



COUNTRY BRIEFING CZECHIA

Vienna Institute for International Economic Studies

Industrial Policy for a New Growth Model

Country Briefing Czechia

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This publication is edited by the FES programme on Economic Development in Central Eastern and South Eastern Europe »European Economies of the East«. The program is headed by Ernst Hillebrand.

Please find all the publications of the programme under its webpage:

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Special thanks to Maciej Grodzicki (Jagiellonian University), Michael Landesmann (wiiw), Julie Pellegrin (CSIL), Slavo Radosevic (UCL) and Roman Stöllinger (wiiw, WU) for their valuable inputs and guidance in the writing of the report.

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 CZECHIA

COUNTRY OVERVIEW

Czechia is the most industrialised country in the EU-CEE, and the most developed. This is reflected by the various indicators of industrial competitiveness, whereby the country not only outperforms other economies in the region, but also scores quite high above the EU average. The relatively high share claimed by sophisticated manufacturing in total manufacturing value added is particularly encouraging – an outcome of deep global value chain integration through FDI. The human capital dimension echoes the relative strength of Czechia, though it does not catch up to regional leaders Slovenia and Estonia.

Similar to Hungary and Slovakia, the metal production and automotive sectors form the core of economic activity in Czechia, representing 14.8 and 13.7 per cent of manufacturing employment, respectively. The Czech automaker Škoda Auto, now owned by Volkswagen Group, is one of the largest employers in the country¹, though other original equipment manufacturers also contribute to the size of the sector (including Toyota/Groupe PSA, and Hyundai Motors). Building on its long-standing tradition in engineering and mobility, there are emerging efforts related to green technologies in the automotive industry, including participation in the IPCEI related to the development of hydrogen-powered buses. In addition, Czechia has a relatively strong foothold in the chemicals and pharmaceuticals industry, and a

growing presence in the medical equipment industry, including the production of nanofibers. There is also a solid ecosystem of high growth start-ups and established players in the digital sector, including ‘unicorn’ and ‘big exit’ firms such as Avast, Kiwi.com, Rohlik group, or JetBrains.

The economy’s main shortcoming given the megatrends lies in the environmental transition: here, Czechia lags behind even its less economically advanced EU-CEE peers, unlike the other four dimensions of the transition performance index, where Czechia lies above or in line with the overall EU performance. At the same time, given its landlocked position and high dependence on Russian energy imports, the issue of energy security represents a particular challenge for industrial competitiveness going forward.

INDUSTRIAL COMPETITIVENESS – SWOT

Strengths

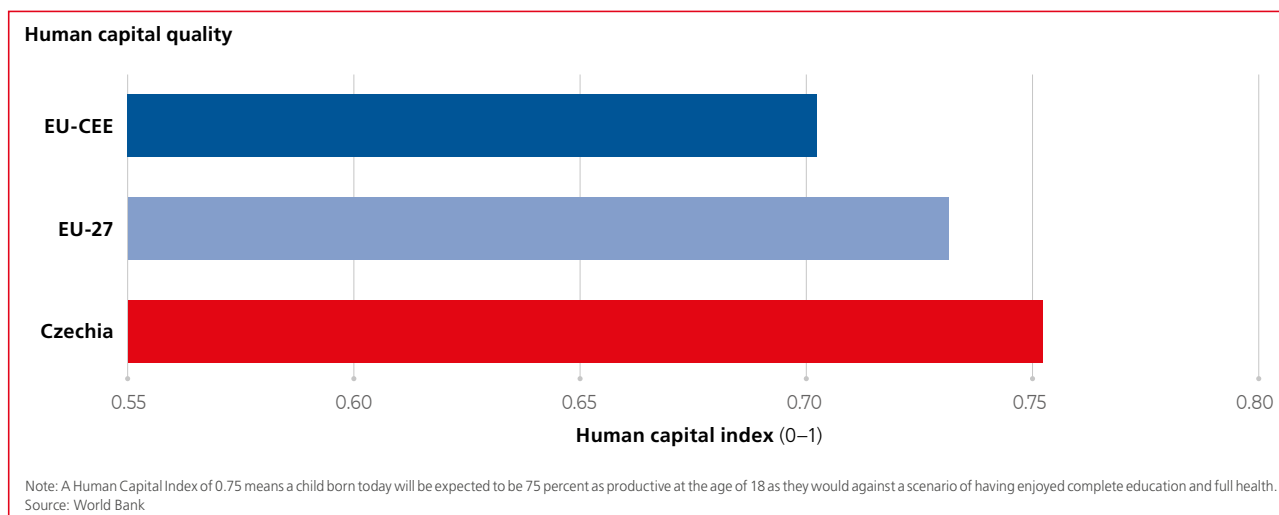
- Deep embeddedness in global value chains, especially in the automotive sector, eases access to state-of-the-art technologies and know-how
- Second highest government spending in R&D relative to GDP among all EU countries², points to the state’s commitment to boost innovation
- Institutional quality is among the highest in the EU-CEE, offering solid pre-conditions for state entrepreneurship

