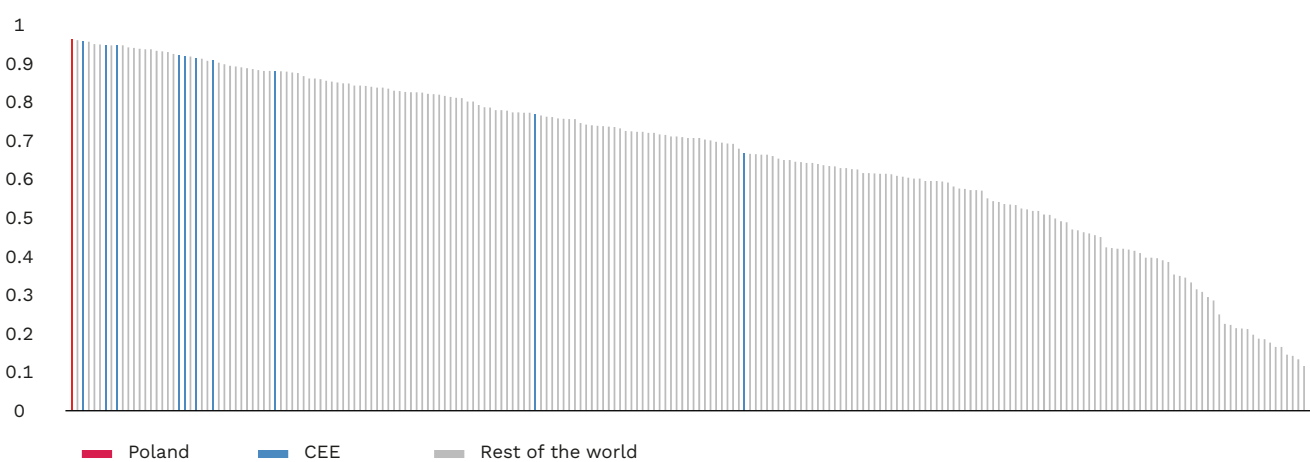
More than half of FDI in Poland comes from reinvested earnings (FDI inflows in EUR million)



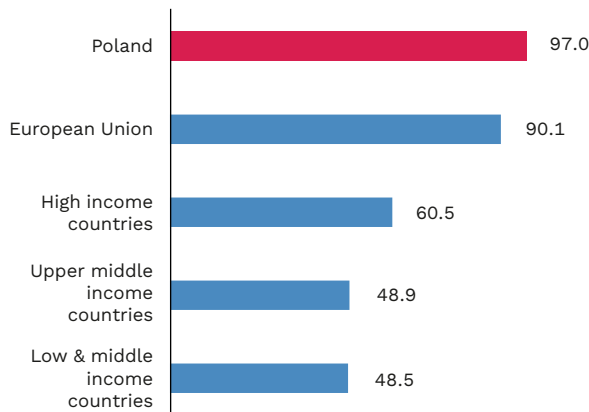
International trade: steady technological progress

- **The evolution of international trade is one of the best illustrations of Poland's journey from a centrally planned Eastern Bloc economy to a modernising country connected to the whole world.**
- **Poland is more engaged in trade than most.** In 2025, its total trade reached 97% of GDP, above both the EU average and the average for developed economies. One in three jobs in Poland is now linked to foreign demand.
- **Poland's goods trade is evolving.** High-tech goods now make up 11.2% of goods exports, up from just 2.3% in 2002.
- **The transformation of the services sector, meanwhile, has revealed Poland's strengths in education and human capital.** Services exports are built largely on professional business services and IT, industries that were virtually non-existent in Poland just 20 years ago.
- **Activities typical of the world's wealthiest economies are gradually appearing in Poland's services exports.** The best example is R&D services, whose exports grew from PLN 1.7 billion in 2010 to PLN 14.5 billion in 2025. R&D's share of services exports rose from 1.6% to 3.0%.
- **The transformation of exports is closely tied to foreign investment,** both through technology brought in directly and through ecosystems of Polish firms that have grown up around foreign-owned plants.

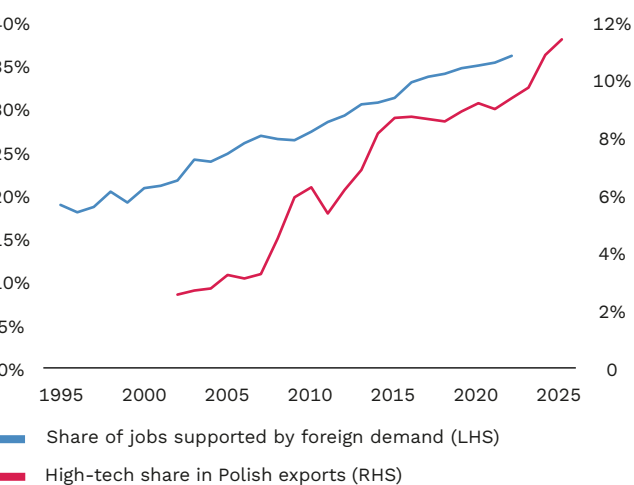
Poland and the region are countries with highly diversified goods exports (index, 1 represents the highest trade diversification, 0 the lowest)



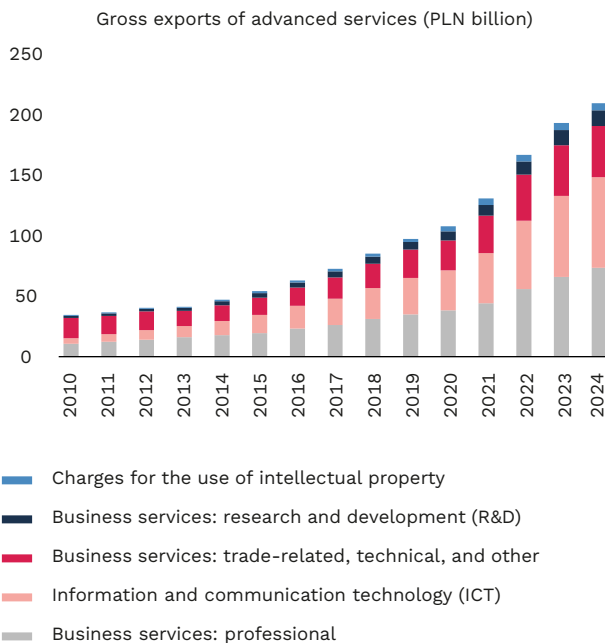
Poland is more integrated into trade than most countries globally (% trade to GDP ratio)



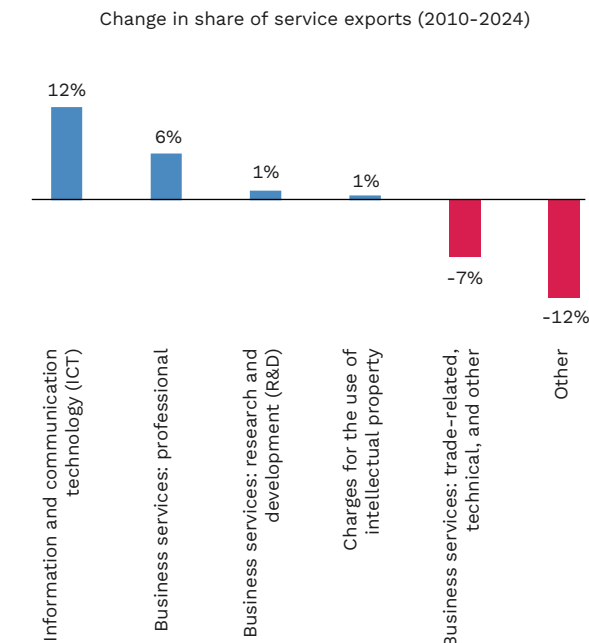
The share of high-tech in our goods exports and engagement in global value chains are growing systematically



Polish exports of advanced services exceeded PLN 200 billion annually



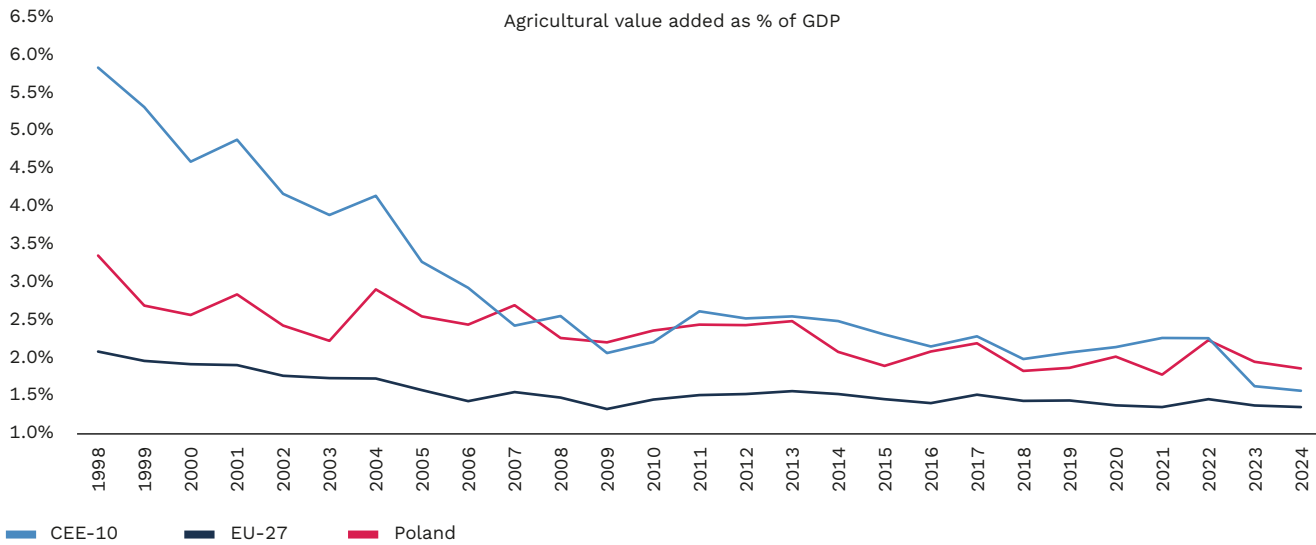
In Polish service exports, the share of high-tech and knowledge-intensive services is growing fastest



