

The background of the entire page is a photograph of a modern industrial factory. Several yellow robotic arms are visible, working on a production line. The scene is filled with complex machinery, pipes, and structural elements of the factory ceiling. The lighting is bright, typical of an industrial environment. A semi-transparent blue overlay covers the left side of the image, and a solid red horizontal bar is positioned across the middle, containing the text 'COUNTRY BRIEFING ESTONIA'.

COUNTRY BRIEFING ESTONIA

Vienna Institute for International Economic Studies

Industrial Policy for a New Growth Model

Country Briefing Estonia

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

<https://eastern-europegrowth.fes.de/>

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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 ESTONIA

COUNTRY OVERVIEW

Estonia is one of the world's most enabled digital nations and a pioneer in digital transformation in EU-CEE. Technological advancements and very high quality of human capital enable Estonia's strong service-based model, largely based on exports of digital know-how and ICT services. Strong record in development and implementation of innovative technologies has been attracting large-scale FDI in high-tech sectors – the cornerstone of economic growth over the last decade. Governance and social transition also top the levels of EU-CEE and EU-27, largely due to advanced digitalization of public services and social innovation. Economic transition performance ranges above other EU-CEE due to steadily growing income level, flexible job market and strong public finance.

The largest sector of economic activity in Estonia, similarly to other Baltic states, is manufacturing, especially wood and wood products, which altogether accounted for 15 per cent of GDP in 2021. Estonia's industry, however, is uncompetitive both compared with EU-CEE and the overall EU average (see table below). In 2020, medium- and high-tech manufacturing value added according for just 30 per cent of the total, also below the EU-CEE and EU averages.

However, the IT sector is the heart of Estonian economy and, in the last decades, has largely driven overall economic growth. This success is based on high levels of capacity and knowledge, strong domestic and foreign demand for cutting-edge technological solutions, strong competitiveness on international markets, and a high level of trust from both customers and investors domestically and internationally. Estonia has the highest number of start-ups and 'unicorns' per capita in Europe, with a notable percentage of those operating in high-tech sectors. Examples include the ride-hailing company Bolt, the fin-tech company Wise (now headquartered in the UK), or the most recent 'unicorn', a digital customer service provider Glia. Despite the deteriorating geopolitical situation and resulting negative economic fallout, Estonia remained highly attractive among foreign investors last year, as overall venture capital investment activity was the highest in per capita terms of all EU countries¹.

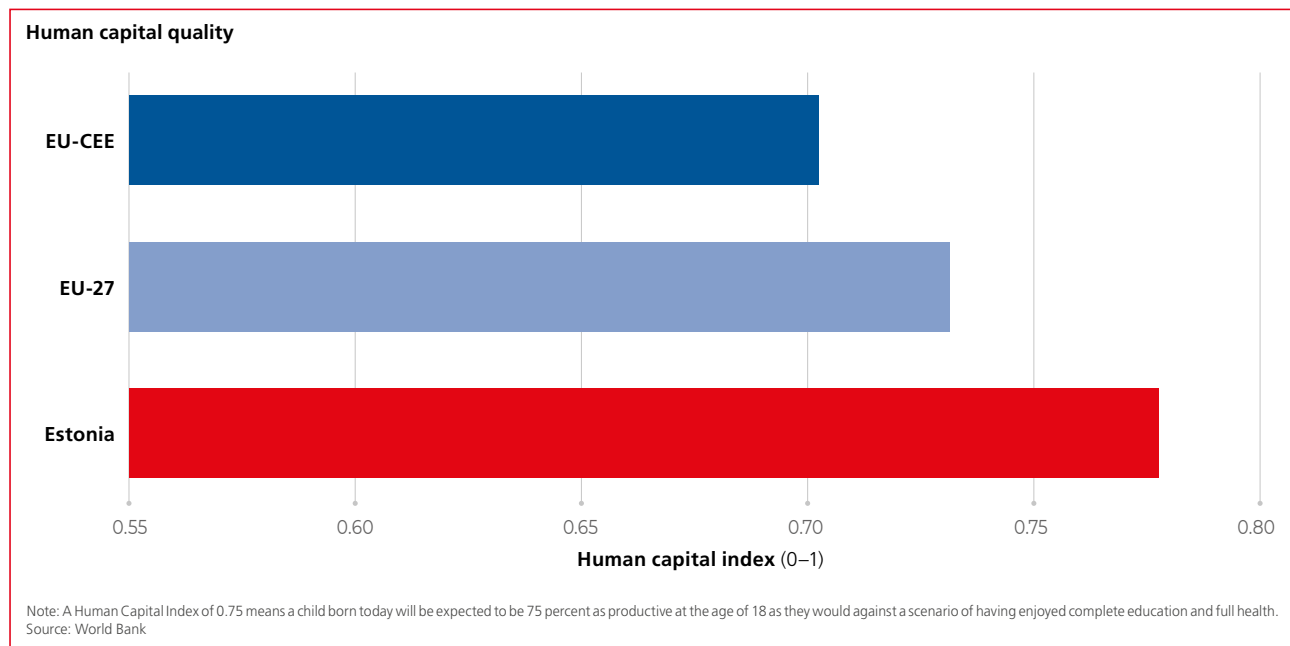
However, Estonia still lags behind in the environmental transition, as oil shale and natural gas remain core energy sources. Nevertheless, like for the rest of EU-CEE, the Russian in-

