



COUNTRY BRIEFING POLAND

Vienna Institute for International Economic Studies

Industrial Policy for a New Growth Model

Country Briefing Poland

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CENTRAL AND EASTERN EUROPE NEEDS INDUSTRIAL POLICY TO ESCAPE THE MIDDLE INCOME TRAP

Since the early 2000s, the EU member states of Central and Eastern Europe (EU-CEE) have achieved an impressive economic catch-up process. However, the previously successful model of taking over labour-intensive production steps as an 'extended workbench' of Western corporations has reached its limits. Combined with major global challenges such as decarbonisation and digitalisation, this makes it essential for EU-CEE to develop a new, innovation-based economic model. Only then will these states be able to complete the catch up with Western Europe in terms of productivity and living standards. The situation is exacerbated by the economic consequences of the war in Ukraine, such as permanently higher energy prices and higher inflation, which pose grave challenges for the region's external competitiveness.

The problem is that the central technological competences and those parts of production with the highest added value are located in the 'headquarter economies' of Western Europe. Meanwhile, the EU-CEE countries – Poland, Czechia, Slovakia, Hungary, Slovenia, Croatia, Romania, Bulgaria and the three Baltic states – are still extremely specialised in labour-intensive production. They depend heavily on lower labour costs, and this restricts their prospects of catching up economically with Western Europe. A good example of this is the car industry, which is so important for the region as indicated by its high share of value added, jobs and exports, especially in the Visegrád states, Romania and Slovenia.

The study shows that the EU-CEE countries have so far lacked a constructive approach to industrial policy in their development trajectories. They have had a very broad ranging FDI promotion policy, weak investment environments for start-ups, and the activities of state-owned enterprises have not been aligned with the greater development goals. In general, there is a lack of state entrepreneurship in these countries that could nurture promising industries. This is particularly challenging for regions that are lagging behind within countries, as they lack the technical capacities for industrial policy. Due to these factors, the study argues that the EU-CEE countries are struggling to get out of their middle income trap.

Their EU membership offers unique opportunities for industrial policy, but also challenges. On the plus side are access to funds, participation in research networks and the opportunity to shape industrial policy on the EU level. Important-

ly, industrial policy in the EU has taken a much more prominent role in recent years as shown by initiatives such as the European Chips Act or the Important Projects of Common European Interest (IPCEI). This provides some momentum for the development of industrial policy in the EU-CEE countries. Strict state aid rules and an EU competition policy that gives preference to free market principles, on the other hand, are challenges for an effective industrial policy.

As discussed above, the growth model of the EU-CEE countries must be made fit for the future. Decarbonisation, digitalisation and a shrinking labour force require massive efforts to be made. For countries like Poland, the green transition is a major challenge. This transition can only be managed through huge public investments in green technologies and digitalisation, combined with the right conditions for private enterprise to thrive, to create a fully joined-up approach combining the best of the public and private sectors and academia. This means more money for education, research and development, as well as active labour market policies to manage the transition.

Above all, however, the countries of the region need a strategically oriented industrial policy to support the emergence of more globally competitive companies and to emphasise their own economic strengths. While a true "entrepreneurial state" may be too ambitious for many EU-CEE countries in the coming years, steps in this direction are the way to go. We propose eight steps, that should be taken:

1. Create a national innovation system in each country, bringing together the private sector, universities, key ministries, and business agencies. Within this biotope, new ideas can be developed, tested, and financed. Each country should define which sectors and specialisations are promoted, rather than relying solely on external market forces.
2. Make full use of EU funds and maximise participation in EU research initiatives to advance industrial policy goals. Governments should also get more involved in industrial policy debates at the EU level. Greater participation in the EU's Horizon Europe research funding programme or in the EU's Important Project of Common European Interest (IPCEI) initiative would also be particularly important for the region's technologically less advanced countries.