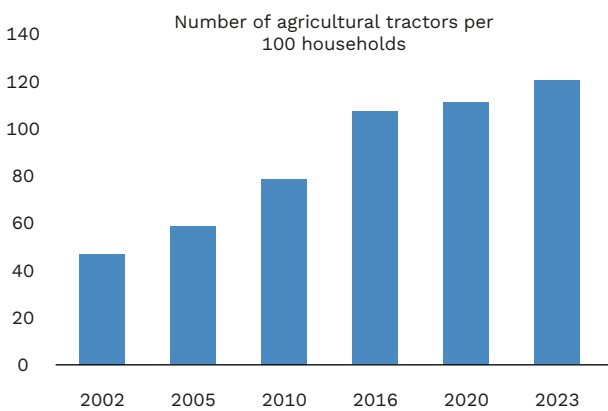
Agriculture: a steadily declining role

- Agriculture has undergone a deep transformation in Poland and across CEE. It was not, however, a driver of growth: its relative importance has declined, while the sector has become highly professionalised.**
- The sector's share of the economy has fallen to levels typical of developed countries.** In Poland, agriculture's share of value added has almost halved, from 3.3% to 1.8% of GDP.
- Agriculture has freed workers for more productive industries.** Employment in Polish agriculture fell from 3.2 million to 1.2 million, partly due to population ageing and partly due to workers moving to other sectors.
- Lower employment has not reduced the sector's value.** Adjusted for inflation, agricultural value added is only slightly lower than in the 1990s. This is thanks to professionalization: larger farms, mechanization and technical modernization.
- Integration with food processing has been another step forward.** Growth in Polish food production is far more visible in food processing, where value added has more than doubled. **This is also a more productive sector, turning agricultural raw materials into higher-margin products.**

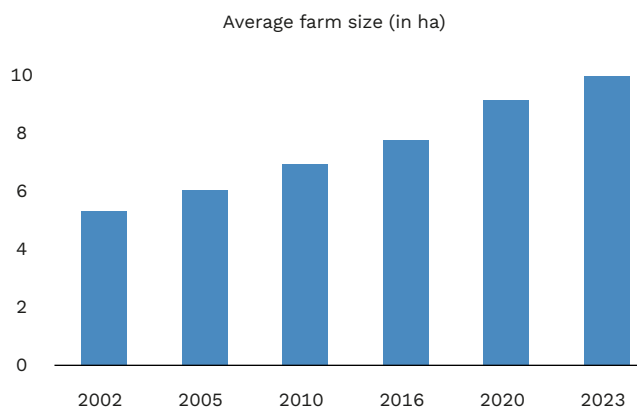
Share of agriculture fell to levels typical of developed economies



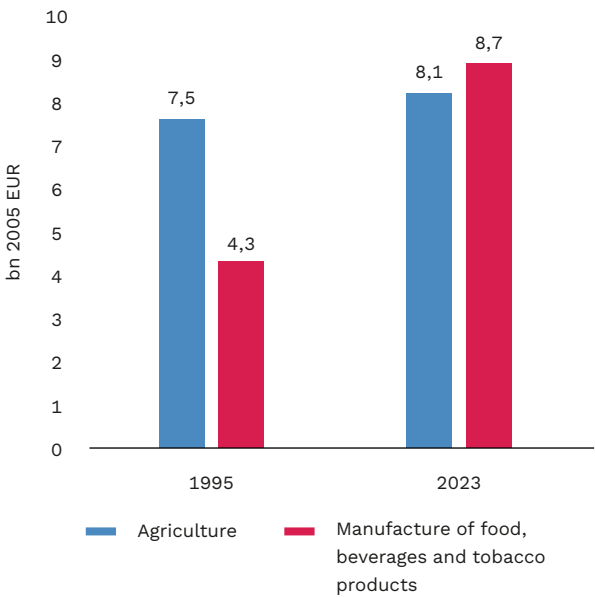
Polish agriculture has built a modern machinery fleet



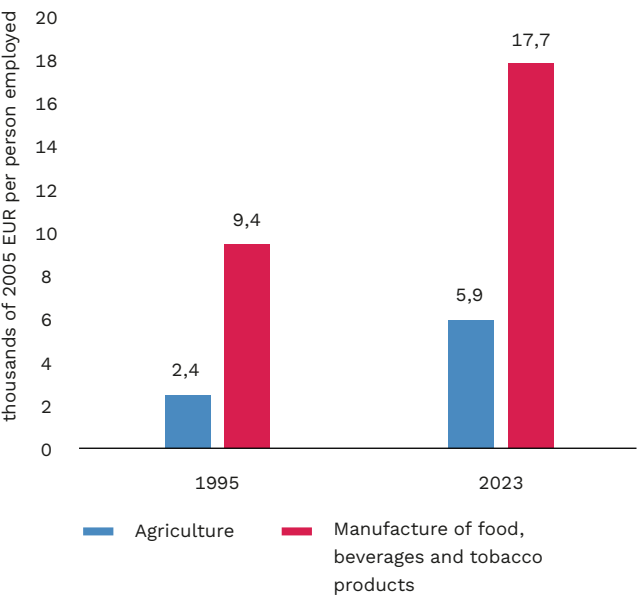
Farm consolidation enabled economies of scale



Value added of agriculture as a sector remained unchanged (Sector's value added)



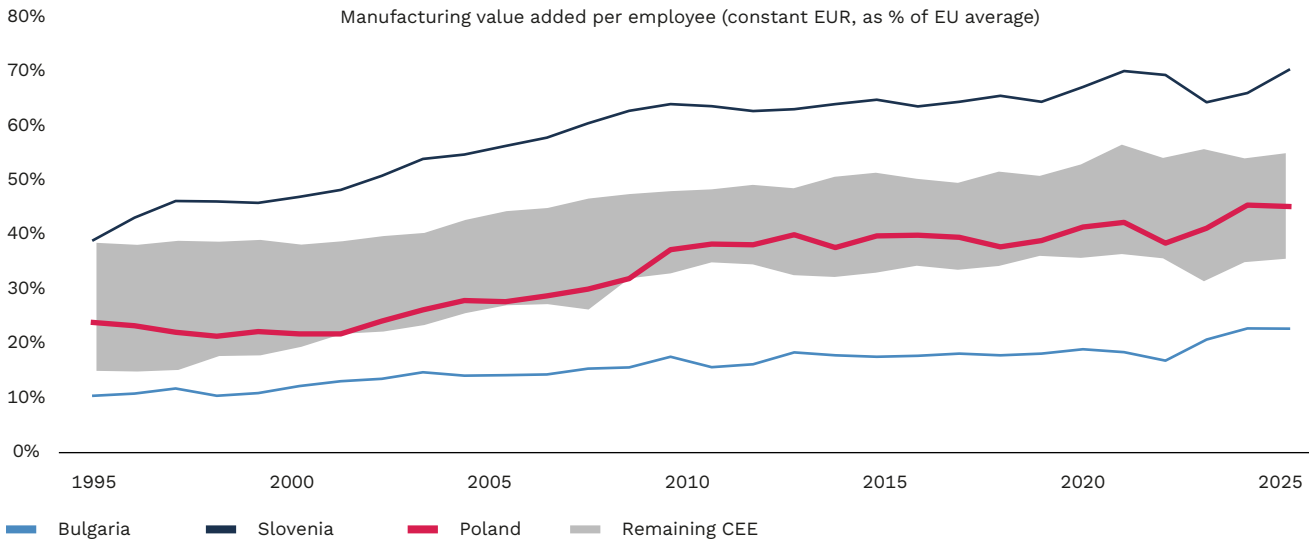
Value added per agricultural worker more than doubled



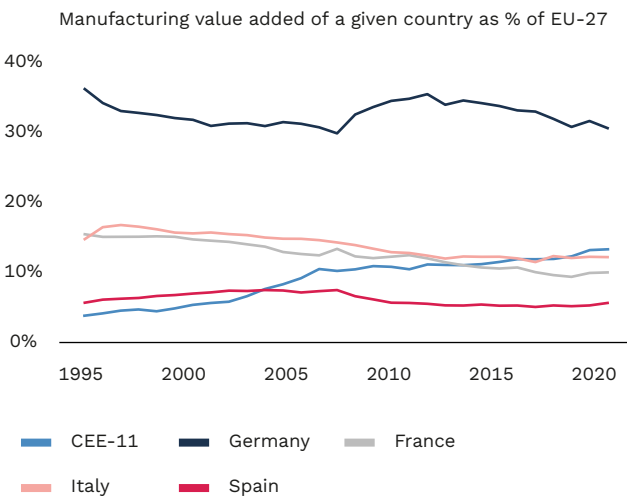
Manufacturing: moving towards high tech

- Industrial restructuring has led to significant gains in value added and productivity. The gap with Western Europe remains large but is steadily narrowing.**
- CEE has become an additional industrial heartland of Europe.** Thirty years ago, the region accounted for just 5.1% of EU-27 manufacturing value added, less than any of the large Western economies individually, such as France (15.8%), Italy (15.2%) or Spain (6.7%). **Today, CEE industry as a whole is second only to Germany's.**
- Productivity in Polish manufacturing, measured per hour worked, has risen by over 281% in 30 years.** Employment barely changed, from 3.1 million in 1995 to 3.3 million in 2024, while average annual hours per worker fell from 2170 to 2019.
- Like its goods exports, Polish industry is diversified.** Half of value added comes from five industrial sections, but Poland has a notable share of production in virtually every major industry.
- High-value-added industry is growing in importance.** Two of the three "workhorses" of Polish industry are technologically advanced sectors. Since 1995, value added has grown by 1,841% in electrical equipment and by 948% in electronics and computers.

