

INVESTING IN INNOVATIONS: KEY TO RECOVERY IN CENTRAL AND EASTERN EUROPE

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INTRODUCTION

In the past decades, economic growth in CEE has been driven by traditional industries, dynamic exports, investments from abroad, low labour-costs and EU funding.¹ However, as the wave of digital transformation and the adoption of new technologies sweeps the global economic landscape, the original drivers of economic development in CEE are beginning to weaken. CEE economies are generally undercapitalised compared with their more advanced European peers, with capital stock 60% lower than average for the EU Big Five.² Workforce costs have been on the rise, and there are limited labour pools to plug into the economy, with unemployment rates among the lowest in the EU.³ The industrial fabric of the region dominated by the automotive industry⁴ is prone to be majorly affected by automation.⁵ A set of well-placed and efficiently utilised investments in innovation and digitalisation, however, could help prevent inevitable economic decline, and an ability to benefit from post-pandemic European recovery instruments could provide a viable platform to do so.

According to a McKinsey study, the region has a solid potential to reap the economic benefits of digitisation: up to €200 billion in additional GDP by 2025.⁶ Given the current post-coronavirus circumstances and the EU large-scale recovery package that comes with it, CEE's pursuit to profit from the digital transformation of the economy couldn't be more timely. Coupled with the EU's quest to reduce its reliance on US technologies⁷ to improve its resilience with regards to the technological infrastructure, there is an urgent need to invest in innovative pan-European projects supporting Europe's technological sovereignty. What are the opportunities arising from this setup for CEE countries, and how can they overcome structural deficiencies which have been slowing down the digital transformation of the region?

EU RECOVERY DEAL & WHAT IT MEANS FOR INNOVATORS

To lead the way out of the COVID-19 crisis, the EU leaders agreed on 21 July 2020 on a post-corona recovery plan and the Multiannual Financial Framework (MFF) for 2021-2027.⁸ The sheer size of the European Recovery Programme (Next Generation EU, NGEU) is substantial – 750 billion EUR (390 billion EUR will be available through grants and 360 billion EUR in loans) on top of capital allocated through the Multiannual Financial Framework 2021-2027, commonly known as the EU budget (in total amounting to a EUR 1,82 trillion package)⁹.

One of the most encouraging elements of the agreement is its forward-looking character: rather than focusing on deficit reduction (as after the last crisis), the priority this time is on strategic investments in climate and digitalisation.¹⁰ In the upcoming programme period 2021-2027, promotion of research, innovation and digital transformation within the EU will be addressed through a set of instruments including the Horizon Europe programme, InvestEU fund, Connecting Europe Facility and the Digital Europe Program. The sum allocated for this agenda will not exceed EUR 132 781 million.¹¹ Out of this sum, 81 million will be spent on Horizon Europe, the main EU research program, which is, however, far less than the innovation community had hoped for.¹²

1 T. Marciniak, J. Novak and M. Purta, "Central and Eastern Europe Needs a New Engine for Growth," [website], 2018, <<https://www.mckinsey.com/featured-insights/europe/central-and-eastern-europe-needs-a-new-engine-for-growth>>, accessed August 27, 2020.

2 Ibid.

3 Kafkadesk, "Czech Republic, Poland and Hungary Have Among Lowest Unemployment in the EU," [website], 2020, <<https://kafkadesk.org/2020/04/27/czech-republic-poland-and-hungary-have-among-lowest-unemployment-in-the-eu/>>, accessed August 27, 2020.

4 Emerging Europe, "Automotive and Transport Companies Dominate the CEE Region," [website], 2017, <<https://emerging-europe.com/news/automotive-and-transport-companies-dominate-the-cee-region/>>, accessed August 27, 2020.

5 OECD, "What are the chances of your job Changing Due to Automation?," [website], 2019, <<https://twitter.com/OECD/status/1206258901362057217/photo/1>>, accessed August 27, 2020.

6 T. Marciniak, J. Novak and M. Purta, "Central and Eastern Europe Needs a New Engine for Growth," [website], 2018, <<https://www.mckinsey.com/featured-insights/europe/central-and-eastern-europe-needs-a-new-engine-for-growth>>, accessed August 27, 2020.

7 Financial Times, "Angela Merkel urges EU to seize control of data from US tech companies," [website], 2019, <<https://www.ft.com/content/956c-cao6-0537-11ea-9afa-d9e2401fa7ca>>, accessed August 27, 2020.

