



ROMANIA EDUCATION SPECIAL REPORT

Boosting Prosperity Through Education



Eugen Sinca
October 2023

Note: Past performance is not necessarily indicative of future results.
CEE8: Croatia, Czechia, Hungary, Poland, Romania, Slovenia, Slovakia, Serbia

SWOT analysis of Romania's education system

Strengths

- Tertiary education attainment for the age class 25 to 34 improved to 24.7% in 2022, from 9.2% in 2000, though it remains the lowest in the EU; the quality of tertiary education remains an issue
- Graduates in information technology, engineering and healthcare are successful in finding good jobs in Romania or abroad
- The strong ICT footprint in the Romanian economy is related to success stories of large university centers
- Development of private education institutions in large cities, from kindergartens to universities, which offer an alternative for those who can afford to pay for it

Weaknesses

- Government expenditure on education is the second lowest in the EU at 3.2% of GDP, while household spending on education is the lowest in the EU and the only major personal expenditure item with a downward trend in the past ten years (-35% 2020 vs. 2010)
- There are wide differences in terms of access to education between urban and rural areas; poor and vulnerable groups suffer from shortcomings in the provision of education services
- Ineffective vocational training limits the availability of a trained labor force in manufacturing; the annual number of graduates of vocational training dropped by ~50% between 1993 and 2021
- Very weak results in PISA tests for reading, mathematics and science call for a broad reform of the Romanian education system
- Young people neither in employment nor in education and training (NEET) are commonplace in Romania; there is a huge gap between men (14.5% of the total) and women (25.4%) aged 15-29 years who receive no education and have no job
- Participation in early childhood education is low and on a downward trend, suggesting possible misconceptions about the need of going to kindergarten on top of poverty issues

SWOT analysis of Romania's education system

Opportunities

- Increased awareness of a deep reform of the education system among decision-makers, including concrete steps for better remuneration of public employees in the education sector in 2023
- Making full use of EU funds for upgrading the Romanian education sector
- Offering tax deductions for households for spending on private education, thus enabling larger categories of the population to access these services
- Building partnerships between companies and schools / universities for connecting the education system with the needs of the business environment
- Higher integration in the European education system: student mobility, continuous training for teachers, partnerships between local and external schools / universities

Threats

- Resistance of some parts of the local education system to structural changes
- Underdeveloped physical infrastructure in rural areas limits potential improvements in the education sector
- Small rural communities lack the scale to ensure access to basic educational needs
- Teacher migration outside the education sector or abroad

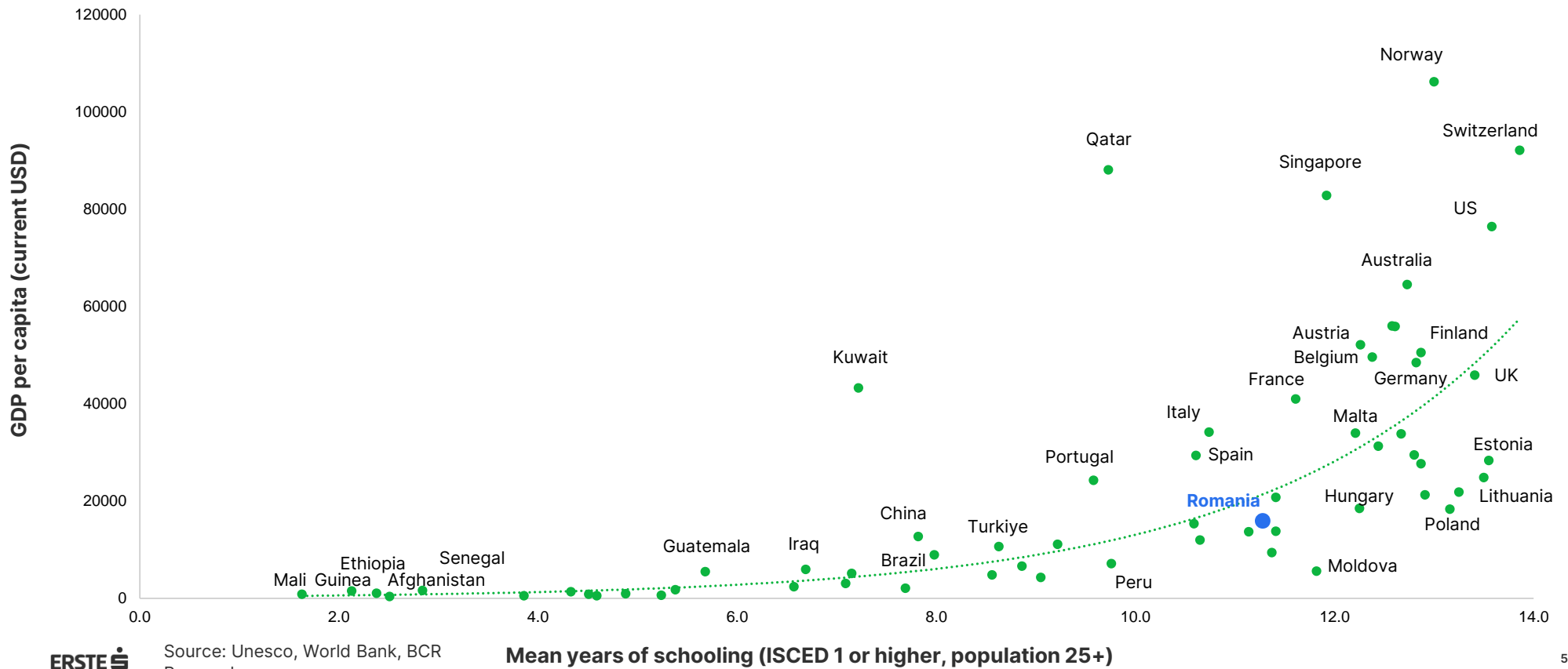
Education and economic growth – theoretical framework