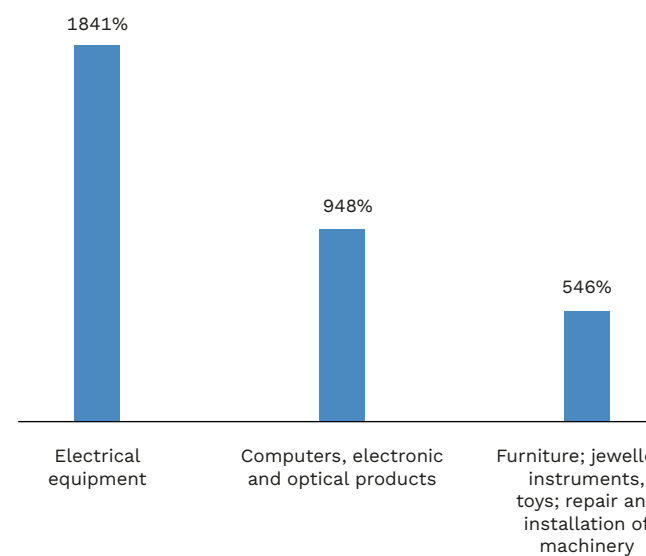
CEE manufacturing remains less productive than the EU average, but has narrowed part of the gap



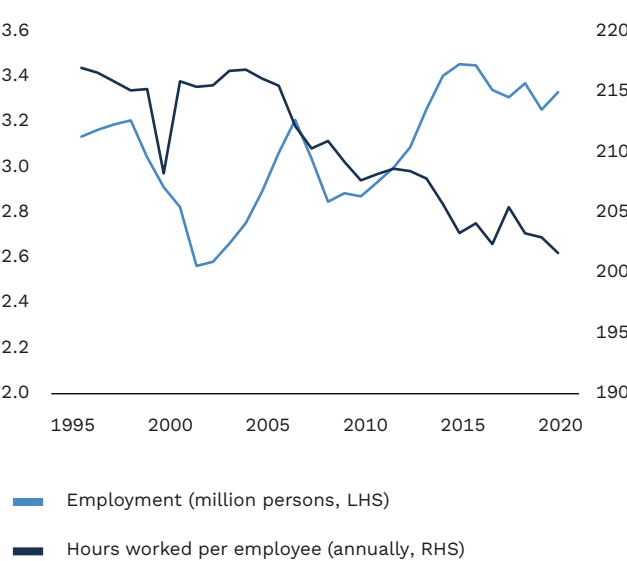
Total manufacturing value added in CEE surpassed all EU economies except Germany



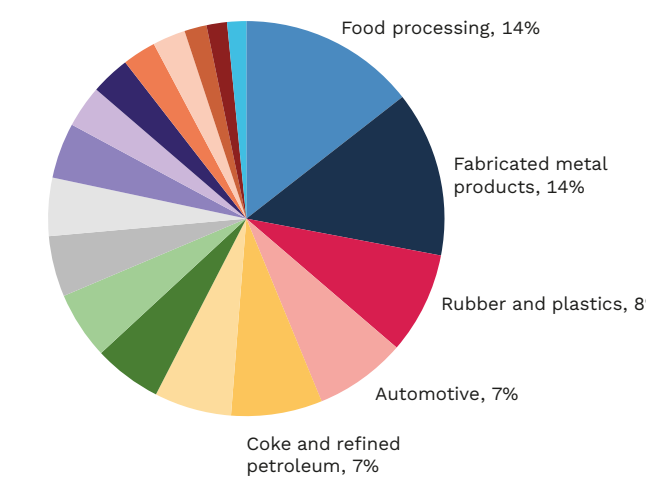
"Workhorses" of Polish manufacturing – value added growth since 1995



Manufacturing employment increased slightly, while hours worked decreased



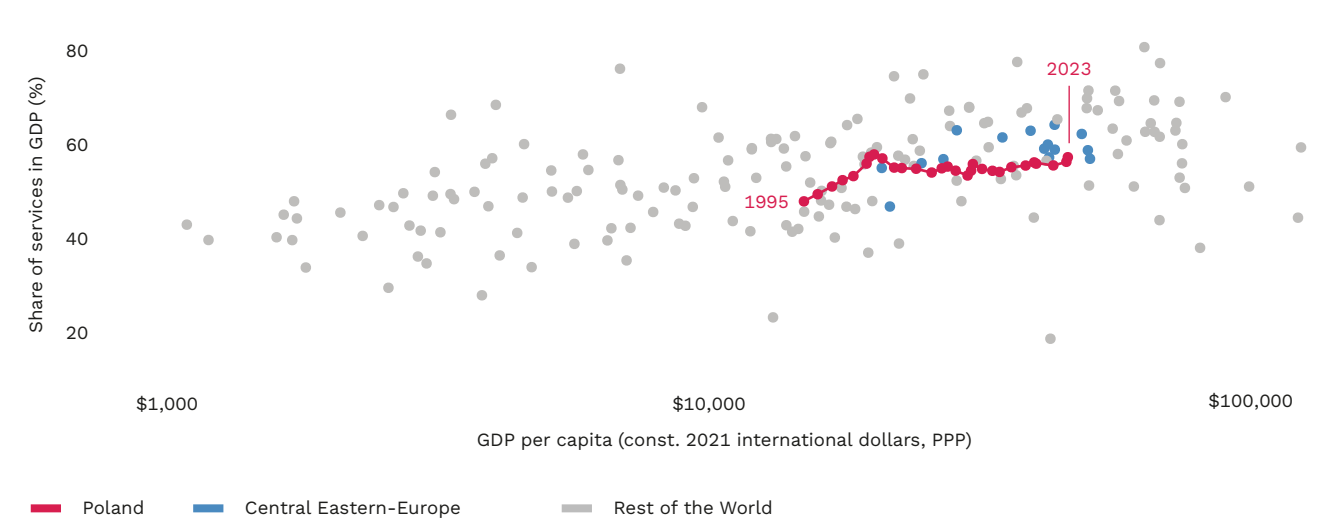
Five sectors account for nearly half of Polish manufacturing value added



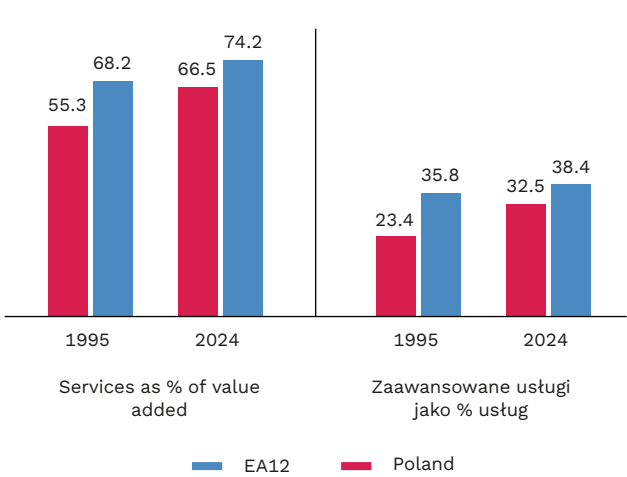
Services: towards a modern economy

- **Services are the modern industries with the greatest impact on Poland's economic growth. Some are built directly on FDI, others on local education and domestic entrepreneurship.**
- **Services are growing faster than industry and agriculture.** Their share of Poland's value-added rose from 55.3% in 1995 to 68.2% in 2024.
- **Productivity and employment have grown side by side.** Employment in services rose by 53%, from 7.2 million to 11.1 million. These industries account for the rise in the employment rate and have absorbed Poles' growing participation in the labour market.
- **One of Poland's major successes is the rapid growth of jobs in high-paying services such as professional, scientific and technical activities, and IT.** Employment in these sectors has more than quadrupled to over 1.5 million, though their share remains below the average for developed countries.
- **Business services centres show how deeply Poland is integrated into the global economy.** Nearly 2,200 centers now operate in Poland, employing half a million people, one in six of them a foreign specialist.
- **The centres themselves are also transforming, moving from simple to advanced work: over 58% of their tasks are now knowledge intensive.**