3. Learn from each other's successes stories to emerge as frontrunners in the digital economy. Estonia is generally well prepared in this area and often raised as an example. However, there are also other positive cases in the region. Romania and Croatia have a particularly high proportion of graduates in ICT, relevant for digitalisation. Czechia shines with its digital start-ups, the Baltic states with the quality of their digital public services. The Visegrád countries and Slovenia have highly digitalised and automated industries.
4. Harmonise investment schemes to attract foreign companies with national industrial policy. Instead of providing blanket support for all investments by foreign companies, national governments should strategically consider which sectors and parts of the value chain they want to attract, and create incentives that maximise the potential for spillovers from foreign giants to domestic firms.
5. Identify and exploit promising niches. Given the lack of technological experience, the establishment of the semiconductor industry in the EU-CEE countries, for example, would not be very promising. However, each country has traditional strengths that should be built upon.
6. Institutional reforms. In some states of the region, the quality of public institutions has declined significantly in recent years. This is worrying. Countries in East Asia have a lot of experience in building adequate institutions for an active industrial policy, even if the framework conditions there partly do not meet Northwest European standards. This experience should be used.
7. Structural change must be cushioned socially in order not to lose the support of the population. EU-CEE countries should aim for a flexible labour market to ease the transition from old to new jobs, but underpin this with extensive retraining programmes and a social safety net that means that workers themselves do not bear the costs of the transition.
8. Each country needs a tailor-made industrial strategy adapted to its specific needs. While the Baltics, for example, are well positioned for the digital transformation, they are struggling above all with distribution problems and a shrinking population. Czechia, Poland or Slovenia are industrially the most advanced, but must make the transition from 'extended workbench' to innovative economy. For the less developed parts of EU-CEE such as Bulgaria and Romania, the priority should be on maximising the transfer and knowledge and innovation from big foreign investors.

COUNTRY BRIEFING POLAND

COUNTRY OVERVIEW

Poland is a moderately industrialized country, with the role of manufacturing in employment and value added above the EU average, yet below some of its CEE peers. It is an export-oriented economy, deeply embedded in global value chains through the channels of both FDI and subcontracting. In recent years, Polish economy, and the manufacturing sector itself has been catching up in terms of labour productivity (although still at high productivity gaps), and it has been quite resilient when it came to employment and output dynamics. Its comparative advantages lie mostly in the availability of skilled, and still relatively cheap workers, as well as its geographical proximity to the German headquarters. It is, also, the largest economy of the region, which is reflected in its diversified industrial structure, and a relatively (on the CEE background) big role of domestic demand and domestic ownership in manufacturing sector.

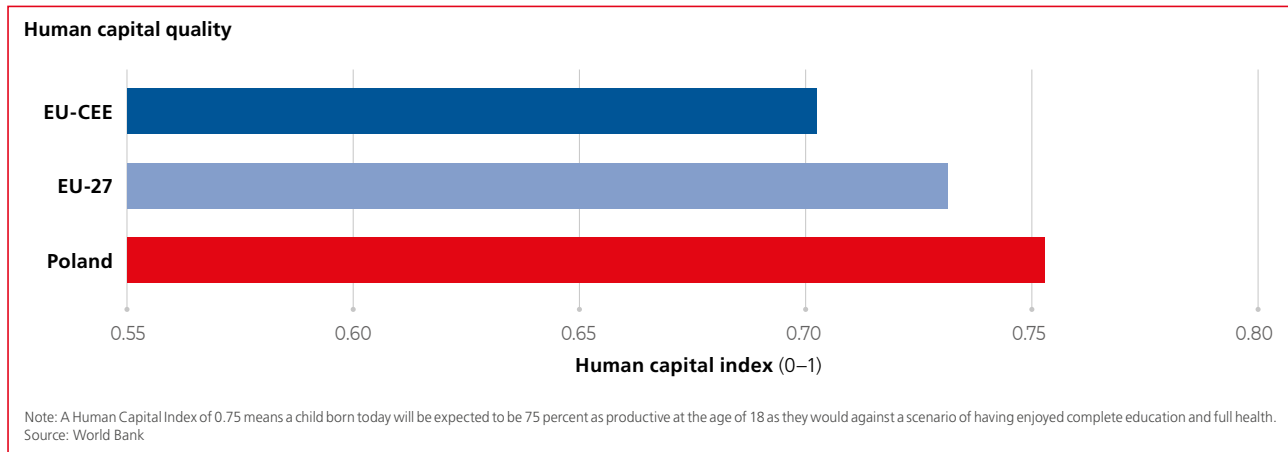
Industrial structure in Poland is dominated by low- and middle-low tech industries, with very small shares of high-tech activities in employment and value added. The technology content is weak also in services, with relatively small shares of ICT and knowledge-intensive activities. Poland manufacturing production and exports is specialized in food, metals and minerals manufacturing, production of furniture. It is also present in most globalized value chains of automotives (though to a lower extent than other Visegrád countries), machinery and equipment, as well as pharmaceuticals. In re-