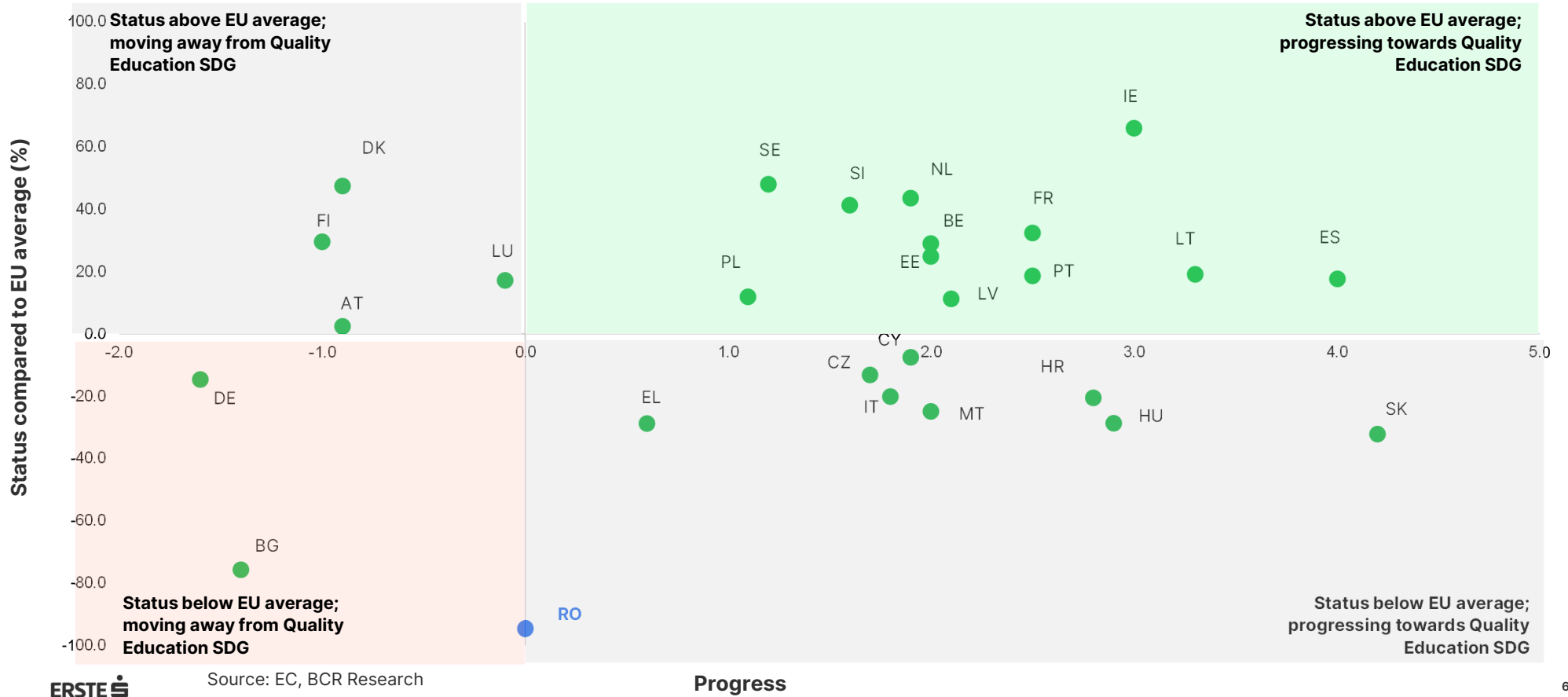
Source: Hanushek E A and Wößmann L (2010), Education and Economic Growth

- **Education brings a return of about 9-10%. This means that every year of learning generates about a 10% increase in earnings annually**, according to the World Bank.
- Sala-i-Martin, Doppelhofer and Miller find that the **primary schooling enrollment rate is a key variable influencing growth in GDP per capita** after analyzing 67 explanatory variables in a sample of 88 countries.
- **People with less secure employment, lower educational status, and lower income experienced higher rates of mental distress during the COVID-19 crisis**, according to OECD.

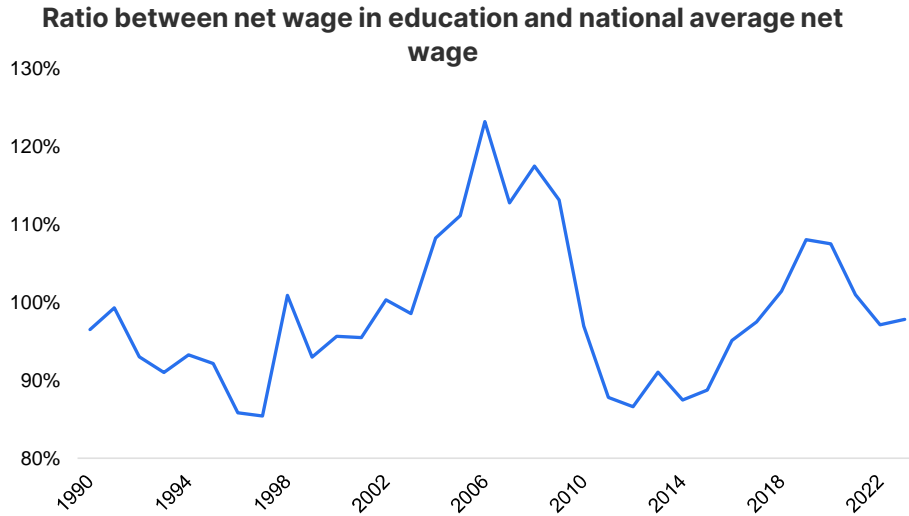
More years in school usually imply higher GDP per capita



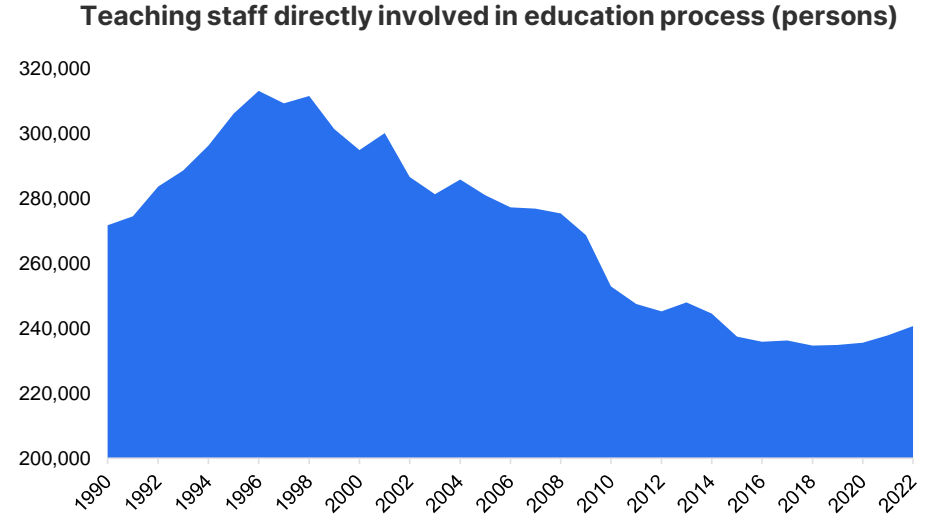
Very weak status of Quality Education SDG for Romania and no recent progress