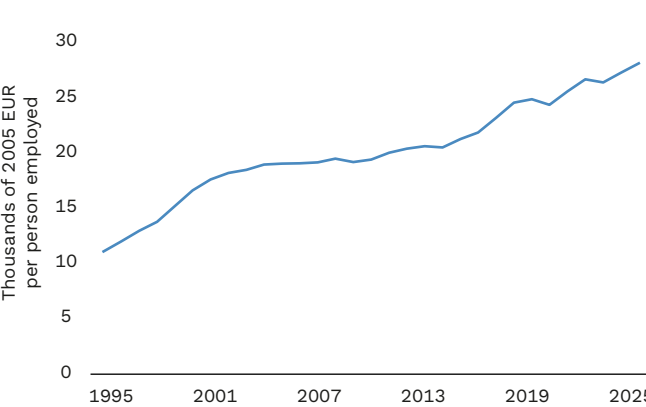
Share of services in our GDP rose to levels of developed economies



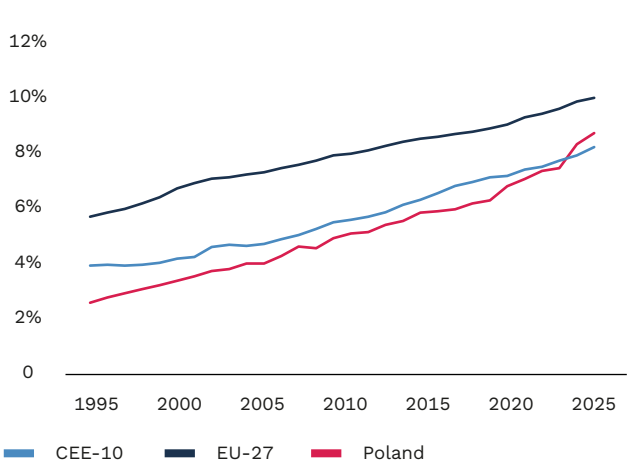
The role of services in Poland has increased, but remains smaller than in Western EU



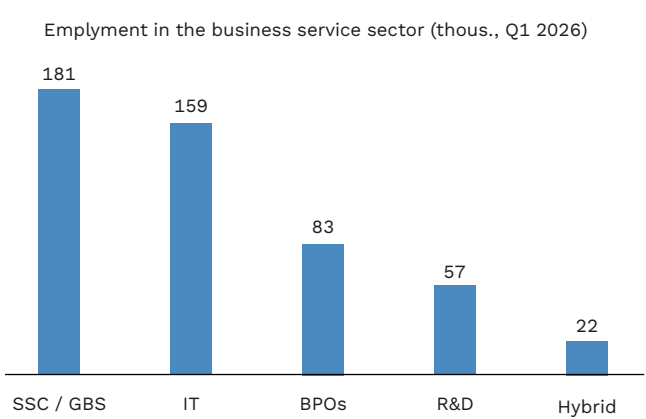
A worker in Poland's service sector generates over 130% more value added today than 30 years ago



Employment in IT and professional services is still catching up with Western Europe (% share of total)



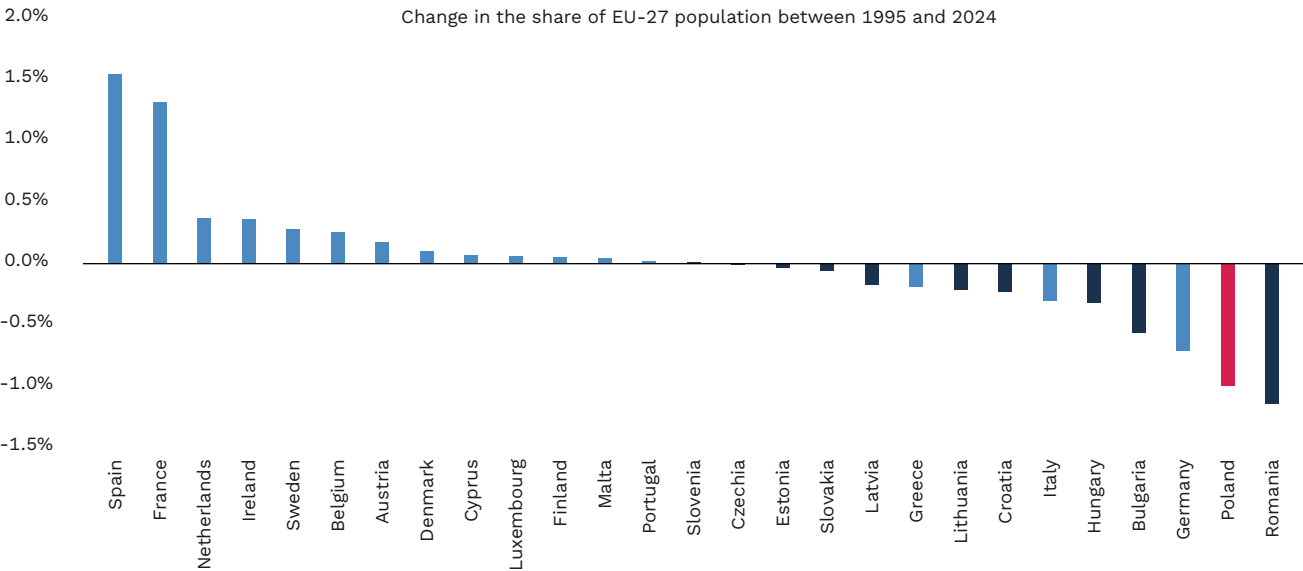
Over half a million Poles work in business services centers today



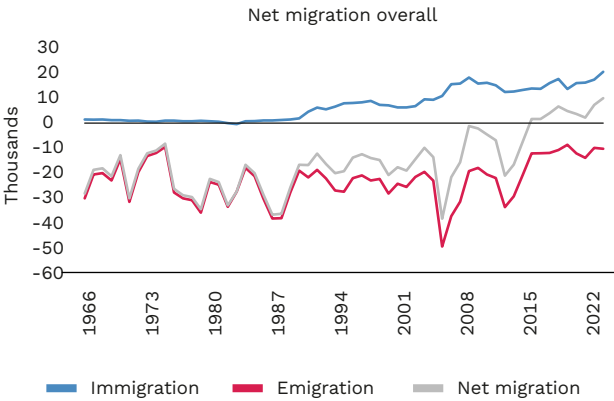
Population and migration: economic success at a demographic cost

- Along with economic success, Poland has acquired a common affliction of developed countries: a shrinking population. The hardships of transition also encouraged emigration, compounding the effect of low fertility.
- Poland and the region make up a shrinking share of the EU population. Between 1995 and 2024, the population of CEE fell by 9.8 million to 100 million, while the rest of the EU grew by 34.0 million.
- Net emigration is a thing of the past. Until 2015, Poland consistently recorded negative net migration, but economic success has turned this into a trend of people returning home. Temporary emigration has also slowly begun to decline: the number of Poles living abroad rose until around 2018–2019 and has been falling since.
- Low fertility remains a far greater challenge. Poland's fertility decline was one of the steepest in the developing world, probably driven in part by the pursuit of prosperity and economic growth. Even if fertility trends begin to reverse, a significant population decline over the coming decades is unavoidable, because there are fewer people of reproductive age.

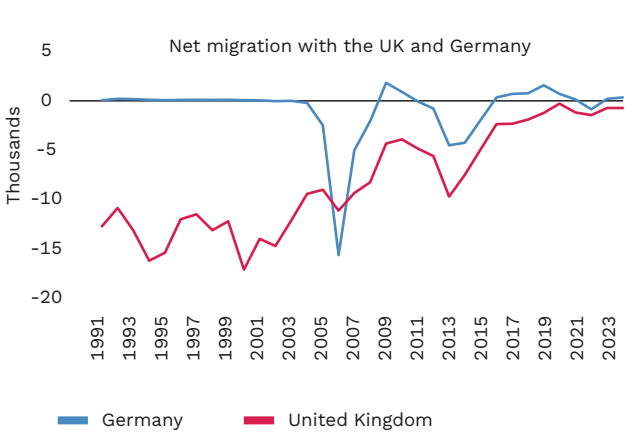
CEE accounts for a shrinking share of the EU population



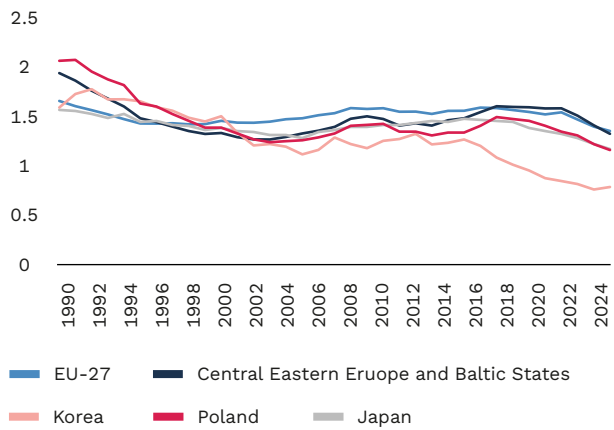
Poland has become a country of return migration and net immigration



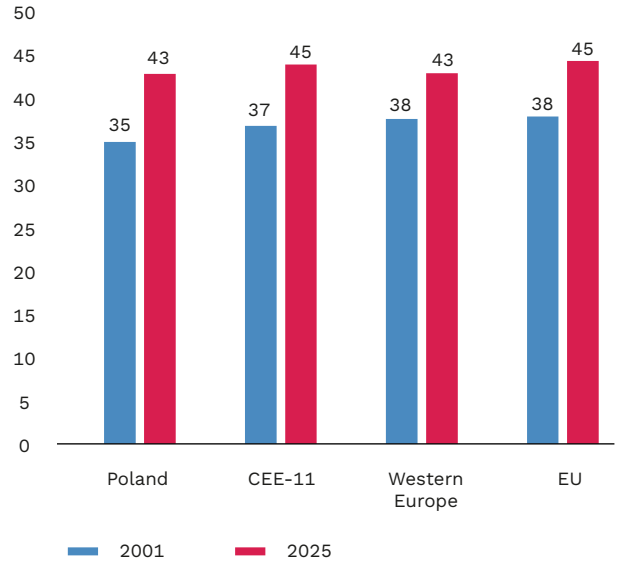
Poland records modest return flows from traditional emigration destinations