8 European Council, "European Council Conclusions, 17-21 July 2020", [website], 2020 <<https://www.consilium.europa.eu/en/press/press-releases/2020/07/21/european-council-conclusions-17-21-july-2020/>>, accessed August 27, 2020.

9 Ibid.

10 Marianna Mazzucatto, "The success of the EU recovery fund will depend on bold missions", [website], 2020, <<https://www.ft.com/content/b26f6785-e08a-450b-8c62-bdafbeb5ff2c>>, accessed August 27, 2020.

11 European Council, "European Council Conclusions, 17-21 July 2020", [website], 2020, <<https://www.consilium.europa.eu/en/press/press-releases/2020/07/21/european-council-conclusions-17-21-july-2020/>>, accessed August 27, 2020.

12 Florin Zubascu, "Leaders Agree on Slimmed-Down EU Horizon Budget," [website], 2020, <<https://sciencebusiness.net/framework-programmes/news/leaders-agree-slimmed-down-eu809b-horizon-europe>>, accessed August 27, 2020.

When considering the recovery grants and loans from the NGEU budget, the overall transfers to the CEE in the 2021-2027 budget period will be eventually larger when compared to the current budget. Taking the grants and loans altogether, the support from the NGEU budget in a 3-year horizon could range from 11 to 16% of GDP for the CEE region.¹³

EU Recovery Fund 2020 (2018 constant prices, EUR bn)						
	EU	CZ	HU	PL	RO	SK
Grant	390	8,7	9,8	29,5	16,8	7,5
Loans	360	15,4	9,0	30,6	16,7	6,8
Total	750	24,1	18,8	60,1	33,5	14,3
Share on 2018 GDP in %						
Grant	2,9	4,1	7,3	5,9	8,2	8,4
Loans	2,7	7,3	6,7	6,1	8,2	7,6
Total	5,6	11,4	14,1	12,1	16,4	16,0
GDP 2018 (EUR bn)	13498	211	134	498	205	90

Source: Bloomberg, ING, national sources

The question remains, are these amounts significant enough to make an impact on the region? 30% of the total expenditure from the MFF and Next Generation EU will target climate-related projects. Given the comparatively high carbon intensity of CEE economies and the high costs of complying with climate objectives, these countries would most benefit from money targeting climate-related projects.¹⁴

Structural Challenges & Opportunities in CEE

There's still a relatively long way ahead before we can consider the EU budget to be final. The European Parliament has to ratify the EU budget, and national parliaments have to sign off on the guarantees given to the EU budget in order to raise money on the financial markets for the recovery fund.¹⁵ Yet regardless of the final regional budget allocations for research and innovation, it is important to note that countries of the wider Central European region still face the same structural challenges as before the pandemic. A miraculous digital transformation of the region derived solely from EU recovery funding is not to be expected, but what is needed is a focus on addressing ingrained structural deficiencies and making the most of what the region has to offer.

When we consider the current distribution of innovation performance in Europe, it is clear there is a long road ahead for CEE to catch up with the rest of Europe (The Digital Economy and Society Index, 2020)¹⁶. Central European countries including Czechia, Hungary, Poland and Slovakia belong to the group of "Moderate Innovators", along with countries like Slovenia, Spain, Croatia, Cyprus, Greece, Italy, Latvia, Lithuania, Malta, Slovenia, and Spain. Their performance ranges between 50% and 95% of the EU average. Eastern European countries including Romania and Bulgaria are at the bottom of the ranking, with a performance level below 50% of the EU average. In addition, the development gap between the most and least advanced innovators is not closing - between 2011-2019, average innovation performance increased by 67% for all EU regions, but only by 45% for modest innovators (Romania, Bulgaria)¹⁷.

13 Jakub Seidler et.al., "CEE Implications from the EU Recovery Fund,"[website], 2020, <<https://think.ing.com/snaps/cee-implications-from-the-eu-recovery-fund/>>, accessed August 27, 2020.

14 Claudia Patricolo, "CEE Main Beneficiary of the EU's Recovery Fund,"[website], 2020, <<https://ceenergynews.com/finance-regulations/cee-main-beneficiary-of-the-eu-recovery-fund/>>, accessed August 27, 2020.

15 D.M. Herszenhorn, L. Bayer and R. Momaz, "Takeaways from the EU Budget and Recovery Deal," [website], 2020, <<https://www.politico.eu/article/5-takeaways-from-the-eu-budget-mff-and-recovery-deal-coronavirus/>>, accessed August 27, 2020.