¹ <https://dealroom.co/uploaded/2021/10/Dealroom-Google-Atomico-CEE-report-2021.pdf?x64504>

Industrial development – I

	Competitive industrial performance index	Manufacturing value added (MVA) (% of GDP)	Medium- and high-tech MVA (% of total MVA)
Estonia	0.06	13	30
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



vasion of Ukraine and fallout will likely shift country's energy profile to more green and sustainable sources.

INDUSTRIAL COMPETITIVENESS – SWOT

Strengths

- Estonia is a leader in digital transition and IT sector developments, both in EU-CEE and the EU-27. As a result, the country posts a remarkably high level of digitalization and well-established digital infrastructure (DESI above EU average), as well as ensures strong cyber security.
- An exceptional record of unicorn start-ups and major capacity in IT R&D.
- High labour productivity relative to other EU-CEE countries and high quality of workforce, with high PISA test scores in mathematics and science rankings compared with EU and global peers.

Weaknesses

- Uneven digitalisation across the sectors, with the manufacturing sector lagging far behind services.
- Oil shale remains one of the major energy sources and the on-going energy crisis gave it a new spin.
- Low quality of transport infrastructure and shortcomings in terms of connectivity and sustainability of transport.
- Shrinking working age population, which is still fueled by an outflow of young professionals following the Global Financial Crisis, and major reliance on immigrant workers, especially in manufacturing, construction, service and trade, as well as highly-technological sectors.

Opportunities

- Increasing investment attractiveness of Estonia, reflected in the steadily growing FDI flow, relies on a good combination of skills (especially in ICT and natural

sciences), environment, geographic location, and innovation capacity, complemented by minimal bureaucratization and stability of institutions.

- Two-decade experience of developing and establishing cutting-age digital solutions and IT technologies allow to accelerate further R&D in most demanded sectors, including cleantec and automation.
- Good potential to utilize existing R&D infrastructure for future research and proof of concept in eco-innovation, which is largely based in academia, accelerators and competence centres.

Threats

- A lack of a formal policy to ensure project selection and assessment of performance, which led to some EU-funded infrastructural projects being designed too large and delivered inefficiently.
- Persistent labour shortages, with demand for both low and high skilled workers (especially in ICT) being very high. Very strict immigration laws are often an obstacle in hiring both high and low-skilled workers of foreign origin.
- Very high economic divergence across the North-Eastern regions and the rest of the country. It results in digital and environmental transition being very slow and requiring major alterations of economic activities in the former region.

INDUSTRIAL POLICIES AND STRUCTURAL REFORM DEVELOPMENTS

FDI promotion and value chain upgrading

- Foreign investors are treated on an equal footing with local investors. Hence all investment incentives and benefits, such as no corporate income tax on retained and reinvested profits, reduction of tax rate for distributed profits from 20 to 14 per cent (as of January 2018), access to various grants and support programs, are equally available for local and foreign investors.

- Investment Promotion Agency published a number of grants to support investments (including FDI) in sectors and regions most affected by transition to a climate-neutral economy (e.g. mining, manufacturing and other sectors in North-Eastern regions) and investments focused on clean and efficient production and use of energy, and on sustainable transport.

New technologies, digitalisation, innovation

- Around 24 per cent of Recovery and Resilience Facility (RRF) funds allocated to Estonia will be streamed into (i) digital transformation of public services – increasing accessibility of public services and internet coverage (c.a. 12 per cent of funds); (ii) digital transition of enterprises, with a focus on improving digital skills of workers and developing digital technologies for enterprises (c.a. 12 per cent of funds).
- Action plan “Estonia 2035”, as a part of Estonian Research, Development, Innovation and Entrepreneurship (RDIE) Strategy for 2021–2035 prioritizes research in highly technological fields, including artificial intelligence and robotics, as well as development of green and sustainable technologies.

Green transformation of industry

- In Estonia’s Recovery and Resilience Plan, 22 per cent will be allocated to the green transition of enterprises, which includes development of a broad range of green technologies (green hydrogen, low-carbon and climate-neutral capabilities), as well as building green skills. Another 12 per cent will be invested in sustainable transport and 9 per cent in sustainable energy and energy efficiency, with a major focus on decarbonizing economic operations, including transportation.