Demotivated and shrinking teaching staff hinder quality of education



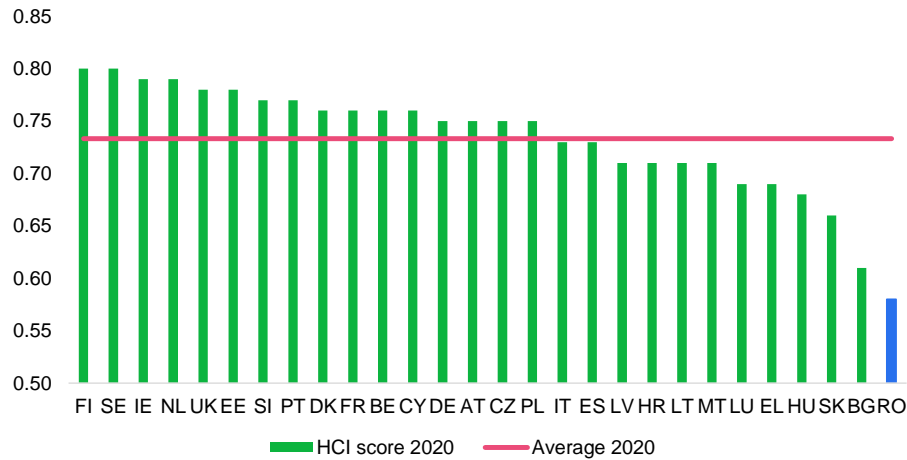
Education was not a top priority in Romanian society during the past decades and the net wage in education fluctuated around the average wage for the economy



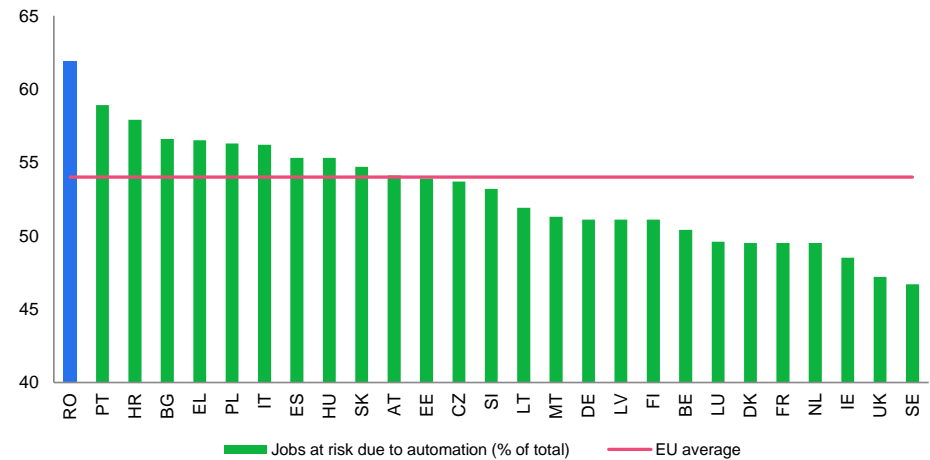
Teaching staff fell at the end of the '90s most likely due to low attractiveness for young graduates, while no tangible reform has been implemented so far

Poor education and healthcare services weigh on long-term productivity

Human Capital Index 2020



Jobs at risk of automation (%)

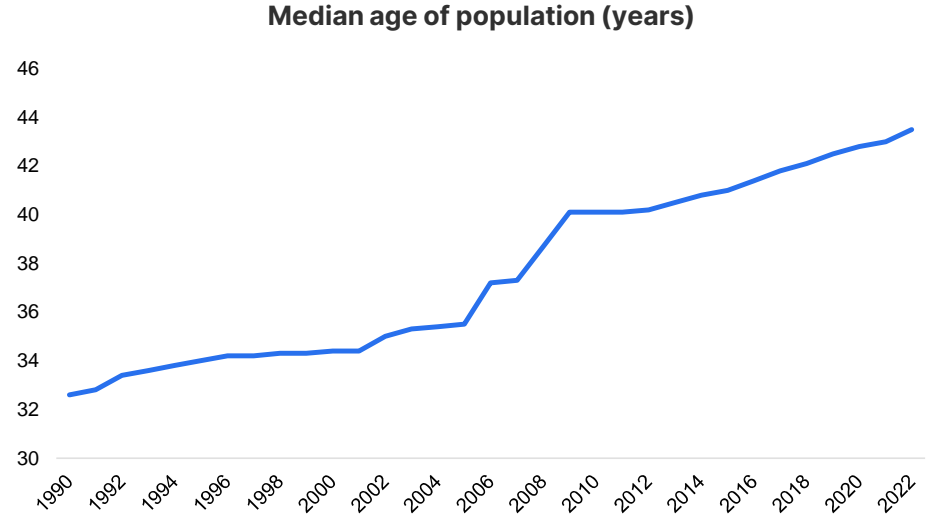
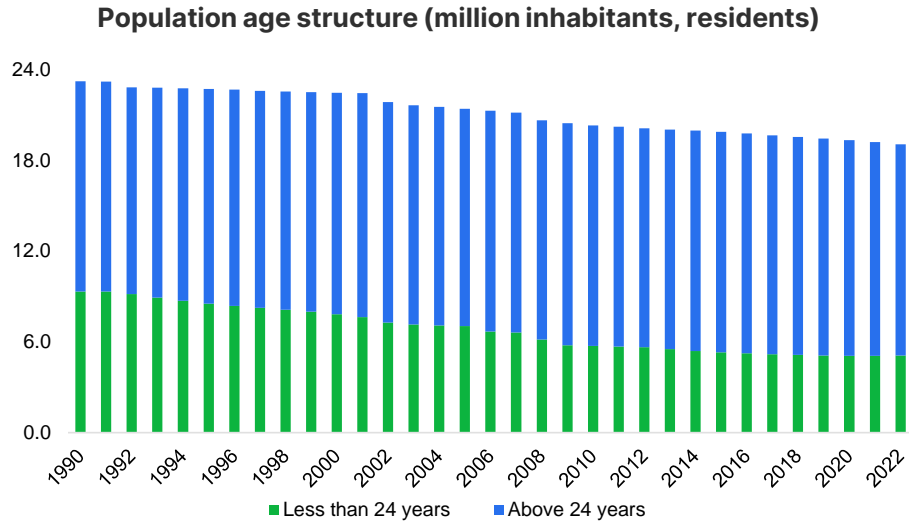


Romania’s HCI is the lowest in the EU and varies widely across counties

A child born in Romania today is expected to reach only 58% of his or her productive potential as an adult, compared to 100% percent if the individual were to receive high-quality education and healthcare

Poor education and health conditions in childhood expose the future adult to unemployment due to rapid changes in the labor market