Fertility decline affects Poland more severely than most countries (TFR)



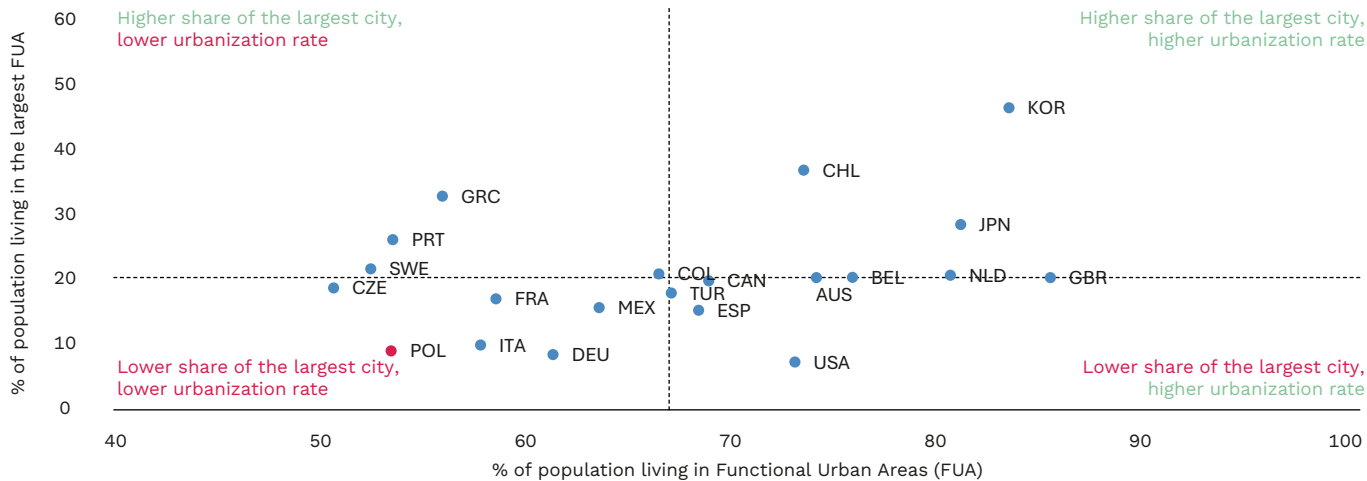
Poland's population remains younger than the EU average (median age)



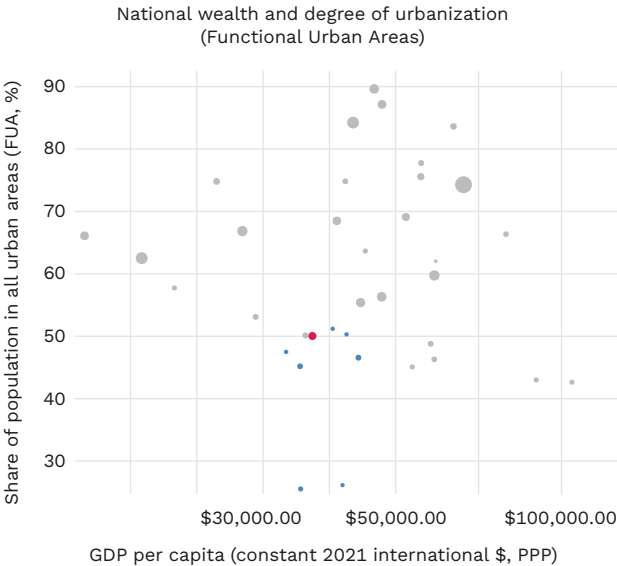
Internal migration: from villages and small towns to cities and metropolitan areas

- **Much of the economic growth in Poland and the region has been linked to internal migration**, which helps offset at least some of the negative effects of a shrinking population.
- **Poland still has an unusually low share of people living in urban areas**, and Warsaw is the smallest metropolitan area among OECD countries of similar population. **This is changing gradually with urbanisation**. Between 2002 and 2025, the population of villages and small towns fell by 1.1 million, while cities of over 200,000 residents grew by 0.7 million.
- **Internal migration in Poland naturally follows the location of universities and jobs**. The best universities are in the largest cities rather than in the college towns typical of some Western countries. These same cities are where modern service jobs for graduates are created.
- **Despite migration, the growth in prosperity has been regionally balanced**. Between 2000 and 2023, regional GDP per capita in euro terms rose by around 300% on average. **Growth did not depend on starting levels**: Poland's major cities are getting richer at a similar pace to its poorer regions.

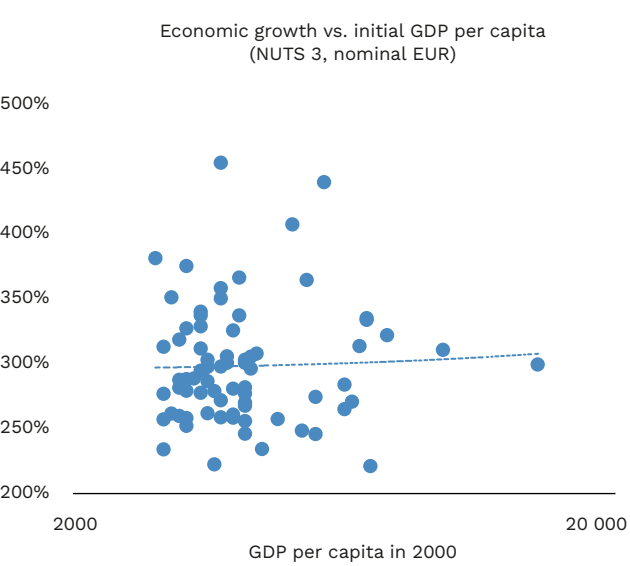
CEE countries remain relatively less urbanized than the OECD average



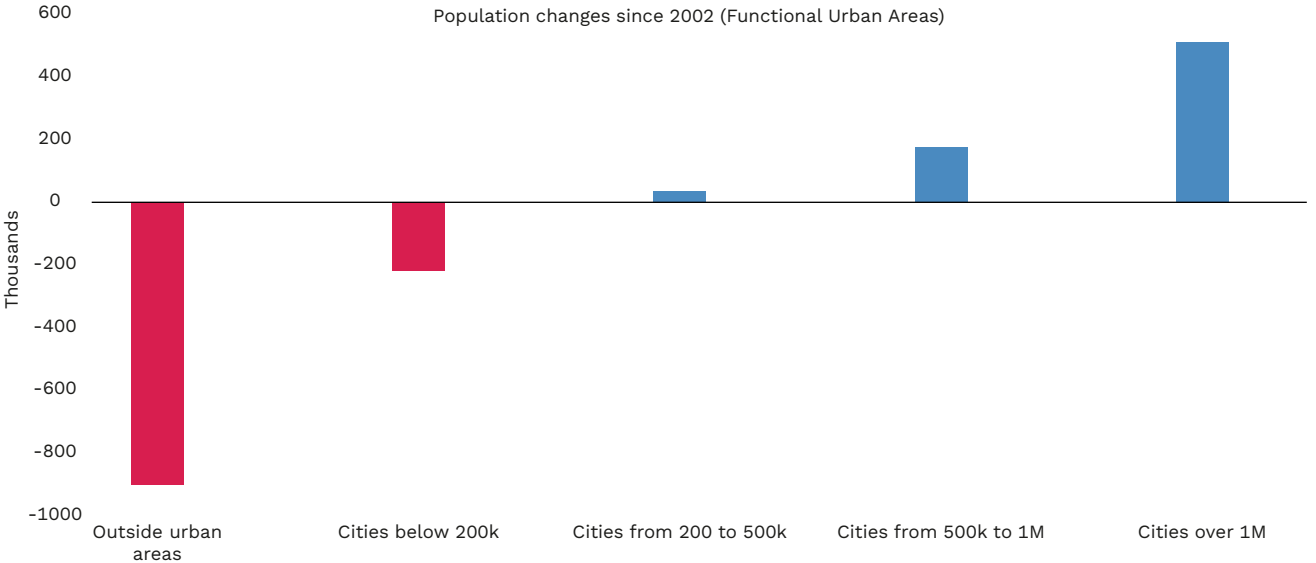
In affluent OECD countries, up to twice as many people live in functional urban areas