¹ Czech Top 100 ranking, 2018.

² Eurostat data, 2020 figures.

Industrial development – I			
	Competitive industrial performance index	Manufacturing value added (MVA) (% of GDP)	Medium- and high-tech MVA (% of total MVA)
Czechia	0.19	25	52
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



Weaknesses

- A laggard in the green agenda by EU standards: over-reliance and continued subsidization of coal and other fossil fuels, combined with energy efficiency much below EU levels and high dependence on Russian imports.
- There are numerous obstacles to greater digitalisation, including the relatively low IT adoption by public authorities, and high mobile data prices due to the market oligopoly
- Scarcity of financing options for new enterprises due to an underdeveloped venture capital and private equity market

Opportunities

- Strategic emphasis on hydrogen technology value chains offers promising areas for leapfrogging
- An emerging entrepreneurial ecosystem, as evidenced by the recent rise of domestic high growth firms specialised in digital products and solutions
- Continuous experience with labour shortages incentivises productivity-enhancing automation

Threats

- Skepticism of policymakers towards green policies, lower social support of environmental protection compared to the core-EU countries and a relatively strong carbon related industrial lobby
- Shortage of scientific and ICT specialists in the labour market hinders the potential of a more digital economy
- Lagging productivity growth rates in recent years compared to other Visegrád countries
- Lack of cooperation and coordination among government ministries and agencies responsible for industrial policies

INDUSTRIAL POLICIES AND STRUCTURAL REFORM DEVELOPMENTS

FDI promotion and value chain upgrading

- Act on Investment Incentives revised in 2019 to focus on higher value-added projects. Umbrella support continues to be provided to manufacturing with different

conditionalities based on firm size. Greater assistance offered to SMEs is intended to extend support to domestic firms. In addition, technological centres and business service centres are strategically favoured for financial assistance and fiscal benefits. Still, there is a general lack of ex-post evaluation of the effectiveness of implemented promotion policies, and the bulk of supported projects remain in the manufacturing industry, offering little room for sectoral diversification.

- Special tax allowances for R&D expenditures are in place, which allow for a deduction of up to 100 per cent. However, these are used relatively sparsely, and have been subject to organisational challenges over eligible expenditures in the past that caused conflicts between businesses and tax authorities.

New technologies, digitalisation, innovation

- The National Research and Innovation Strategy (RIS3) approved in 2021, vertically focuses on nine core domains, including areas in which Czechia already has a relatively strong presence (e.g. advanced materials, transport, electronics), as well as new areas identified for upgrading and diversification (e.g. bioeconomy, pharmaceuticals).
- About 22 per cent of the Recovery and Resilience Facility (RRF) is allocated to the digital transformation, including direct businesses support. Czechia is presently in the process of meeting the necessary milestones for the disbursement of these funds.