Economic growth is set to slow down as population is ageing



Labor supply and productivity are affected by low quality of education

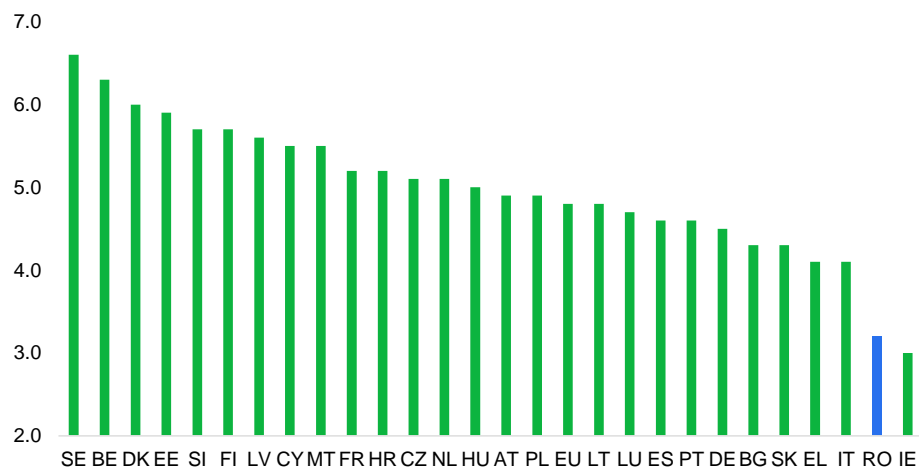
Young population dropped constantly in recent decades: in 1990 there were 9.3mn Romanians less than 24 years old, while in 2022 there were only 5.1mn

Median age of population in Romania increased to 43.5 years in 2022 from 32.6 years in 1990

Slower long-term economic growth, rising pressure on state budget to support the elderly and the need for high transfers from the working-age population to cover the costs of health and retirement programs are likely the main economic headwinds going forward

Education is more than an expenditure, it is an important investment

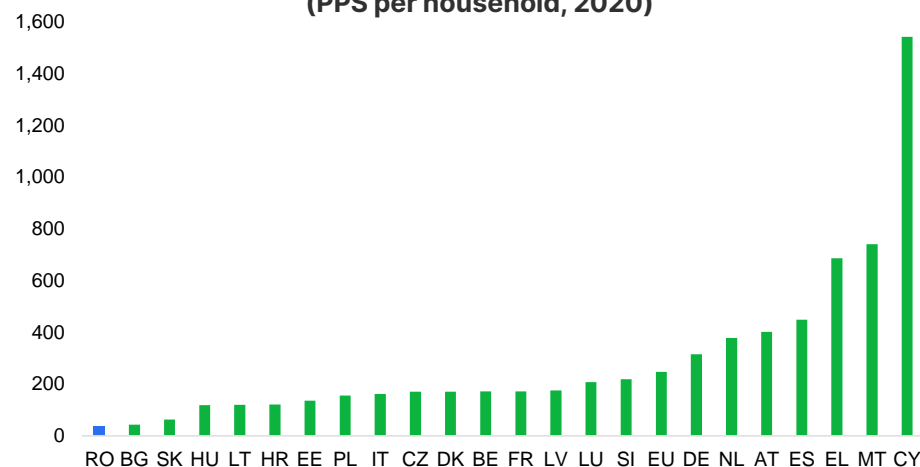
Government expenditure on education in EU (% of GDP, 2021)



Government spending on education in Romania is one of the lowest in the EU, at 3.2% of GDP in 2021

Making education a priority among other categories of budget expenditures along with an increase in total government expenditure based on higher revenues are two key action areas to be followed

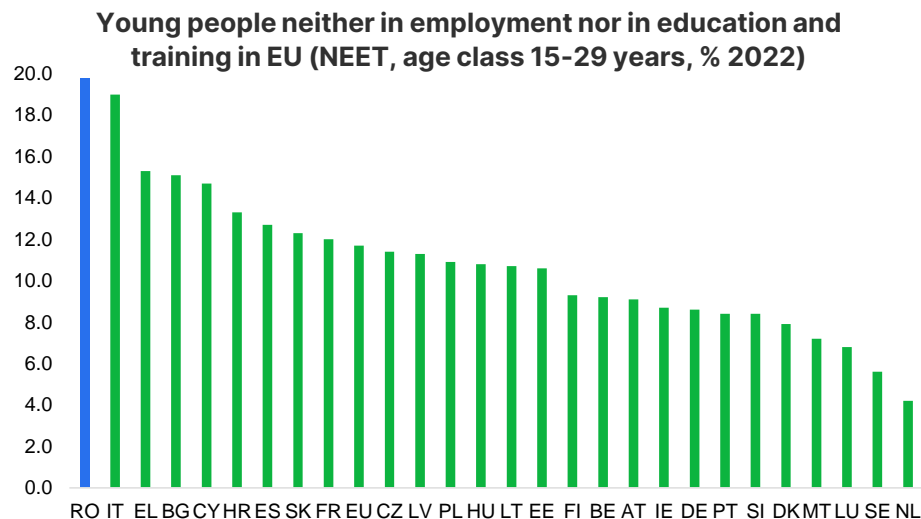
Household consumption expenditure on education in EU (PPS per household, 2020)



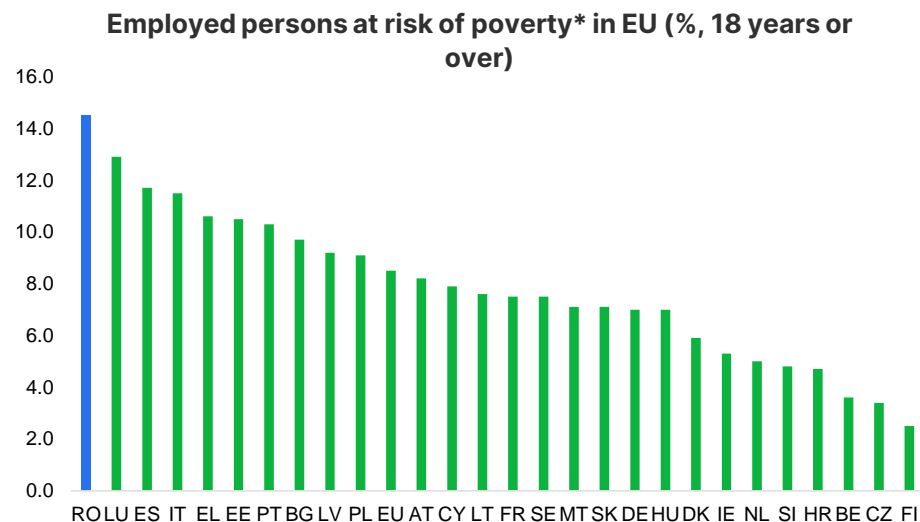
Household expenditure on education in Romania is the lowest in the EU and on a downward trend during the past ten years (-35% 2020 vs. 2010)