Economic growth against initial GDP per capita in Poland at the regional level



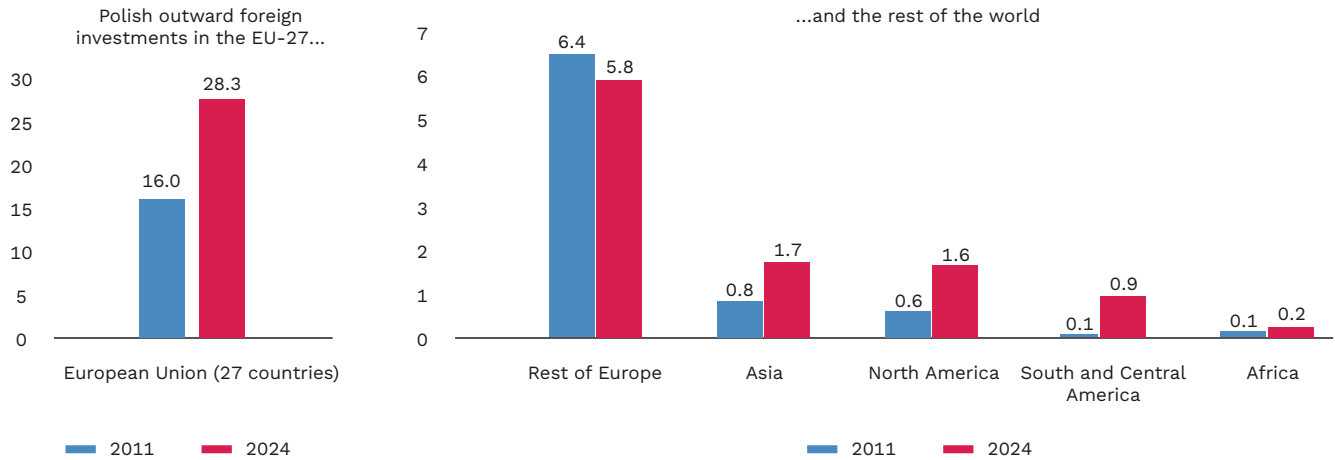
Internal migration in Poland is a natural population flow to cities



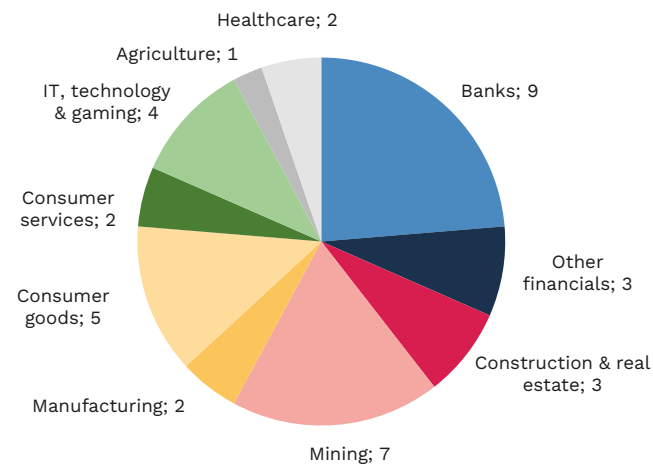
Companies: the growth of Polish firms and the expansion of domestic capital

- **Convergence in CEE has made it possible to build domestic capital and scale up companies.** The focus is gradually shifting from attracting FDI to the steady international expansion of Polish firms.
- **The Warsaw Stock Exchange lists 38 companies valued at over USD 1 billion.** Most have grown organically and span a wide range of sectors, from the traditional economy to world-renowned gaming studios and fintechs.
- **Foreign investment is becoming a natural path for expansion.** Thirty years ago, Polish companies had virtually no international presence. Today, over 2,000 Polish companies hold stakes in more than 5,000 foreign subsidiaries. **The total value of Polish direct investment abroad has grown by 60% in 13 years.** Investment in Russia has fallen by 67%, while it has grown on every non-European continent.
- **Polish assets abroad go beyond direct investment.** They also include reserve assets, portfolio investment and private savings invested in foreign markets. In total, Polish assets invested abroad have grown to over EUR 567 billion, or 61% of GDP.
- **This transformation is gradually balancing Poland's international capital balance.** Poland and its neighbors are no longer merely passive recipients of capital; **their position is evolving into a balanced, two-way flow of substantial investment.**

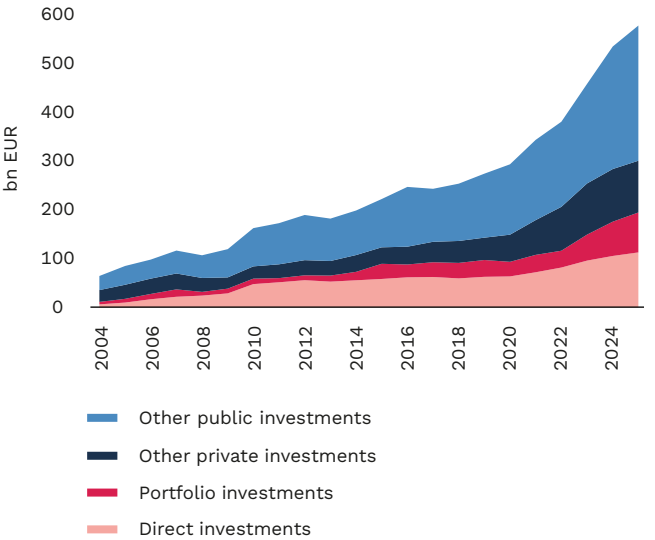
Polish foreign direct investment is present on virtually all continents (stocks in EUR billion)



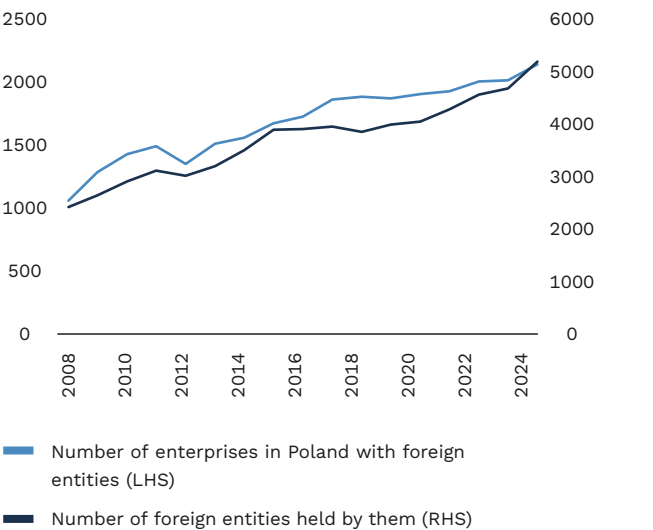
Over 38 companies on the Polish stock exchange exceeded USD 1 billion in market capitalization



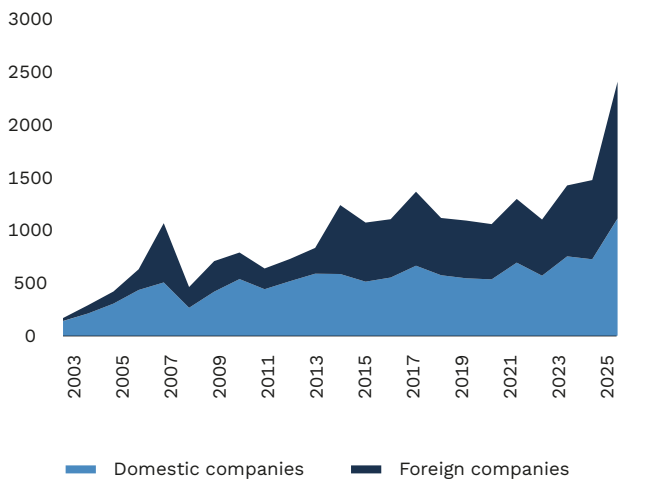
The value of Polish foreign assets rose to nearly EUR 600 billion (balance of payments)



The number of companies in Poland with foreign entities has doubled



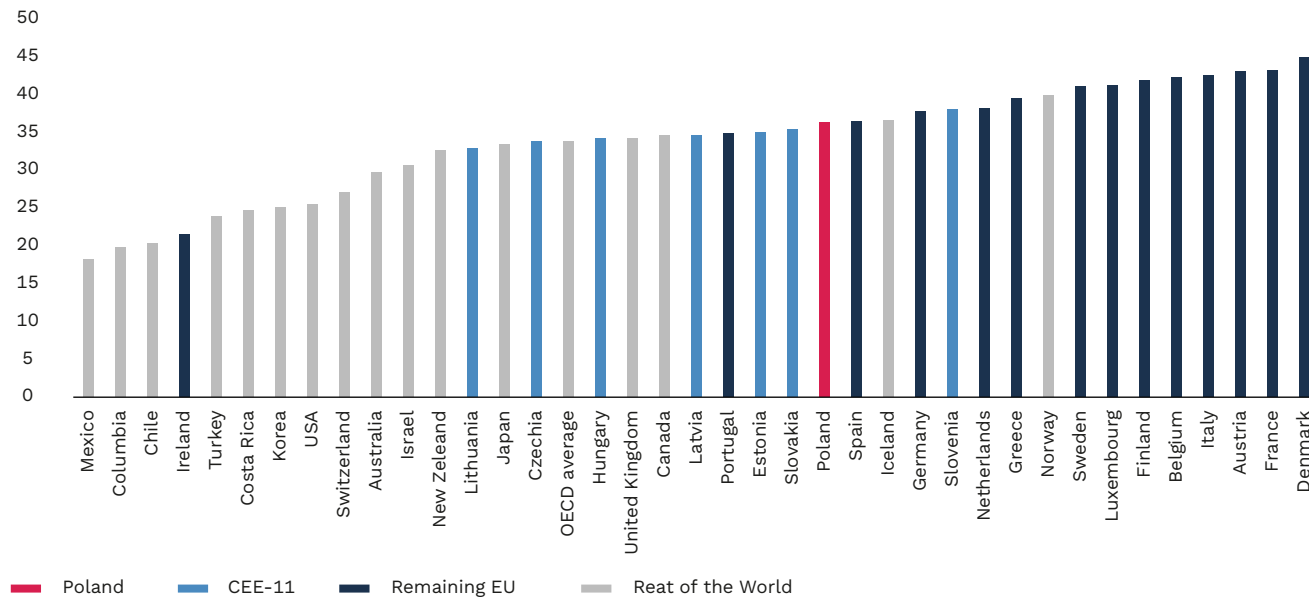
Recent years have brought a significant improvement in Polish stock market valuations