Green transformation of industry

- The investments and reforms covered by the RRF do not primarily target the nurturing of green technologies and industries, focusing more heavily on the provision of sustainable public solutions. This aspect can be partially linked to the RIS3 strategy, however, where green technologies for agriculture, food production and forestry make up one of the nine specialisation domains.
- There is an emphasis on hydrogen technologies, with the adoption of the Hydrogen Strategy of the Czech Republic and participation in the IPCEI 'Hy2Tech', as well as the establishment of the Czech hydrogen technology platform (Hytep) by the Ministry of Industry and Trade.

COUNTRY-SPECIFIC RECOMMENDATIONS

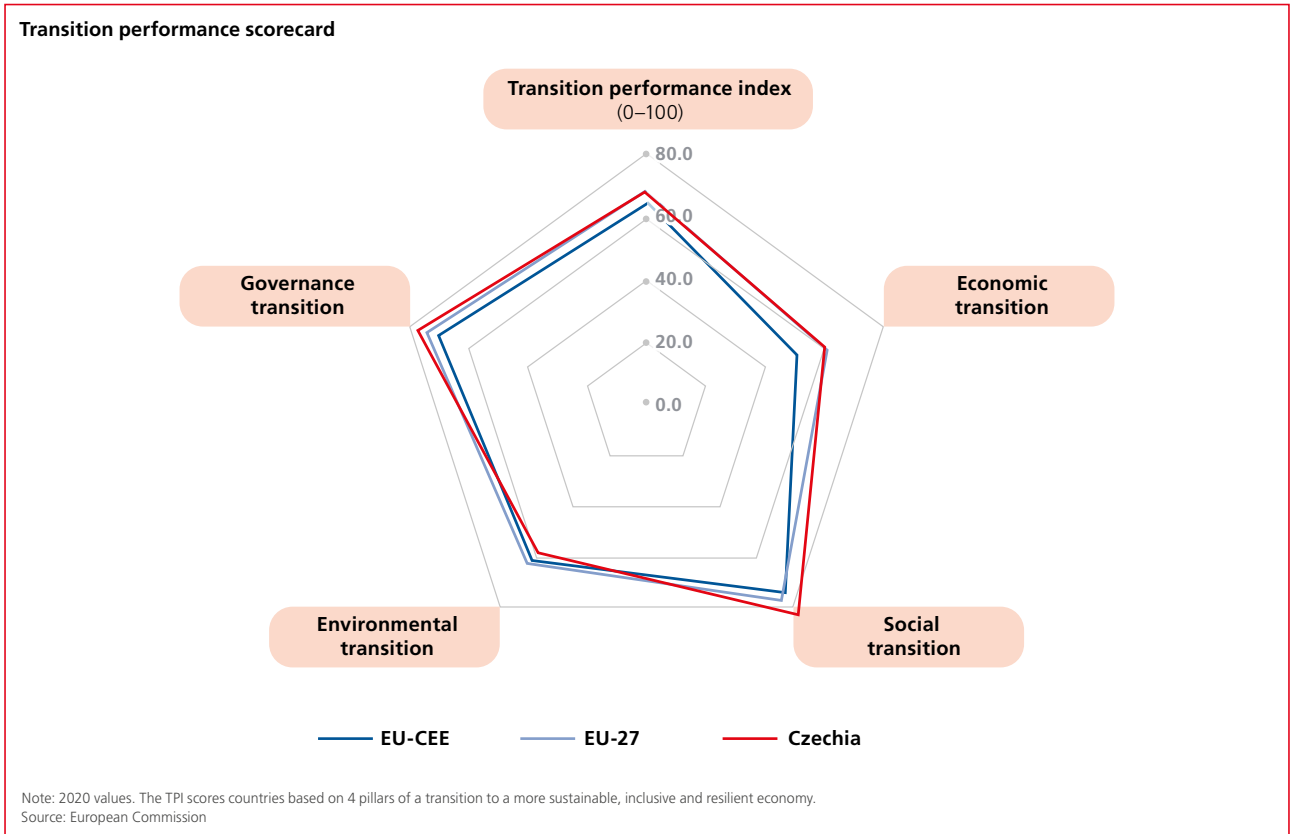
In the main part of the study, we identify Czechia as the wealthiest and most industrialised country of the region, where the core focus should be on making the switch from imitation to innovation-driven growth. Policymakers should target the cultivation of a National Innovation System, wider participation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