16 European Commission, 'Digital Economy and Society Index 2020' [website] <<https://ec.europa.eu/digital-single-market/en/desi>>, accessed 10 September, 2020.

17 European Commission, "Regional Innovation Scoreboard 2019," [website], 2019, <<https://ec.europa.eu/growth/sites/growth/files/ris2019.pdf>>, accessed August 27, 2020.

WHAT ARE THE KEY INGREDIENTS TO MAKE CENTRAL EUROPE SUCCEED, AND WHICH CHALLENGES NEED TO BE ADDRESSED?

1. ICT TALENT POOL

In 2018, some 8.9 million professionals worked as ICT specialists across the EU which makes up 3.9% of the total workforce of the researched countries. While the employment shares are continuously the highest in Western Europe, most of the countries from the CEE region – like the Czech Republic, Slovenia, and Hungary – are already surpassing or nearing the European average share.¹⁸ The presence of high quality educational institutions plays a key role. For example, Masaryk University and the University of Technology in Brno have been major players in transforming the city into a tech hub with one of the highest concentrations of R&D centers and shared service centres, and a solid supporting infrastructure for start-ups in the form of accelerators and coworking spaces.¹⁹

As the technological skills gap widens with the increased rate of digitalisation, the good news for CEE is that public education is complemented by a range of forward-looking education programmes focused on the development of digital and entrepreneurial skills across the whole CEE region. Some examples include Czechitas²⁰ (Czechia), Geek Girls Carrots²¹ (Poland) and Butterfly Effect²² (Slovakia). While there is a need for a deeper reform at the level of national governments, these programmes can serve as an example of best practice and provide lessons learned which can be then applied to a larger scale reform.

2. DIGITAL INFRASTRUCTURE & NO LEGACY TECHNOLOGY LOCK-IN

Another important factor helping the CEE region succeed in the digital economy is its high-quality digital infrastructure with excellent 4G coverage; some of the best coverage rates in the world for ultrafast broadband with excellent affordability for ordinary citizens.²³ Having joined the digitisation race later than Northern and Western Europe, CEE countries are less tied up with older technology infrastructure. For example, the CEE region almost entirely bypassed the use of payment by cheque, going direct to card payments. Today, the region has one of the highest contactless-payment adoption rates in the world.²⁴

3. PROMISING STARTUP ECOSYSTEM

There are a few global success stories coming from the region. Some of the most renowned startups originated in Estonia: Skype, the video-calling app, and TransferWise, an online money transfer start-up. Antivirus software companies such as Avast and AVG (Czechia), and Slovakia's ESET, are well known in the global cybersecurity market.

Overall, 12 “unicorns” have been created in the CEE region, with a combined value of €30 billion, mostly founded in Estonia, Poland and Romania. In 2018, a record €0.7 billion was invested in CEE startups, partly driven by two mega-rounds above €100 million (Taxify and Citybee).²⁵ While the region still struggles with quantity or quality of venture capital when compared with Western counterparts, recent years show that it is able to compete at the forefront of the European tech startup scene.²⁶

18 Mary Loritz, “Codecool Report 2019”, [website], 2019, <<https://www.eu-startups.com/2019/10/codecool-report-2019-cee-regions-ict-sector-is-catching-up-with-western-europe/>>, accessed August 27, 2020. _

19 Brno Expat Centre, “General Info”, [website], <<https://www.brnoexpatcentre.eu/im-an-expat/getting-support-for-your-startup/>>, accessed August 27, 2020. _

20 Czechitas, [website], <<https://www.czechitas.cz/cs/>>, accessed August 27, 2020. _

21 Go Carrots, [website], <<https://gocarrots.org/>>, accessed August 27, 2020. _

22 Butterfly Effect, [website], <<https://butterflyeffect.sk/>>, accessed August 27, 2020. _

23 T. Marciniak, J. Novak and M. Purta, “Central and Eastern Europe Needs a New Engine for Growth,” [website], 2018, <<https://www.mckinsey.com/featured-insights/europe/central-and-eastern-europe-needs-a-new-engine-for-growth>>, accessed August 27, 2020.

