

Adrian Curaj · Jamil Salmi ·  
Cezar Mihai Hâj *Editors*

# Higher Education in Romania

Overcoming Challenges and  
Embracing Opportunities

2022

*uefiscdi*

OPEN ACCESS

 Springer

# Higher Education in Romania: Overcoming Challenges and Embracing Opportunities

Adrian Curaj · Jamil Salmi · Cezar Mihai Hâj  
Editors

# Higher Education in Romania: Overcoming Challenges and Embracing Opportunities

 Springer

*Editors*

Adrian Curaj  
UNESCO Chair on Science and Innovation  
Policies  
National University of Political Studies  
and Public Administration  
Bucharest, Romania

Executive Agency for Higher Education,  
Research, Development and Innovation  
Funding (UEFISCDI)  
Bucharest, Romania

Cezar Mihai Hâj  
Executive Agency for Higher Education,  
Research, Development and Innovation  
Funding (UEFISCDI)  
Bucharest, Romania

Jamil Salmi  
Global Tertiary Education Expert  
Bogota, Colombia



ISBN 978-3-030-94495-7      ISBN 978-3-030-94496-4 (eBook)  
<https://doi.org/10.1007/978-3-030-94496-4>

© S.C. E-NFORMATION SRL 2022. This book is an open access publication.

**Open Access** This book is licensed under the terms of the Creative Commons Attribution 4.0 International License (<http://creativecommons.org/licenses/by/4.0/>), which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this book are included in the book's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the book's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.

The use of general descriptive names, registered names, trademarks, service marks, etc. in this publication does not imply, even in the absence of a specific statement, that such names are exempt from the relevant protective laws and regulations and therefore free for general use.

The publisher, the authors and the editors are safe to assume that the advice and information in this book are believed to be true and accurate at the date of publication. Neither the publisher nor the authors or the editors give a warranty, expressed or implied, with respect to the material contained herein or for any errors or omissions that may have been made. The publisher remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

This Springer imprint is published by the registered company Springer Nature Switzerland AG  
The registered company address is: Gewerbestrasse 11, 6330 Cham, Switzerland

# Contents

<b>Educated Romania—Focusing on Inclusive Policymaking After 30 Years of Shifting Reforms in the Romanian Education System</b> .....	1
Ligia Deca and Robert Santa	
<b>Increasing Participation and Success in Higher Education (Coordinated by Jamil Salmi)</b>	
<b>Access Patterns in Romanian Higher Education. A Story of Asymmetry and Polarization</b> .....	13
Robert Santa and Silvia I. Fierăscu	
<b>Access to Higher Education: Losing Precious Human Resources Before the Start Line</b> .....	35
Cezar Mihai Hâj and Petrișor Laurențiu Țucă	
<b>The Impact of Social Scholarships and of Reserved Places for Graduates from Rural High Schools in Improving Access to Higher Education and Academic Performance</b> .....	53
Diana-Maria Cismaru, Nicoleta Corbu, Valeriu Frunzaru, Cezar Mihai Hâj, and Oana Ștefăniță	
<b>The Socio-Economic Challenges in Access to Romanian Higher Education. Student Perception and Funding Policy Directions</b> .....	71
Oana-Alexandra Dervis, Elena Trifan, and Gabriela Jitaru	
<b>Defining and Measuring Dropout Phenomenon in Romanian Public Universities</b> .....	93
Claudiu Herțeliu, Daniela Alexe-Coteț, Cezar Mihai Hâj, and Andrei T. Pârvan	