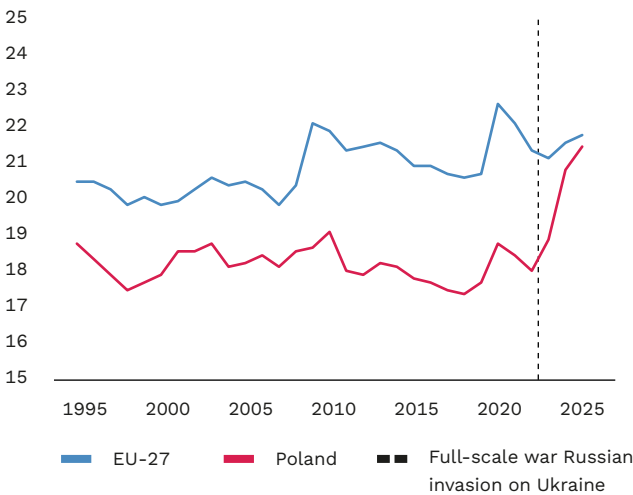
The state: private sector growth without excessive intervention

- Poland's transition unlocked the untapped potential of the private sector. The past decades have been a period of steady economic liberalization.**
- Poland's economic model is free of excessive state intervention.** Polish taxes are relatively high by global standards but lower than in most of Western Europe. According to the OECD, total taxes and social contributions reached 36.6% of GDP in 2024.
- Most spending in Poland is done by businesses and consumers.** Between 1995 and 2025, public consumption averaged 18.5% of GDP, 2.3 percentage points below the EU average.
- Product market regulation is also less restrictive than in most OECD countries.** On the PMR index, which measures market distortions caused by the state, Poland outperforms 76% of other OECD members, and barriers to business expansion are lower than in 78% of them.
- Liberalisation and privatisation were nevertheless a long and painful process.** Between 1990 and 2012, the Polish state restructured the ownership of more than 7,500 enterprises. Most were privatised and still operate in various forms today; nearly 1,130 were liquidated.

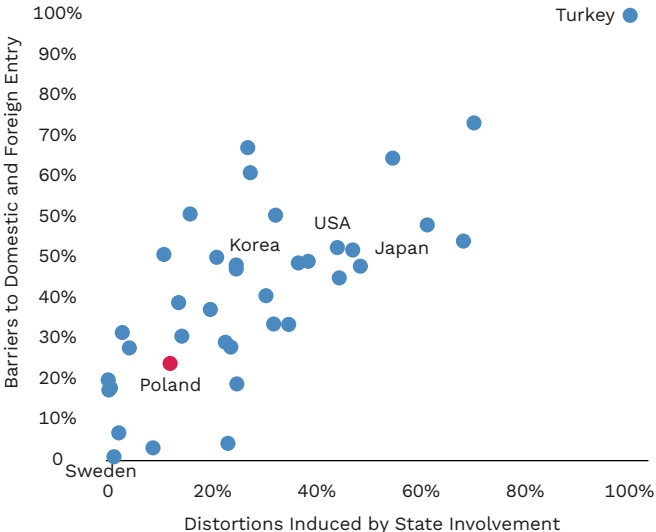
Taxes in Poland are "European", but lower than the Western European average (taxes as % of GDP)



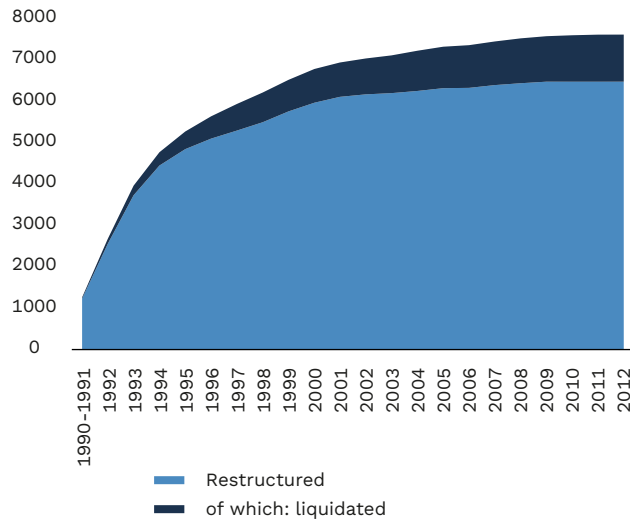
An above-average share of Polish GDP is spent directly by citizens; the role of the state is smaller, though differences are narrowing (public consumption as % of GDP)



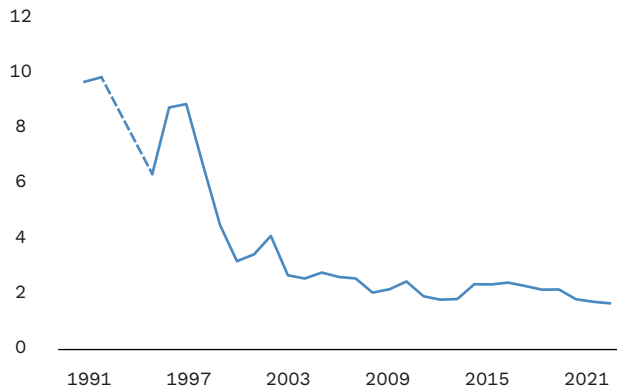
Poland is a country with simple regulations and no barriers to business expansion (PMR regulation index in 2023 for OECD countries, normalized)



Privatization of state-owned enterprises in Poland spanned over two decades (cumulative number of ownership transformations)



Poland integrated into trade also by reducing tariffs practically to zero (average effective tariff rate in %)



Looking Ahead

Poland's growth story is not over. The country became prosperous only a generation ago. The effort invested in building institutions and implementing reforms, combined with hard work, openness to change and economic dynamism, has accelerated growth. Thanks to these, each new generation grows up in a fundamentally wealthier world. Poland's economic success has yet to reach its full potential, and a considerable gap with the "old, wealthy world" remains.

The economic success of Poland, and of the wider region, is no economic miracle. It is the result of the determination and hard work of millions of citizens who tirelessly pursued freedom, security and a better future. The road was not easy, and memories of the transition, with its hardships, successes and dilemmas, remain vivid and fresh.

What makes Poland's success truly unique is how recent it is, and that it was achieved in a democratic, open economy. The economic transformation and four decades of uninterrupted growth were achieved without excessive state control or aggressive protectionism. Ours is the newest and most current of the world's great development success stories.

Today, Poland is the best example of growth. This publication therefore not only illustrates that success but can also serve as a compass to help other countries chart their own paths to economic development.

The growth of Poland and Central and Eastern Europe need not be exceptional: its experience can offer lessons and inspiration to the rest of the world in its pursuit of prosperity. In a separate publication, we present an empirical analysis of the factors associated with faster economic growth in Poland and across the European Union. These include:

- a dynamic private sector without an excessive role for the state;
- sectoral concentration, including a relatively large share of manufacturing;
- openness to trade, including substantial imports of goods;
- sound public finances.

Factors that could further support Poland's development, and that may also matter for other countries on their own development paths, include:

- a high rate of private investment and a well-developed capital market;
- stronger institutions, including price stability;
- higher population density and urbanization.

Annex. Notes on charts presented

This annex lists all data sources and notes for the charts presented. As the charts are not numbered in the text, the descriptions below follow the order in which the charts appear: top to bottom, then left to right.

1) Introductory section

- GDP per capita data from the World Bank, 1990–2025. Real GDP per capita in PPP terms, in constant 2021 international dollars.
- Registered unemployment data from Statistics Poland's Local Data Bank (BDL). County-level (powiat) data for 2004 and 2025.
- Life expectancy data from the World Bank. Life expectancy at birth, in years.
- Data on the share of Poles at risk of poverty from Eurostat's EU-SILC survey. The chart shows the share of people whose equivalised income is below 60% of the median. Missing data for 2002–2004 have been linearly interpolated.

2) Section "Convergence: rapid growth in real GDP"

- Average annual growth rates, 1995–2025. GDP data from the World Bank in constant PPP international dollars. Population and labour supply data from Eurostat national accounts. The implied pace of gap closure is the implied half-life of beta convergence relative to Germany.
- World Bank data. Real GDP per capita in PPP terms, in constant international dollars.
- World Bank data, 1990–2025. Real GDP per capita in PPP terms, in constant international dollars.
- Penn World Table data, 1970–2023. GDP per capita based on expenditure-side real GDP at current PPPs. The unweighted series shows the share of countries with lower GDP per capita than Poland. The population-weighted series shows the share of people living in countries with lower average GDP per capita. Penn World Table data cover over 98% of the world's population.

3) Section "Prices and currencies: converging alongside GDP"

- Eurostat data on relative price levels and GDP in the EU, 1995–2025. Prices are based on actual individual consumption (AIC) under COICOP 2018, and GDP per capita volumes are in PPS. Both series are expressed relative to the EU-27 average in each year.
- BIS data on the real and broad effective exchange rates of the zloty, retrieved from FRED (Federal Reserve Bank of St. Louis). Index, 2020 = 100.