On the other hand, households significantly increased their spending on furnishings and household equipment (+148%), clothing and footwear (+110%) and health (+94%) in 2020 vs. 2010

Worrisome share of young people outside labor market and education



Young people neither in employment nor in education and training are commonplace in Romania; the huge gap between men (14.5% of total) and women (25.4%) aged 15-29 years calls for action for protecting vulnerable categories of the population through education and jobs



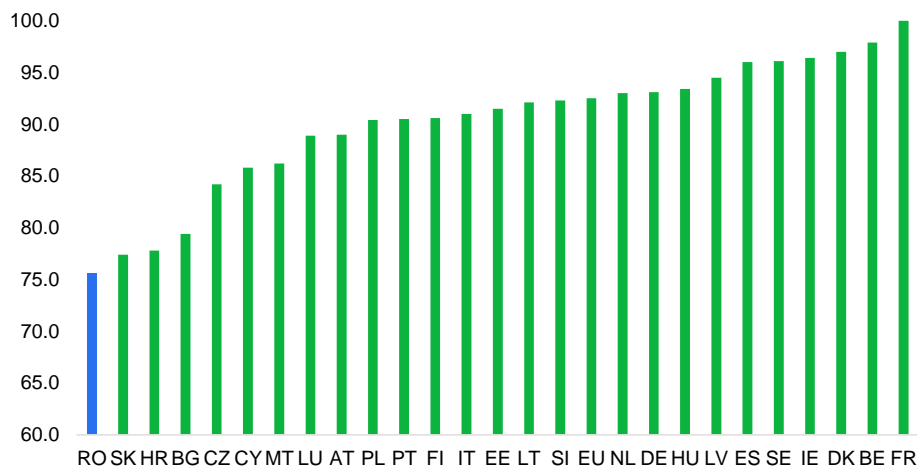
Jobs are less rewarding in Romania – the share of employed persons at risk of poverty is the highest in the EU at 14.5%

Average wage is the second lowest in the EU after Bulgaria, in spite of significant gains over the past years

* share of employed persons having an equivalised disposable income below the risk-of-poverty threshold set at 60% of the national median equivalised disposable income, after social transfers

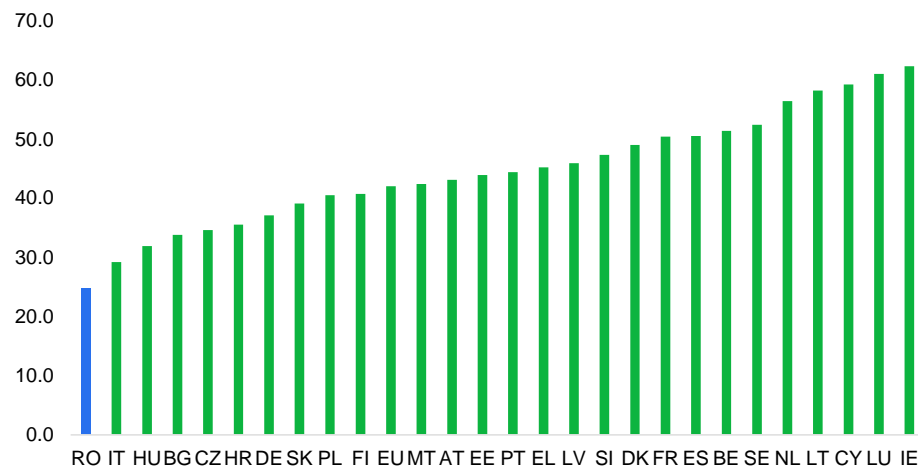
Low educational attainment for all age groups

Participation in early childhood education* in EU (%)



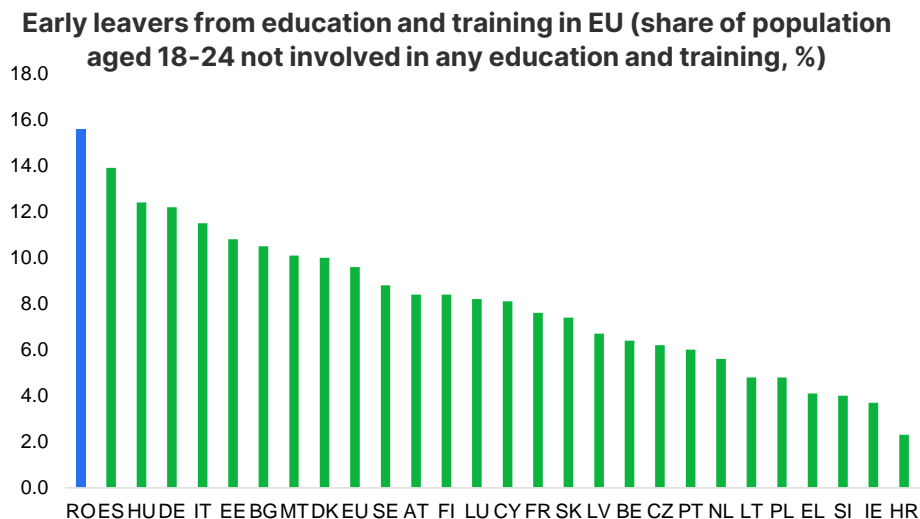
Participation in early childhood education is among the lowest in EU at 75.6% of children aged three and over. Quite worryingly, participation in early childhood education has dropped ~9pp since 2013, pointing to possible misconceptions of parents about the need of education for very young children, on top of structural issues related to poverty in rural areas.

Tertiary education attainment** in EU (%)

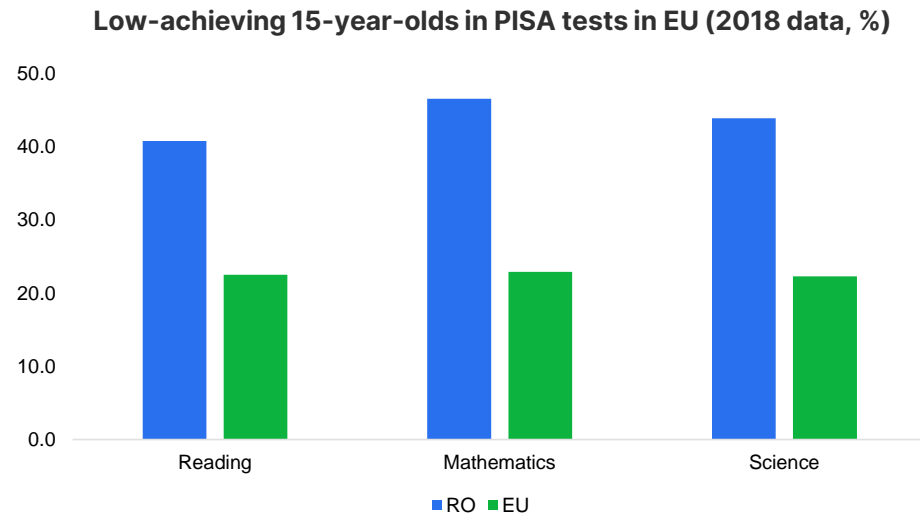


Tertiary education attainment is the lowest in the EU at 24.7% in 2022, but it improved significantly in the last decades, from 9.2% in 2000. The quality of tertiary education in Romania remains an issue due to low representation in the rankings for global universities.