cent years, exports of services have been growing dynamically, due to new FDI in logistics, transport, and various business services (shared-services centres). Most of export-oriented industries in Poland are dominated by multinational corporations, while Polish capital is organized mostly in small and medium enterprises, which perform functions of suppliers and subcontractors. Notable exceptions are visible in: food production (Maspex, dairy cooperatives), clothing and footwear (LPP, CCC), pharmaceuticals (Polpharma, Adamed), chemistry (Synthos, Azoty), and ICT (CD Projekt, Asseco). After 2015 there were industrial policy attempts to stimulate the development of domestically owned exporters, and a broad innovation ecosystem. They have been, however, mostly futile, and inconsequent, and the dependence on foreign capital and value chains has actually even increased.

Polish manufacturing has considerable weaknesses, and it will face profound challenges to reduce its substantial productivity gap with respect to West European economies. Its competitiveness resides still mostly in low labor costs (further assured by currency undervaluation), and the availability of skilled workers. Functionally, it is specialized in production stages of manufacturing in most industries. Internal sources of non-cost competitiveness and innovativeness are restricted to few industries. R&D expenditure lies both below the EU average, and behind Czechia and Hungary. What is more, there is a significant gap between large firms and SMEs in important aspects such as R&D and productivity of employees.

| Industrial development – I | | | |
|----------------------------|--|--|--|
| | Competitive industrial performance index | Manufacturing value added (MVA) (% of GDP) | Medium- and high-tech MVA (% of total MVA) |
| Poland | 0.14 | 17 | 33 |
| EU-27 | 0.14 | 15 | 41 |
| EU-CEE | 0.10 | 17 | 38 |

Note: 2020 values. The CIP index assesses the strength and complexity of an economy's industry, with Germany claiming the maximum score in 2020 at 0.42.
Source: UNIDO



INDUSTRIAL COMPETITIVENESS – SWOT

Strengths

- Deep integration in global value chains, which facilitates productivity growth, technological spillovers and access to export markets. In recent years, it has moved beyond manufacturing towards business services
- Diversified industrial structure, and a strong domestic market, making it more resilient to global business cycle and diverse shocks
- Policy makers' awareness of the role of industrial policy, as reflected in the systemically growing government financed R&D spending, and the development of innovation ecosystem around the Polish Development Fund

Weaknesses

- High reliance on fossil fuels in energy supply, with import dependency and coal being of particular importance. By 2030 the share of coal-fired power generation will still be estimated to be around 37.5 per cent.
- Low innovativeness of the business sector, with low R&D expenditures, small high-tech manufacturing and knowledge-intensive services.
- Digital and productivity gap between large (mostly foreign) companies, and domestically owned SME sector, which translates into the barriers for investment and competitive exports.
- Underfinanced public services, including education, science and health care systems

Opportunities

- Strategic focus on some future-oriented activities and technologies, like batteries for electric vehicles, drones, cloud computing and hydrogen utilization, might enable leapfrogging
- Upgrading towards high value-added, profitable niches in some of the already developed low-tech industries, e.g. food production, furniture, or chemicals.
- Development of innovation and entrepreneurial ecosystem in segments of ICT (gaming, big data, e-commerce, fin-techs).
- Automation and functional upgrading in business services sector, driven by accumulated skills and experience of Polish workers as well as the continuous wage pressures, in the condition of labour shortages