<b>Enhancing Quality in Higher Education. Employability and the Future of Work (Coordinated by Ligia Deca)</b>	
<b>Doctoral Studies in Romania: Thriving or Surviving? . . . . .</b>	<b>121</b>
Simona Iftimescu, Mihaela Stîngu, and Delia Lupescu (Gologan)	
<b>Measuring Students' Perception of COVID-19 Impact on Higher Education Through the National Student Survey in Romania . . . . .</b>	<b>141</b>
Stefan-Marius Deaconu and Roland Olah	
<b>Romanian Universities: The Use of Educational Marketing to Strengthen Internationalization of Higher Education . . . . .</b>	<b>169</b>
Cristina Ramona Fiț, Cristian Andrei Panțir, and Bianca-Florentina Cheregi	
<b>How to Cope with GDPR for Graduate Tracking: A Discussion at the Intersection of Law and Policy and Two Solutions . . . . .</b>	<b>193</b>
Viorel Proteasa and Andreea Vertes-Olteanu	
<b>Losing Ground: Romanian Higher Education Since 2006 in Comparative Perspective . . . . .</b>	<b>211</b>
Alex Usher and Jonathan Williams	
<b>Performance-Based Funding—The Romanian Experience of the Last Five Years (2016–2020) . . . . .</b>	<b>231</b>
Mihai Păunescu, Andreea Gheba, and Gabriela Jitaru	
<b>Competitive Funding for Institutional Development. The Romanian Experience Between 2016–2020 . . . . .</b>	<b>255</b>
Remus Nica and Gabriela Jitaru	

## About the Editors

**Adrian Curaj** is a former minister of education, science and innovation. He is the head of the UNESCO Chair on Science and Innovation Policies at the National University of Political Studies and Public Administration and a professor at the “Politehnica” University of Bucharest. He worked as a consultant for the World Bank, UNESCO, UNIDO, ETF, and EC for studies in Tertiary Education, Science and Innovation, and Foresight. Adrian Curaj is a member of the Board of Directors of the U.S. Fulbright Commission in Romania and fellow of the World Academy of Art & Science (WAAS). He has been at the forefront of developments in Smart Specialization as Europe’s contribution to the new industrial innovation policy, in policy advising for higher education as a host and chair of the Future of Higher Education -- Bologna Process Researchers’ Conferences and of the main initiatives supporting progress toward Open Science in Romania. Professor Curaj is the artisan of the smart territorial development project, Laser Valley-Land of Lights.

**Jamil Salmi** is a global tertiary education expert providing policy advice to governments, universities, professional associations, multilateral development banks, and bilateral cooperation agencies. Until January 2012, he was the World Bank’s tertiary education coordinator. In the past twenty-six years, Dr. Salmi has provided advice on tertiary education development, equity promotion, financing reforms, and strategic planning to governments and university leaders in more than 100 countries all over the world.

Dr. Salmi is Emeritus Professor of higher education policy at Diego Portales University in Chile and Research Fellow at Boston College’s Center for Higher Education. He is also a member of the International Quality Assurance Advisory Group and chair of the Board of the Chilean EdTech startup u-planner. Dr. Salmi’s 2009 book addresses the “Challenge of Establishing World-Class Universities”. His 2011 book, co-edited with Professor Phil Altbach, was entitled “The Road to Academic Excellence: the Making of World-Class Research Universities”. His latest book, “Tertiary Education and the Sustainable Development Goals”, was published in August 2017.

**Cezar Mihai Hâj** holds a Ph.D. in Political Science from the National University of Political Studies and Public Administration (SNSPA) in Bucharest.

His experience as a policy expert includes coordinating a number of studies on internationalization, equity, university management, internal quality assurance, and data collection. He has written articles in Springer and Central European University publications and recently co-authored the “Study on the impact of admission systems on higher education outcomes” commissioned by the DG-EAC.

He is a member of the Bologna Follow-Up Group and Social Dimension Advisory Group. He is currently coordinating an extensive national project focused on delivering evidence-based policy recommendations.