Education should adapt to rapidly changing labor market



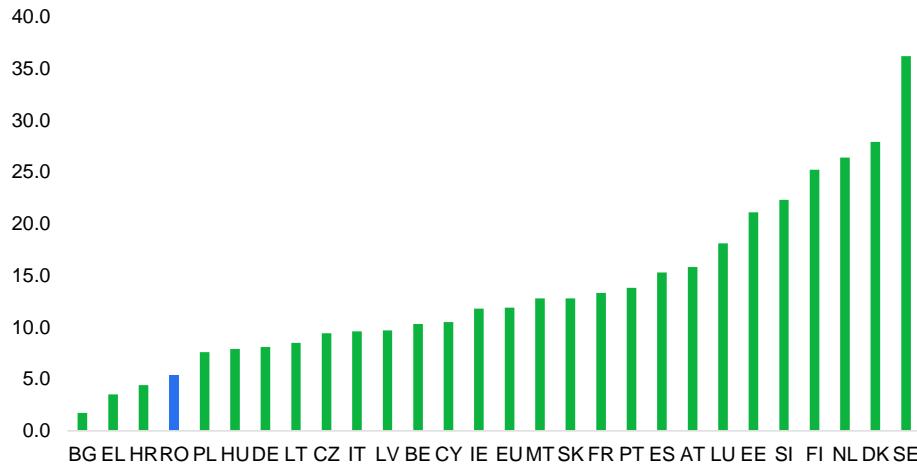
The highest share of early leavers from education and training in the EU at 15.6% in 2022, with some minor improvement over the past five years, leaves Romania exposed to the economic and social effects of a rapidly evolving labor market



With very weak results in PISA tests for reading, mathematics and science, the Romanian education system needs deep structural reforms for offering a better start in life for young generations

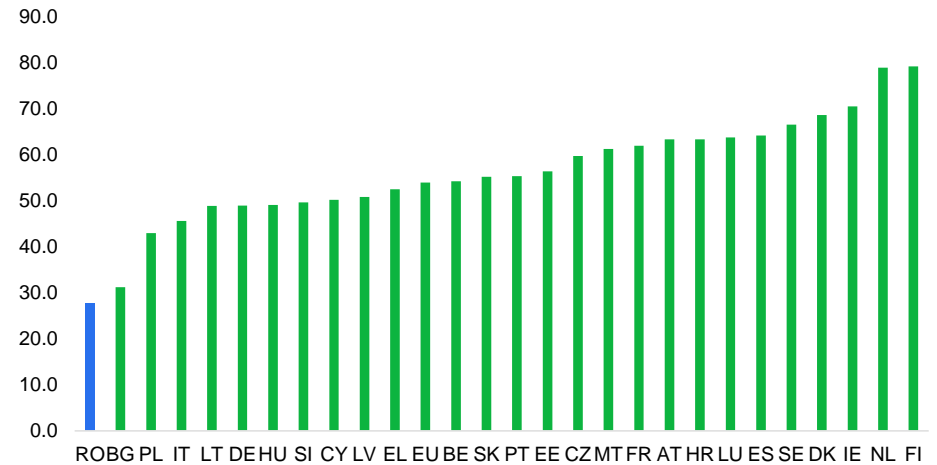
Adults are not fully prepared for today's information society ...

Adult participation in learning in past four weeks* in EU (%)



Romania made visible progress in terms of formal or non-formal education and training received by adults during the past four weeks, with the share of people going up to 5.4% in 2022, from an annual average of 1.1% in 2016-20

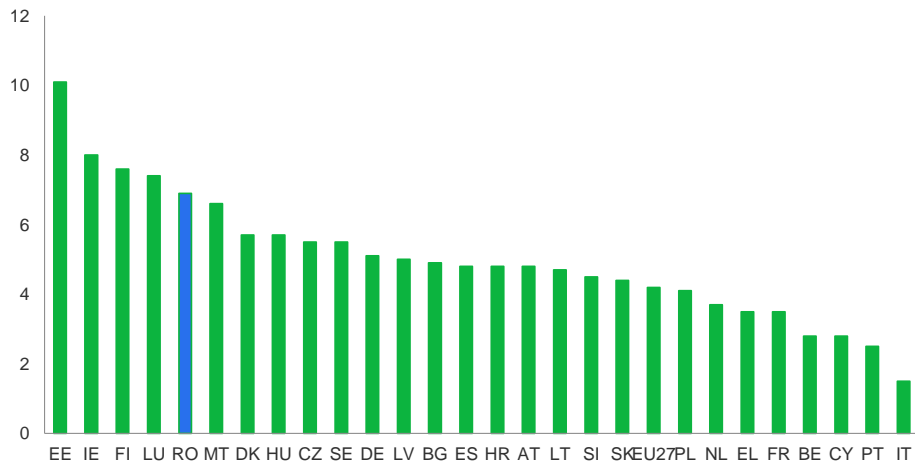
Share of individuals having at least basic digital skills** in EU (%)



Share of individuals aged 16 to 74 having at least basic digital skills is 27.8% in Romania, lowest in EU
Digital skills relate to activities performed on the internet in specific areas: information and data literacy, communication and collaboration, digital content creation, safety and problem solving

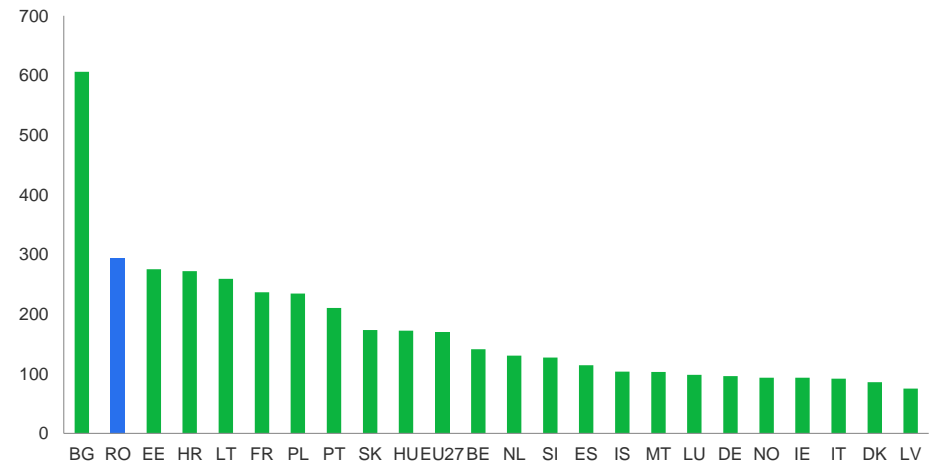
... but young generation is at forefront of changes in ICT sector