Threats

- Functional lock-in in labour-intensive, low-wage activities, facilitated by poor application of labour regulations and systemically weak trade unions
- On-going blockade on the inflow of strategically-important RRF funds, due to political conflicts between the ruling party and the European Commission
- Carbon lock-in, slow energy transition and weak development of green industry, due to policymakers' skepticism of policymakers and the pressures of a strong carbon related industrial lobby
- Shortage of scientific and ICT specialists in the labour market hinders the potential of a more digital economy

INDUSTRIAL POLICIES AND STRUCTURAL REFORM DEVELOPMENTS

FDI promotion and value chain upgrading

- Polish Investment Zone created in 2018 makes certain tax exemptions now available in the entire country and not restricted to regional special economic zones as before. This was undertaken to introduce more selective and strategic approach to incoming FDI, as well as to level-off the field for both foreign and domestic investors. In a similar way, the Act on Supporting New Investments of 10 May 2018 granted extra-support for greenfield investments in R&D centres in Poland. Despite some signs of this new strategic approach to foreign capital (perhaps best exemplified with the forward-looking invitation for LG batteries factory), the overall policy is still lenient and many investments in manufacturing reproduce low-tech, labour-intensive mode of production.
- Diverse agencies of the Polish Development Fund Group provide institutional support also for outgoing FDI and exports. Consolidation and reform of the Group, as a part of the Strategy for Responsible Development (SOR) after 2017, increased the scope and availability of instruments for foreign expansion, which span: export insurance schemes, export promotion and diplomacy, and direct subsidies to outgoing FDIs.

New technologies, digitalisation, innovation

- The SOR Strategy included profound reform of the National Innovation System, and its consolidation around the National Centre for Research and Development and the Polish Development Fund Group. In subsequent years institutional and financial support for innovations increased substantially, and it covers diverse stages of technology maturity, as well as companies of various sizes. SOR also prescribed a strategic focus on a number of key industries, either with already strong comparative advantage (e.g. food, furniture, trains, games), or promising ones (drones, small ships, medical instruments). However, only some of them can be perceived as policy success. Most were discontinued due to a lack of political or business support, while the whole industrial strategy evolved after 2020 towards more horizontal and liberal one.
- About 21 per cent of the Recovery and Resilience Facility (RRF) is allocated to the digital transformation, including direct businesses support. However, Polish government remains (as of early 2023) in conflict with the European Commission, which means that necessary milestones for the disbursement of these funds remain unmet.
- Broad financial support for robotisation through tax deductions, grants, and subsidies. Most of these funds are, however, scattered, unstable or depend on the acceptance of the national Recovery and Resilience Facility plan. Now, the most important instrument is the Act on relief for robotization, which grants tax deductions for 50 per cent of robotization-related costs.

Green transformation of industry

- Polish Hydrogen Strategy was prepared in 2021 to mobilize and integrate actions towards development of diverse hydrogen-based technologies and to introduce them in utilities, transportation, and industry. Industrial Development Agency has coordinated since then opening of 5 so-called hydrogen valleys, i.e. regional clusters that shall specialize in particular technologies, and integrate academic, business and political actors. Also, Poland participates in IPCEIs on hydrogen utilization.
- Support of electromobility has been of the priorities in Polish industrial policy since 2017. Its flag project is to develop a Polish commercial brand of electric vehicles (within a state-owned company Electromobility Poland). This faces, however, multiples obstacles and lags behind the schedule, while other initiatives have been more successful. It involves building a battery cluster around the LG factory, and a strong export sector of electric buses.
- Polish Development Fund runs a Green Hub, as a platform dedicated to support investment and innovation in renewable energy technologies. This is however a small exception, and energy transition is rarely perceived by the policy makers as vital for industrial competitiveness as well (beyond mere costs, and accessibility of energy). For instance, Polish plan for Recovery and Resilience Facility covers mostly funds for transition of energy infrastructure, and electric public transport, with marginal role for development of technologies themselves.