24 Ibid.

25 Dealroom.co, “Central & Eastern Europe: Startup & Investment Landscape,” [website], 2019, <<https://blog.dealroom.co/wp-content/uploads/2019/03/Google-CEE-v25.pdf>>, accessed August 27, 2020. _

26 A. Terrisse, “What’s up with the CEE?” [website], 2019, <<https://www.eu-startups.com/2019/11/whats-up-with-the-cee-how-eastern-europes-tech-startup-ecosystem-is-booming/>>, accessed August 27, 2020. _

4. QUALITY OF PUBLIC ADMINISTRATION & TRANSPARENCY WITH REGARDS TO EU FUNDS

As most of the region's venture funding comes from public funds, the EU has played a major role in ploughing billions of euros into government-run and local venture capital funds. However, lengthy approval processes, overly complicated public procurement procedures and a lack of human capacity to deal with bureaucracy are all factors that contribute to the fact that some CEE countries struggle with weak spending of EU funds. The misuse of EU funds is still perceived as a problem according to the 2019 Corruption Perceptions Index published by Transparency International.²⁷ The report confirms that most post-communist EU Member States are not addressing the problem effectively. Five European countries (Hungary, Poland, Romania, Croatia and Greece)²⁸ score below 50% in this respect, with many cases of fraud involving European funding being detected according to Michiel van Hulst, Director of Transparency International.²⁹

5. POLICY INSTRUMENTS FOR DIGITAL BUSINESS

The ability to engage in the increasingly digital nature of the global economy is key to building resilience to economic and social shocks like those presented by the COVID-19 outbreak. One of the essential ingredients in kickstarting the digital economy in CEE is to create favourable policy instruments for the development of digital businesses. These can include measures improving access to early-stage funding and the creation of accelerators and incubators. In addition, governments should actively participate in discussions on the upcoming Digital Services Act³⁰ and the creation of ethical and legal requirements for AI³¹ at the European level at an early stage, to ensure that both public and private actors can make the most of digitisation.

27 Transparency International, "2019 Corruption Perceptions Index," [website], 2019, <https://www.transparency.org/news/pressrelease/2019_CPI_efforts_stagnate_in_G7>, accessed August 27, 2020. .

28 European Parliament, "Corruption and Mismanagement of EU Funds in MS," [website], 2020, <https://www.europarl.europa.eu/doceo/document/E-9-2020-000835_EN.html#ref3>, accessed August 27, 2020. .

29 I. Silva and J. Parrock, "The Brief: Corruption Still a Major Issue in European Union," [website], 2020, <<https://www.euronews.com/2020/01/27/the-brief-corruption-still-a-major-issue-in-european-union>>, accessed August 27, 2020. .

30 European Commission, "Digital Services Act Package," [website], 2020, <<https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12418-Digital-Services-Act-package-ex-ante-regulatory-instrument-of-very-large-online-platforms-acting-as-gatekeepers>>, accessed August 27, 2020. .

31 European Commission, "Artificial Intelligence – Ethical and Legal Requirements," [website], 2020, <<https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12527-Requirements-for-Artificial-Intelligence>>, accessed August 27, 2020. .

POLICY RECOMMENDATIONS

Getting the economy back on track will require effective measures responding to the challenges on the labour market and a shift towards a more digital economy. Several policy recommendations could help countries from the CEE region overcome structural deficiencies on their path towards a more value-added digital economy.

- 1) Digital & entrepreneurial education: schools and universities should adjust their curriculums to the demand for current and future technological skills, and introduce inter-disciplinary teaching concepts. Governments should also facilitate the growth of the digital sector through life-long learning and training/retraining opportunities (in cooperation with the private sector).
- 2) E-government: Public administration should undergo a thorough internal audit to identify opportunities and ways to make the provision of digital services for citizens more efficient.
- 3) Research & innovation in AI: Support for the research, development and deployment of AI should form a key part of government strategy to maximize the opportunities brought about by digitisation in the public as well as the private sector.
- 4) Digital infrastructure: Governments must make a significant investment into the development of digital infrastructure, taking into account the benefits and application of high-speed connectivity in the areas of transport, production, public services or public (physical) infrastructure.
- 5) Support for private sector innovations:
 - ▶ Support creation of innovative companies via systematic funding for accelerators and incubators
 - ▶ Improved access to early-stage funding
 - ▶ Support collaborations between small innovative companies and large corporations
- 6) Support public-private collaborations by:
 - ▶ Increasing the capacity of research institutions and universities to collaborate with industries
 - ▶ Supporting the creation of research projects connecting researchers, companies and experts to create project partnerships
- 7) Improved quality of public administration in managing EU funds, both on the national and regional level, and measures increasing transparency of fund allocation.

Adopting such measures and investing in innovations as early as possible will ensure a resilient infrastructure able to cope with the demands of the post-pandemic recovery.

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