- Eurostat data on hourly wages in nominal euros, 1995–2025.
- World Bank data, 1990–2025, based on GDP in constant PPP international dollars and in current US dollars. The additional exchange-rate gap is calculated as the difference between the two measures.
- Eurostat data for 1999 based on COICOP 1999, and for 2025 based on COICOP 2018. Two measures are shown due to methodological change. Both price levels are expressed as a percentage of the EU-27 average.

4) Section "Labour market: a region of high economic activity"

- Eurostat LFS data on unemployment as a percentage of the economically active population aged 15–74. A methodological change occurs between 2008 and 2009. For the first three years, data for France are supplemented with data for metropolitan France.
- Data on the share of people in work and on hours worked from Eurostat national accounts, including population data. Average weekly hours assume, for simplicity, a 52-week year.
- Eurostat LFS data on employment rates by age group, as a percentage of the population. A methodological change occurs between 2008 and 2009.
- Data on average wages by voivodeship from Eurostat national accounts, 2000–2023. Hourly wages in euros relative to the EU-27 average. Warsaw is excluded for comparability reasons, as it is the only Polish metropolitan area classified as a separate NUTS 2 region.

5) Section "Education: the key role of human capital"

- Human capital in Poland over time and across countries, based on World Bank and Penn World Table data. Real GDP per capita in constant PPP terms, in 2021 international dollars, from the World Bank. The Penn World Table human capital index ("hc") combines years of schooling and returns to education. For Poland, the chart shows changes over time; for other countries, a cross-section for 2023.
- Eurostat data on the share of people with higher education in households. Each series is calculated as the difference between the value for Poland and the corresponding value for the EU-27.
- Eurostat data on higher education graduates in 2024. Medical and health-related fields fall under the "Health and welfare" category.
- Number of people of student age per university, calculated from Eurostat and ETER data. The number of universities comes from the ETER database. The student-age population is defined as people aged 18–30, based on Eurostat data.
- OECD data: the average across three domains, namely reading, mathematics and science. The OECD average is for a constant group of 23 countries. The chart shows 95% confidence intervals for the average score, calculated using a simplified method that assumes zero covariance between domain scores. Actual standard errors are higher, but Poland's results remain statistically significantly higher even so.

6) Section "Research and science: successful imitation"

- R&D spending in Poland over time and across countries, based on World Bank data. Real GDP per capita in constant PPP terms, in 2021 international dollars, from the World Bank. For Poland, the chart shows changes over time; for other countries, a cross-section for 2023.
- Eurostat data on R&D spending in CEE-11 for 2024, in billions of current euros.
- Data on the split of R&D spending between private and public sources, based on Eurostat data.
- Eurostat data on human resources in science and technology. Totals calculated from the HRST, HRSTE, HRSTO and HRSTC categories.
- University rankings from the Shanghai Ranking (ARWU); real GDP per capita from the World Bank in constant PPP terms, in 2021 international dollars. Both series are for 2024.

7) Section "Foreign investment: a gateway to the global economy"

- World Bank data on FDI inflows as a percentage of GDP. The CEE-9 figure is an arithmetic average. Hungary is excluded due to extremely volatile data (for example, FDI inflows exceeding 100% of GDP in one year, followed by a comparable drop the next).
- Poland's share of FDI inflows, population and GDP in the CEE region (excluding Hungary), calculated as averages for 2004–2025. All data from Eurostat. FDI inflows are based on the balance of payments, and GDP is in nominal euros. Hungary is excluded for the same reason as above.
- FDI inflows as a percentage of gross investment, calculated from Eurostat data. FDI from the balance of payments; investment from national accounts.
- Breakdown of FDI into equity, reinvested earnings and debt instruments, based on National Bank of Poland (NBP) data. 12-month moving average.
- Eurostat data on the net international investment position of Poland and CEE-11.

8) Section "International trade: steady technological progress"

- Herfindahl-Hirschman index of goods export diversification, based on UNCTAD calculations for 2025. The scale is inverted for the chart, so that 0 means the least diversified exports and 1 the most diversified.
- Trade as a percentage of GDP, based on World Bank data. Total trade, i.e. goods and services, imports and exports, relative to GDP. The latest available data are used, for 2025 or 2024.
- The chart shows the percentage of jobs linked to foreign demand, based on the latest OECD TiM database. The share of high-tech goods in Polish exports is calculated as the sum of the following categories: "Aerospace", "Computers-office machines", "Electronics-telecommunications", "Pharmacy", "Scientific instruments", "Electrical machinery", "Chemistry", "Non-electrical machinery" and "Armament".

- Exports of advanced services, based on NBP data on international trade in services. The selection of advanced sectors is our own.
- Changes in services exports, based on NBP data on international trade in services.

9) Section "Agriculture: a steadily declining role"

- Agriculture's share of value added, calculated from Eurostat sectoral national accounts. Data cover the whole of Section A, i.e. agriculture, forestry and fishing.
- Data on farm machinery and average farm size come from Statistics Poland's agricultural censuses.
- Data on value added in agriculture and food processing from Eurostat sectoral national accounts, in constant 2005 euros. Productivity per person employed is calculated by dividing value added by employment, as reported in Eurostat national accounts.

10) Section "Manufacturing: moving towards high tech"

- The gap in manufacturing value added per person employed, based on Eurostat sectoral national accounts data on value added and employment in manufacturing, 1995–2024. Value added in constant 2015 prices; employment as headcount, regardless of employment type.
- Shares of CEE-11 and individual countries in EU manufacturing value added, based on Eurostat sectoral national accounts, 1995–2024, in current euros.
- Growth in value added of the "workhorses" of Polish manufacturing, based on Eurostat sectoral national accounts in constant euros.
- Data on employment and annual hours worked in manufacturing, based on Eurostat national accounts for all persons employed.
- The chart shows the shares of individual divisions in Polish manufacturing, based on Eurostat data for 2022 in current euros, the latest complete data available. The coke and refined petroleum products division had an unusually high share that year.

11) Section "Services: towards a modern economy"

- The share of services in GDP in Poland over time and across countries, based on World Bank data. Real GDP per capita in constant PPP terms, in 2021 international dollars, from the World Bank. For Poland, the chart shows changes over time; for other countries, a cross-section for 2023.
- Shares of services and advanced services in value added, calculated from Eurostat national accounts in current euros. Advanced services are defined as NACE Rev. 2 sections J, K, L and M.
- Productivity in services based on national accounts, including employment data regardless of employment type. Value added in constant euros.

- Share of people working in advanced services in total employment, based on Eurostat data. Advanced services are defined as NACE Rev. 2 sections J, K, L and M.
- Employment in the business services sector, based on the ABSL report *Business Services Sector in Poland 2026*.

12) Section "Population and migration: economic success at a demographic cost"

- Changes in countries' shares of the EU-27 population, based on Eurostat data.
- Data on total net migration, and on net migration with the United Kingdom and Germany, from the Statistics Poland publication *Main directions of emigration and immigration for permanent residence, 1966–2025*.
- Total fertility rate (TFR) data from the World Bank.
- Median age data from Eurostat. The Western Europe figure is the arithmetic average of the median ages of Belgium, Denmark, Germany, Ireland, Spain, France, Italy, Luxembourg, the Netherlands, Austria, Portugal, Finland and Sweden.

13) Section "Internal migration: from villages and small towns to cities and metropolitan areas"

- Data on the share of the population living in functional urban areas (FUAs), based on the OECD Regions and Cities Atlas. The OECD provides two different FUA definitions; the grid-based definition (eFUAs) is used here.
- The relationship between urbanisation and GDP per capita, based on the OECD data above combined with World Bank data on GDP in constant PPP terms, in 2021 international dollars.
- Regional economic growth based on Eurostat data on GDP per capita at NUTS 3 level.
- Population changes in urban areas based on the OECD Regions and Cities Atlas, using the more precise FUA definition adopted by the OECD.

14) Section "Companies: the growth of Polish firms and the expansion of domestic capital"

- Data on Polish direct investment abroad, based on NBP investment data compiled under the extended directional principle.
- Market capitalisation of companies listed on the Warsaw Stock Exchange, based on the WSE's *Fact Book* series.
- Data on Polish assets invested abroad, based on NBP data on the international investment position. NBP reserve assets and other claims attributed to the public sector (e.g. general government, NBP) are classified as public.
- Number of companies with foreign affiliates, based on the Statistics Poland publication series *Activity of enterprises having foreign entities*.

15) Section "The state: private sector growth without excessive intervention"

- Tax-to-GDP data from the OECD's *Revenue Statistics 2025*. For most countries, data are for 2024; where unavailable, the previous year is used. Taxes are defined as total compulsory payments to the public sector, including social contributions.
- Share of public consumption in GDP, based on Eurostat national accounts.
- PMR index data from the OECD for 2023. In each of the index's two main categories, values have been normalised to a 0–100% scale, with the bounds set by the extreme values observed among OECD countries.
- Data on ownership transformation of Polish enterprises, based on the Statistics Poland publications *Privatisation of state-owned enterprises* for 2011 and 2012.
- Effective tariff rates, based on World Bank data.

The Polish Economic Institute

The Polish Economic Institute is a public economic think tank with a history dating back to 1928. The Institute produces reports, analyses and recommendations on key areas of the economy and social life in Poland, taking into account the international situation. Its research areas primarily include macroeconomics, energy, the global economy, the digital economy, behavioural economics and social processes.