COUNTRY-SPECIFIC RECOMMENDATIONS

In the main part of the study, we identify Poland as one of the wealthier and more industrialised parts of the region, where the core focus should be on making the switch from imitation to innovation-driven growth. Policymakers should target the cultivation of a National Innovation System, wider participation in common EU projects, and investment in human capital. Specifically, we propose the following policy priorities:

- **Take a more assertive and strategic stance towards foreign direct investments.** Incoming FDIs have been a transformative force for Polish manufacturing, in its both positive and negative aspects. In most industries, it is foreign capital that drives production, technical change and exports, with domestically owned companies and labour force at peripheral and dependent positions. Arguably, some policies and institutions favour such mode of development. This could be changed by, most importantly, much more selective application of tax deduction and subsidies to incoming FDIs, to make sure that Poland is attracting investment from abroad that aligns with its specific needs and own industrial strategy (see policy recommendation 5.4 in the main report). Development of clusters and balanced linkages with Polish suppliers should be a precondition of such financial support. Also, strict application of labor regulations and protection of competition would facilitate wage growth, profit reinvestments (instead of remitting) and functional upgrading.
- **Push the SME sector beyond routine tasks, and towards higher positions in value chains.** Productivity and digital gap between SMEs and large companies is a major barrier on the way to a new growth model in Poland. The SME sector is relatively large and important for employment, yet it is far from technology frontier and is unable to sustain high rates of investment and innovation. Public policies should push the companies to build up on existing advantages, yet to abandon the dominant labour-intensive mode of production. In already strong low- and middle-tech sectors (food, furniture, chemicals), Poland could develop local, resilient value chains, which could be new leaders in niches of respective industries. The process should involve local authorities, academia, as well as IT sector to integrate digital technologies, following the guidelines of an entrepreneurial state (see policy recommendation 5.1 in the main report). On the other hand, current ITC ecosystem (in gaming, fintech, e-commerce, e-health or e-education) should be scaled-up and networked, with the funds of RRF.
- **Commit to an ambitious and broad energy transition.** So far energy transition in Poland has faced multiple obstacles and has been narrowed down to slow changes in energy infrastructures. In turn, Poland not only remains a major polluter in terms of CO₂ emissions, but also has ongoing problems with availability and costs of energy, while its sector of green technologies is underdeveloped. The greening of power generation and the parallel coal phase-out should be sped up, with

regulatory and financial priority given to renewables. The Just Transition Fund should be utilized to build up on the human and economic potential of coal regions. New modes of production and technology development (including cooperatives) should be promoted for instance in thermal modernization, ecological construction, and electric public transport. The PFR Green Hub should be expanded towards further technology areas, based on the lessons learnt in hydrogen and batteries.