- **Implement a tailored FDI promotion policy which would complement the national industrial strategy.** Recent reforms in the investment incentives scheme lay out the intention to upgrade the position of Czechia in global value chains. However, the support provided remains broadly defined and is not harmonised with an overall industrial strategy, missing a clear directional overlap with other strategic policy documents (as outlined in policy recommendation 5.4 of the main report). Moreover, as discussed in Box 4 of the main report, a regular and evidence-based evaluation of investment promotion policies is largely absent in the country. At the same time, the creation of linkages with domestic firms ought to feature more prominently in the country's FDI strategy. Leveraging the regional offices of the Czechinvest agency, that have the know-how on local firms and their needs can play a valuable role.
- **Speed-up digitalisation of the public sector and overall implementation of the strategy Digital Czechia.** So far, digitalization of public services has been proceeding rather slowly, and presents an opportunity for Czechia. Inspiration can be drawn from the EU-CEE's digital frontrunners like Estonia, which is a leader in the quality of public e-services (see recommendation 5.3 of the main report). The country should take advantage of the fact that for the first time since 2007, digitalization of public services falls under the responsibility of a government minister. The utmost issue has been the so-called supplier lock-in, i. e. a situation when a government agency is dependent on a single long-term supplier, reducing the efficiency of the digital ecosystem, interconnectedness of the digital public services and providing room for corruption. To this end, the transformation and synchronization of the internal processes and IT tender coordination would present a step in the right direction.
- **Take a more proactive approach to the green transformation.** The policy stance taken by Czechia in the green transition thus far has been relatively hesitant and avoidant. This limits the potential to cultivate an ecosystem where green technologies and industries, which are inevitably rising in importance, would be able to flourish. Implementing direct support to innovative businesses and research in this area presents an opportunity to leapfrog from a coal-oriented economy to a rising player in clean technologies. Still, given the large share of Czechia's workforce being potentially adversely exposed to the changes brought on by the green transition, policies advancing the green transformation need to be complemented by the provision of a robust safety net (in line with the policy recommendation 5.7 of the main report).
- **Introduce the upskilling and reskilling programs, that enable employees to acquire competences demanded by the labour market.** Again related to the distributional implications of structural change (as emphasised in policy recommendation 5.7 in the main report), it is important to note that Czechia is among countries with the lowest share of population continuously participating in lifelong learning programs. In the near future, combined with population ageing, this exacerbates the risk of deepening skill mismatches in the labour market, and hinders the prospects of further development. A central programme for upskilling and reskilling which is in line with the long-term priorities of the industrial policy ought to be implemented under the coordination of the responsible government ministries.

Industrial development – II

Sector	% of manufacturing employment
Fabricated metal products, excl. machinery and equipment	14.8
Motor vehicles, trailers and semi-trailers	13.7
Machinery and equipment	10.0
Electrical equipment	8.2
Food products	7.5
Rubber and plastic products	7.2

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



Czechia



COUNTRY OVERVIEW

Czechia is the most industrialised country in the EU-CEE, and the most developed.

The economy's main shortcoming given the megatrends lies in the environmental transition: here, Czechia lags behind even its less economically advanced EU-CEE peers.

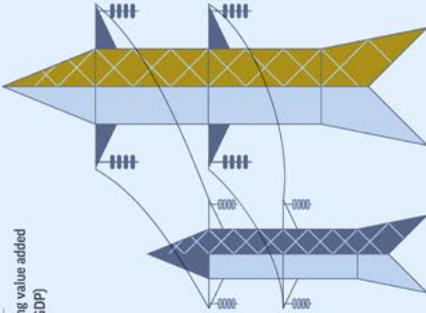
Given its landlocked position and high dependence on Russian energy imports, the issue of energy security represents a particular challenge for industrial competitiveness.