COUNTRY-SPECIFIC RECOMMENDATIONS

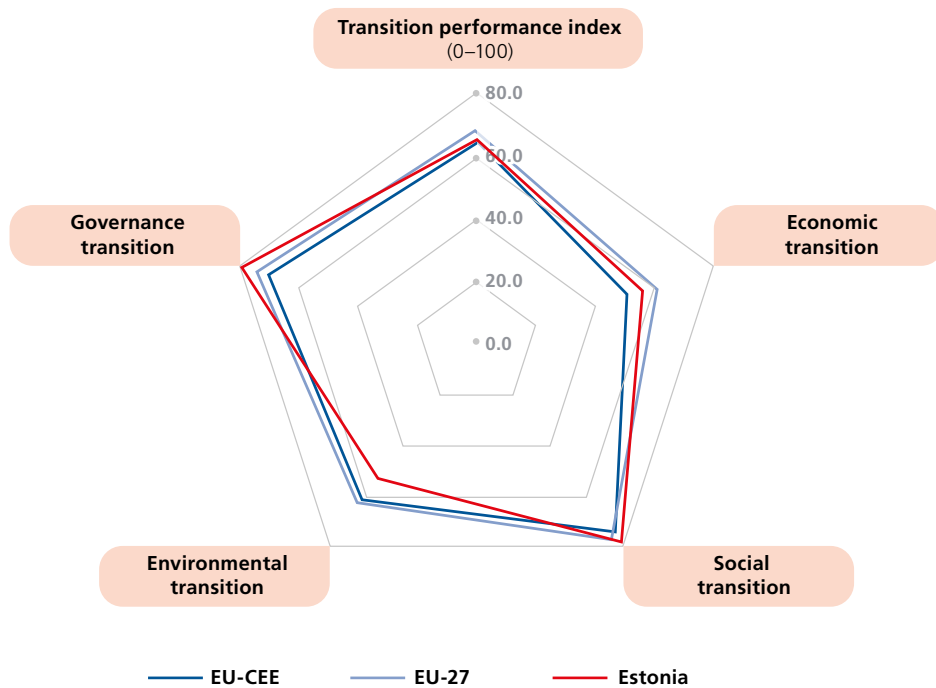
- **In the main part of this study, we identified Estonia as the most digitally advanced country in the region, and therefore very well prepared for this half of the “twin” transition.** The core focus for policymakers should therefore be to maximise advantages in the digital sphere, address the distributional implications of this type of growth, take steps to maximise the growth potential of the green transition (where Estonia is much less advanced), and address the extremely challenging issue of labour supply.
- **Digitalization of enterprises, particularly in the manufacturing sector, via the development of an entrepreneurial state, and smart specialization strategies.** Although the services sector is an EU leader in terms of digitalization, this is much less the case for manufacturing, where Estonia is a relative laggard. Further automation, including robotization, and digitalization of enterprises could lead to significant productivity improvements and increase the economy’s growth potential. Part of the solution here is to incentivize the automation of routine tasks via higher minimum wages (see policy recommendation 5.7 in the main report).
- **Further push the digitalisation of industry, address labour shortages more generally, and boost productivity and growth potential via automation and active labour market policy.** The demographic challenges of the Baltic states, including Estonia, are well known, with aging population and extreme labour shortages across all sectors and all skill levels. There is no silver bullet. Yet the apparently weak competitiveness and lagging digitalization of the manufacturing sector outlined above suggest the potential for labour-saving improvements. Along with strategies to increase the absorption of digital technologies in industry, policymakers should seek to nudge automation of the economy more generally, by setting minimum wages at a level that encourages automation and an active labour market policy that ensures workers get to the parts of the economy where they are most needed, and with the appropriate training, as quickly as possible. We propose combining a strong welfare state and extensive retraining programmes with minimal entry and exit frictions for employment (see policy recommendation 5.7 in the main report). These policies will need to take into account that education and skill attainments are very heterogeneous by ethnic groups.
- **The green transition of large parts of the economy has some way to go, and appropriate policy interventions would unlock significant growth potential here.** As we identified above, Estonia has a long way to go in transitioning from oil shale to renewable sources in electricity production, in reducing the use of fossil fuels in the transport sector, and in increasing the heating efficiency of dwellings across the country. These can be achieved by combining carbon pricing, public investments in new infrastructure, fostering private investments especially when households and small businesses are concerned, with adequate subsidies to the latter. FDI attraction policy must be adapted to take this needs into account: Estonia should seek to incentivize in particular foreign capital that will help to make significant strides in the greening of the economy (see policy recommendation 5.4 in the main report). With the EU support towards green transition being very strong, it is a primary duty of local governments to identify the most vulnerable groups and tailor targeted support.