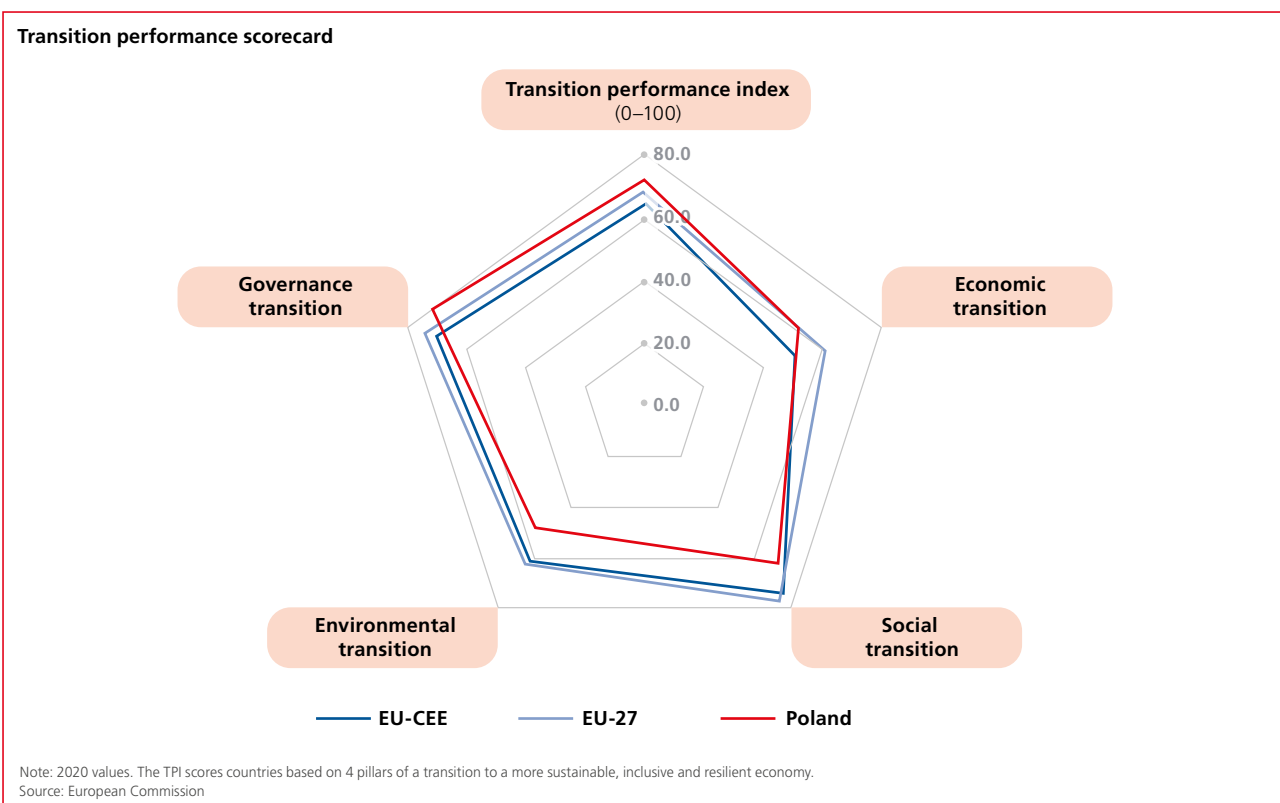
- **Invest in education, skills and science.** Human capital remains a major competitive advantage of Polish economy. However, this advantage may evaporate quickly, due to demographic decline and weaknesses of education sector. Labour shortages have been present

already in recent years, and many investors, as well as public sector organizations, complain about the decreasing availability of highly skilled workers. Large public investments in education and science is a precondition towards sustained upgrading, in terms of industrial complexity, functions and tasks. Education and (re) training policies should be aligned with the current and future needs of the labour market, and address especially workers in industries and/or regions that will be negatively affected by the twin transitions, to prepare them for the needs of a greener, more digital economy (see policy recommendation 5.7 in the main report). Priority should be given towards education and life-long learning in engineering, IT and other competences, in line with long-term social and industrial goals.

Industrial development – II

| Sector | Percent of manufacturing employment |
|--|-------------------------------------|
| Food products | 15.2 |
| Fabricated metal products, excl. machinery and equipment | 13.1 |
| Rubber and plastic products | 7.9 |
| Motor vehicles, trailers and semi-trailers | 7.5 |
| Furniture | 7.2 |
| Machinery and equipment | 5.2 |
| Other non-metallic mineral products | 5.2 |

Note: 2018 values.
Source: Eurostat Structural Business Statistics.



Poland



COUNTRY OVERVIEW

Poland is an export-oriented economy, deeply embedded in global value chains. Manufacturing is important and dominated by low- and middle-low tech industries.

Manufacturing is specialized in food, metals and minerals manufacturing, production of furniture. It shows a substantial productivity gap with respect to West European economies. Its competitiveness resides mostly in low labor costs and the availability of skilled workers.

R&D expenditure lies clearly below the EU average.