Tertiary education graduates in ICT field (% total graduates, 2021)



Young talents put Romania on the global ICT map and an impressive number of international technology companies are present in university centers like Bucharest, Cluj, Iasi and Timisoara

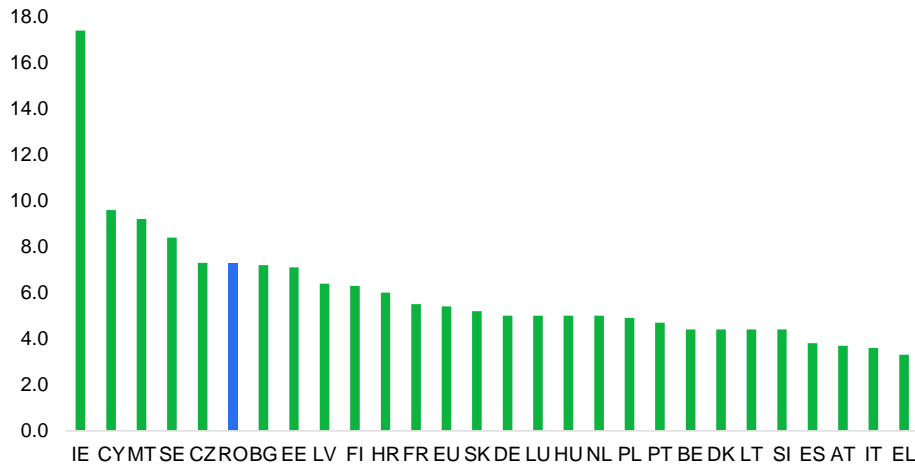
New business registrations in ICT sector in 2022 (index 2015=100)



Good tertiary education, partnerships between universities, local authorities and private enterprises, good connectivity with other countries facilitated by an international airport and a multicultural community with students from many countries drove the success of the ICT sector in these cities

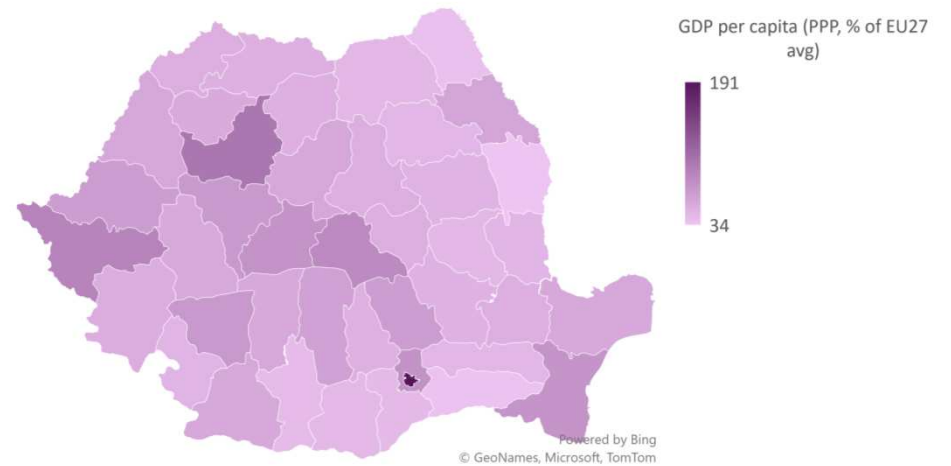
Tech sector is important contributor to GDP

Share of ICT sector in gross value added (2022, % of total)



Romania is a top EU country when looking at the share of the ICT sector in gross value added at 7.3% in 2022
Economic development is concentrated in counties with large university centers

GDP per capita, PPS, breakdown on counties (% of EU27)



GDP per capita in Bucharest is almost six times higher than in the poorest county
Bridging educational gaps requires a reduction of territorial disparities in terms of GDP per capita
RRF funds available for digitalization of education offer young generations the opportunity to keep up the pace with technological advances

Appendix – References

Hanushek E A and Wößmann L (2010), Education and Economic Growth. In: Penelope Peterson, Eva Baker, Barry McGaw, (Editors), International Encyclopedia of Education. volume 2, pp. 245-252. Oxford: Elsevier.

OECD, Tackling the mental health impact of the COVID-19 crisis: An integrated, whole-of-society response, 2021.

OECD, Education at a Glance, 2023.

Papademos L (2007), Education, financial markets and economic growth, 35th Economics Conference on “Human Capital and Economic Growth”, Österreichische Nationalbank, Vienna.

Patrinos H. A. (2023), 50 years after landmark study, returns to education remain strong, Education for Global Development, World Bank Blogs.

Sala-i-Martin X, Doppelhofer G and Miller R. I. (2004), Determinants of Long-Term Growth: A Bayesian Averaging of Classical Estimates (BACE) Approach, The American Economic Review, Vol. 94, No. 4.

World Bank (2020), Markets and People, Romania Country Economic Memorandum. International Development in Focus

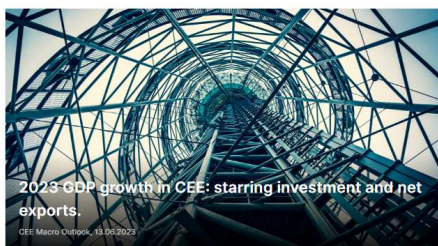
World Bank (2023), Systematic Country Diagnostic 2023 Update

Macro reports & forecasts are publicly available on Erste Group's website and our mobile applications

Open in your **browser**



CEE



CEE Insights, 12.06.2023

May's inflation numbers will be flowing in

This week, May's inflation numbers will be flowing in throughout the week. We have already seen the flash estimates in Poland and Slovenia (inflation...

[More](#) [PDF](#)



CEE Macro Outlook, 07.06.2023

Baltics: Slow growth and lower inflation

As a consequence of the fallout of the war in Ukraine, Baltic economies have witnessed a deceleration in growth, with Estonia even experiencing a...