INDUSTRIAL DEVELOPMENT

	0.19	25%
CZECHIA		
EU-27	0.14	15%
EU-CEE	0.10	17%

Competitive industrial performance index

Source: OECD, Eurostat, The World Economic Forum, The Global Competitiveness Index, Government of the Czech Republic, Government of the Czech Republic, Eurostat, OECD, World Bank, WFP



INDUSTRIAL COMPETITIVENESS - SWOT



STRENGTHS

- Deep embeddedness in global value chains, especially in the automotive sector
- Second highest government spending in R&D relative to GDP among all EU countries
- Institutional quality is among the highest in the EU-CEE



WEAKNESSES

- Over-reliance on coal and other fossil fuels, low energy efficiency and high dependence on Russian imports.
- Numerous obstacles to greater digitalisation, including the relatively low IT adoption by public authorities
- Scarcity of financing options for new enterprises



OPPORTUNITIES

- Strategic emphasis on hydrogen technology value chains offers promising areas for leapfrogging
- An emerging entrepreneurial ecosystem with domestic high growth firms specialised in digital products and solutions
- Labour shortages incentivises automation



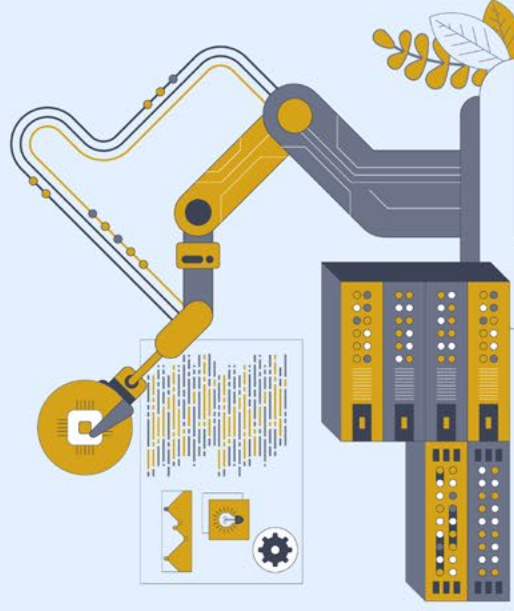
THREATS

- Low support for green politics by politics and citizenship; relatively strong carbon related industrial lobby
- Shortage of scientific and ICT specialists
- Lower productivity growth rates in recent years compared to other Visegrad countries
- Weak cooperation and coordination among government ministries and agencies responsible for industrial policies

WHAT SHOULD BE DONE?

COUNTRY-SPECIFIC RECOMMENDATIONS

- **Implement a tailored FDI promotion policy which would complement the national industrial strategy.** The aim should be to upgrade the position of Czechia in global value chains. At the same time, the creation of linkages with domestic firms ought to feature more prominently in the country's FDI strategy.
- **Take a more proactive approach to the green transformation.** Implementing direct support to innovative businesses and research in this area presents an opportunity to leapfrog from a coal-oriented economy to a rising player in clean technologies.
- **Speed-up digitalisation of the public sector and overall implementation of the strategy Digital Czechia.**
- **Introduce the upskilling and reskilling programs, that enable employees to acquire competences demanded by the labour market.**



IMPRINT

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Friedrich-Ebert-Stiftung

Publisher: Friedrich-Ebert-Stiftung Budapest

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ISBN 978-615-6289-43-8

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Design/Typesetting: pertext, Berlin

Cover photo: Nataliya Hora / Shutterstock.com

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>



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

Vienna Institute for International Economic Studies,
Friedrich-Ebert-Stiftung Budapest, 2023, 103 Seiten,
ISBN 978-615-6289-36-0