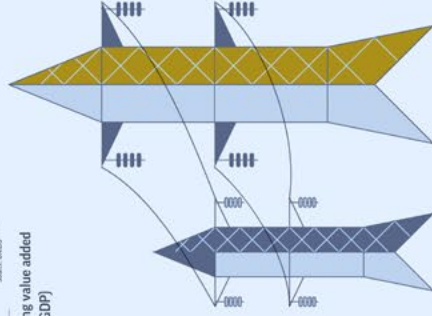
INDUSTRIAL DEVELOPMENT

| | 0.14 | 17% |
|---------------|------|-----|
| POLAND | | |
| EU-27 | 0.14 | 15% |
| EU-CEE | 0.10 | 17% |

Competitive industrial performance index

Manufacturing value added (MVA) (% of GDP)

Source: OECD, Eurostat, The European Commission, the European Central Bank, Germany's Federal Statistical Office, Eurostat, ILO, UNCTAD



INDUSTRIAL COMPETITIVENESS - SWOT



STRENGTHS

- Deep integration in global value chains.
- Diversified industrial structure, and a strong domestic market.
- Growing government financed R&D spending
- Evolving innovation ecosystem around the Polish Development Fund

WEAKNESSES

- High reliance on coal and imports of fossil fuels
- Low innovativeness of the economy and low R&D expenditures
- Digital and productivity gap between large (mostly foreign) companies and domestically owned SME sector.
- Underfinanced public services, including education, science and health care system.

OPPORTUNITIES

- Strategic focus on some future-oriented activities and technologies, like batteries for electric vehicles, drones, cloud computing and hydrogen utilization.
- Upgrading towards high value-added, profitable niches in some low-tech industries.
- Development of innovation and entrepreneurial ecosystem in segments of ICT (gaming, big data, e-commerce, fintech).
- Automation and functional upgrading in business processes and acquisition of new skills and experience of Polish workers as well as the continuous wage pressures.

THREATS

- Functional lock-in in labour-intensive, low-wage activities.
- On-going blockade of RRF funds, due to political conflicts between the Government and the European Commission.
- Carbon lock-in, slow energy transition and weak development of green industry.
- Shortage of scientific and ICT specialists.

WHAT SHOULD BE DONE?

COUNTRY-SPECIFIC RECOMMENDATIONS

- Focus on the switch from limitation to innovation-driven growth, targeting the cultivation of a National Innovation System.
- Take a more assertive and strategic stance towards foreign direct investments with the aim of the development of clusters and linkages with Polish suppliers.
- Push the domestic SME sector beyond routine tasks, and towards higher positions in value chains aiming to develop local, resilient value chains which could be leaders in niches of respective industries.
- Commit to an ambitious and broad energy transition, speeding up the greening of power generation and the coal phase-out.
- Invest much in education, skills and science while aligning education and (re)training policies with future needs of the labour market with life-long learning in engineering, IT and other competences.



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Industrial Policy for a New Growth Model: A Toolbox for EU-CEE Countries

This country briefing is a short summary of a much broader study that deals with the perspectives of industrial policies in Central Eastern and Southern Eastern Europe and the question how these countries can avoid to get stuck in a middle-income trap. The study has been authored by a team of experts from the Vienna Institute for International Economic Studies on behalf of Friedrich-Ebert-Stiftung.

The study argues that the EU-CEE countries have so far lacked a systematic approach to industrial policy in their development trajectories. They have had a very broad ranging FDI promotion policy and weak investment environments for start-ups, while the activities of state-owned enterprises have not been aligned with the greater development goals.

Hence, the growth model of the EU-CEE countries must be made fit for the future. Decarbonisation, digitalisation and a shrinking labour force require massive efforts to be made. This transition can only be managed through public investments in green technologies and digitalisation, education and infrastructure, combined with the right conditions for private enterprise to thrive.

The study includes eleven country profiles that analyse the economic and industrial structures for their strengths and weaknesses and identify possible courses of action for an active industrial policy.

The full study can be found here:

<http://library.fes.de/pdf-files/bueros/budapest/20260.pdf>



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