[More](#) [PDF](#)



CEE Challenges for the new decade:

- No.1 Demography
- No.2 Going Green
- No.3 Rule of Law
- No.4 Healthcare
- No.5 Euro Adoption
- No.6 Labor Market
- No.7 Education
- No.8 Regional Development
- No.9 Capital Markets

[Instant Comments](#) [Show More](#)

RO: May CPI surprised to the upside

Instant Comment, 13.06.2023

CZ: Inflation affected by food prices

Instant Comment, 12.06.2023

SK: Industry back in the red

Instant Comment, 09.06.2023

[Daily Updates](#) [Show more](#)

2023 GDP forecast revised

CEE Macro and FI Daily, 13.06.2023

On your **mobile**



CEE



CEE Macro Outlook, 13.06.2023

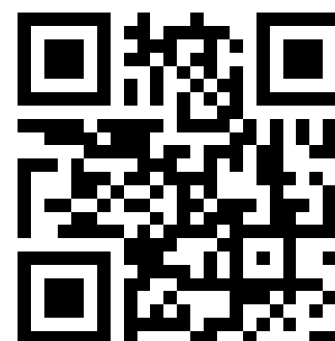
2023 GDP growth in CEE: starring investment and net exports.

We revise our 2023 GDP forecast to 1.3% (CEE8 average), driven by upward revision of growth in Croatia and Poland. Czechia and Hungary went through a...

[More](#) [PDF](#)



Scan our QR code



Visit our research page:
erstegroup.com/en/research

Contacts

Visit www.erstegroup.com or type on Bloomberg [ESTE <GO>](#)

Erste Group Research (Vienna)

Fritz Mostböck, CEFA®, CESGA®
Head of Group Research
+43 5 0100 11902
friedrich.mostboeck@erstegroup.com

Juraj Kotian
Head of CEE Macro/ FI Research
+43 5 0100 17357
juraj.kotian@erstegroup.com

Gudrun Egger, CEFA®
Head of Major Markets & Credit Research
+43 5 0100 11909
gudrun.egger@erstegroup.com

Henning EBkuchen
Head of CEE Equity Research
+43 5 0100 19634
henning.esskuchen@erstegroup.com

Local Research Offices

Bratislava
Slovenska Sporitelna
Head: **Maria Valachyova**
+421 (2) 4862 4158
valachyova.maria@slsp.sk

Prague
Ceska Sporitelna
Head: **David Navratil**
+420 224 995 439
DNavratil@csas.cz

Budapest
Erste Bank Hungary
Head: **Jozsef Miro**
+36 (1) 235 5131
Jozsef.Miro@erstebroker.hu

Warsaw
Erste Securities Polska
Head: **Cezary Bernatek**
+48 22 257 5751
Cezary.Bernatek@erstegroup.com

Bucharest
Banca Comerciala Romana (BCR)
Head: **Ciprian Dascalu**
+40 3735 10 424
ciprian.dascalu@bcr.ro

Zagreb/ Belgrade
Erste Bank
Heads: **Alen Kovac, Mladen Dodig**
+385 72 37 1383, +381 1122 09178
akovac2@erstebank.com
Mladen.Dodig@erstebank.rs

Disclaimer

This publication was prepared by Erste Group Bank AG or any of its consolidated subsidiaries (together with consolidated subsidiaries "Erste Group") independently and objectively as other information pursuant to the Circular of the Austrian Financial Market Authority regarding information including marketing communication pursuant to the Austrian Securities Supervision Act. This publication serves interested investors as additional source of information and provides general information, information about product features or macroeconomic information without emphasizing product selling marketing statements. This publication does not constitute marketing communication pursuant to Art. 36 (2) Austrian Securities Supervision Act as no direct buying incentives were included in this publication, which is of information character. This publication does not constitute investment research pursuant to § 36 (1) Austrian Securities Supervision Act. It has not been prepared in accordance with legal requirements designed to promote the independence of investment research and it is not subject to the prohibition on dealing ahead of the dissemination of investment research. The information only serves as non-binding and additional information and is based on the level of knowledge of the person in charge of drawing up the information on the respective date of its preparation. The content of the publication can be changed at any time without notice. This publication does not constitute or form part of, and should not be construed as, an offer, recommendation or invitation to subscribe for or purchase any securities, and neither this publication nor anything contained herein shall form the basis of or be relied on in connection with or act as an inducement to enter into any contract or inclusion of a security or financial product in a trading strategy. Information provided in this publication are based on publicly available sources which Erste Group considers as reliable, however, without verifying any such information by independent third persons. While all reasonable care has been taken to ensure that the facts stated herein are accurate and that the forecasts, opinions and expectations contained herein are fair and reasonable, Erste Group (including its representatives and employees) neither expressly nor tacitly makes any guarantee as to or assumes any liability for the up-to-dateness, completeness and correctness of the content of this publication. Erste Group may provide hyperlinks to websites of entities mentioned in this document, however the inclusion of a link does not imply that Erste Group endorses, recommends or approves any material on the linked page or accessible from it. Neither a company of Erste Group nor any of its respective managing directors, supervisory board members, executive board members, directors, officers or other employees shall be in any way liable for any costs, losses or damages (including subsequent damages, indirect damages and loss of profit) howsoever arising from the use of or reliance on this publication. Any opinion, estimate or projection expressed in this publication reflects the current judgment of the author(s) on the date of publication of this document and do not necessarily reflect the opinions of Erste Group. They are subject to change without prior notice. Erste Group has no obligation to update, modify or amend this publication or to otherwise notify a reader thereof in the event that any matter stated herein, or any opinion, projection, forecast or estimate set forth herein, changes or subsequently becomes inaccurate. The past performance of securities or financial instruments is not indicative for future results. No assurance can be given that any financial instrument or issuer described herein would yield favorable investment results or that particular price levels may be reached. Forecasts in this publication are based on assumptions which are supported by objective data. However, the used forecasts are not indicative for future performance of securities or financial instrument. Erste Group, its affiliates, principals or employees may have a long or short position or may transact in the financial instrument(s) referred to herein or may trade in such financial instruments with other customers on a principal basis. Erste Group may act as a market maker in the financial instruments or companies discussed herein and may also perform or seek to perform investment services for those companies. Erste Group may act upon or use the information or conclusion contained in this publication before it is distributed to other persons. This publication is subject to the copyright of Erste Group and may not be copied, distributed or partially or in total provided or transmitted to unauthorized recipients. By accepting this publication, a recipient hereof agrees to be bound by the foregoing limitations. This document is only made to or directed at investment professionals (as that term is defined in Article 19(5) of the Financial Services and Markets Act 2000 (Financial promotion) Order 2005 ("FPO")) or to persons for whom it would otherwise be lawful to distribute it. Accordingly, persons who do not have professional experience in matters relating to investments should not rely on this document.

© Erste Group Bank AG 2023. All rights reserved.

Published by:
Erste Group Bank AG
Group Research
1100 Vienna, Austria, Am Belvedere 1
Head Office: Wien
Commercial Register No: FN 33209m
Commercial Court of Vienna

Erste Group Homepage: www.erstegroup.com