Industrial development – II

Sector	% of manufacturing employment
Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials	16.9
Manufacture of fabricated metal products, except machinery and equipment	12.4
Manufacture of food products	11.6
Manufacture of furniture	7.2
Manufacture of electrical equipment	5.5
Repair and installation of machinery and equipment	5.5
Manufacture of computer, electronic and optical products	5.3

Note: 2021 values.
Source: Eurostat Structural Business Statistics.

Transition performance scorecard



Note: 2020 values. The TPI scores countries based on 4 pillars of a transition to a more sustainable, inclusive and resilient economy.
Source: European Commission

Estonia



COUNTRY OVERVIEW

Economy is strongly service-oriented, based on digital know-how and ICT services.

The IT sector has driven overall economic growth whereas industry is uncompetitive. The largest manufacturing sectors are wood and wood products.

Estonia lags behind in the environmental transition, as oil shale and natural gas remain core energy sources.

INDUSTRIAL DEVELOPMENT

ESTONIA	0.06	13%
EU-27	0.14	15%
EU-CEE	0.10	17%

Competitive industrial performance index

Manufacturing value added (MVA) (% of GDP)

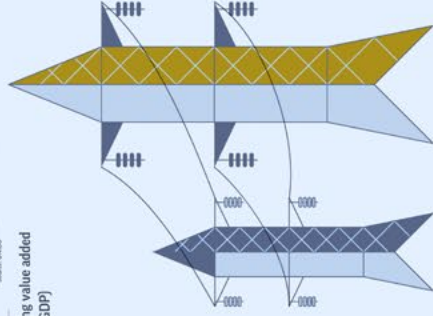
Note: 2020 data for Estonia is preliminary. The 2020 data represents the strength and competitiveness of Germany's economy in comparison to the EU-27 and EU-CEE. Source: IFA 2021

WHAT SHOULD BE DONE?

COUNTRY-SPECIFIC RECOMMENDATIONS

- Maximise advantages in the digital sphere and push for the digitalization of enterprises, particularly in the manufacturing sector
- Address labour shortages and boost productivity and growth potential via automation and active labour market policies including higher minimum wages.
- Combine a strong welfare state and extensive retraining programmes with minimal entry and exit frictions for employment.
- Unlock the significant growth potential linked to the green transition by combining carbon pricing, public and private investments and foreign capital.

INDUSTRIAL COMPETITIVENESS – SWOT



STRENGTHS

- Strong IT sector, high level of digitalization and well-established digital infrastructure.
- An exceptional record of unicorn start-ups and major capacity in IT R&D.
- High labour productivity and good PISA and MINT education scores.



WEAKNESSES

- Digitalization of manufacturing sector lags far behind services.
- Oil shale remains one of the major energy sources.
- Low quality of transport infrastructure.
- Shrinking working age population, still fueled by an outflow of young professionals.



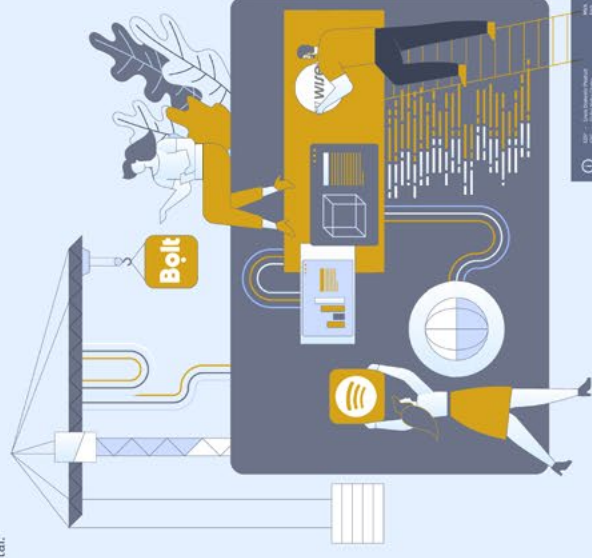
OPPORTUNITIES

- Increasing investment attractiveness based on a good combination of skills, environment, geographic location and innovation capacity.
- Minimal bureaucratization and high stability of institutions.
- Two-decade experience of developing and testing cutting-edge digital solutions and IT technologies, which can be leveraged for R&D in most demanded sectors, including clean-tech and automation.
- Good potential to utilize existing R&D infrastructure for future research and proof of concept in eco-innovation.



THREATS

- A lack of a formal policy to ensure project selection and assessment of performance in execution of EU programmes.
- Persistent labour shortages, with demand for both low and high skilled workers (especially in ICT) being very high.
- Very high economic divergence between capital region and the rest of the country.



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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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