# Educated Romania—Focusing on Inclusive Policymaking After 30 Years of Shifting Reforms in the Romanian Education System



Ligia Deca and Robert Santa

**Abstract** Romanian education policy was notoriously plagued by instability and a tendency to escape the normal policymaking cycle via top-down highly politicised reforms. After almost three decades, a new initiative by the President of Romania attempts to promote a more inclusive style of policymaking that would ensure wider societal support to upcoming educational reforms. The purpose of this article is to set the background to the wider discussion on Romanian higher education, placing it inside the context of the country's efforts to reform its schools and universities via the Educated Romania project, on which the authors had the privilege of working. It aims to create a long-term, structured vision on which to centre future education reforms and to correct some of the imbalances that have emerged in Romanian education over the past few decades. The conclusion also analyses the chances of its survival in the current Romanian political and administrative status-quo.

## 1 Context

Education as a policy topic has become increasingly prominent in Romanian public debates in recent years. A slew of international reports has recently shone light on the poor performance of Romanian education compared to its European peers. PISA scores have placed the country near the bottom among European states, indicating structural quality issues in secondary education. Early school leaving rates have remained high and have surpassed the country's Europe 2020 target. Similarly, the country has failed to lift education attainment, with the share of tertiary education graduates among persons age 30–34 at the very bottom of the EU league table (European Commission 2020). Research has been another contentious topic, with

---

L. Deca (✉)  
Romanian Presidential Administration, Bucharest, Romania  
e-mail: [deca.ligia@gmail.com](mailto:deca.ligia@gmail.com)

R. Santa  
National University of Political Studies and Public Administration, Bucharest, Romania

Romania suffering from a limited output and low funding, again placing well shy of European averages. The country has seen setbacks in major research infrastructure projects such as the flagship Extreme Light Infrastructure—Nuclear Physics (ELI-NP) and is lagging in attracting European research funding.<sup>1</sup>

Awareness of the fact that Romanian education is plagued by multiple issues is not new, and there has been a sense of urgency with regard to reforms since the 1990s. The transition from communism meant that the architecture of the education system started being, almost overnight, out of tune with new social and economic realities. Some communist-era constraints, for example, strict *numerus clausus* in higher education, were removed almost immediately after the 1989 Revolution. Others, such as the structure of the vocational education and training (VET) system, became the object of debates that stretched out over the upcoming decades. Procedures and transition requirements between cycles were gradually overhauled, with requirements for accessing upper secondary and tertiary education changing over time (Deca 2015).

In 1995, a new law regulating the structure of the education system was adopted, overhauling the patchwork of legal texts that had adapted the communist-era education system to contemporary realities. Nevertheless, regulatory changes continued unabated amid a desire by multiple political forces to leave a mark on the education system. These tendencies were further strengthened by the lack of a unified national strategy. In 1999, Education Minister Andrei Marga attempted the first major reform package, which saw the introduction of the “capacity examination” at the end of 8th grade, replaced trimesters with semesters in secondary education and attempted to increase decentralization at all levels. Crucially, they envisaged autonomous universities in a country that had long-lasting traditions of centralization.

The Marga reforms did not end a culture of back-and-forth changes in the education system, however. Legislative changes continued, balkanizing Romania’s regulatory landscape in a way that made it difficult for the education system to strategically support public policy goals. It was in the early 2000s that the most comprehensive higher education reforms in transition-era Romania were prepared. The impetus was external this time, with the country aiming to join the Bologna Process. As such, the Bologna-style 3-cycle system was introduced, with a mostly 3-2-3 configuration in terms of nominal years of study. Quality assurance processes and recognition procedures were overhauled, ECTS credits were introduced, and Romania started taking part in the Erasmus mobility scheme. These changes were transformative when it came to the structure of the higher education system, though their deeper internalization by the university sector remains open to debate (Deca 2016).

The mid-2000s were a time of exuberant change in Romania as a whole. European integration had made significant strides. Visas were lifted, and Romanians could travel freely. Legislation was aligned with that of the European Union (EU) ahead of full membership in 2007. The economy had turned a corner in 2000 and was now growing rapidly, with real wages increasing and job creation picking up pace in new sectors. Certain public sector jobs now required tertiary-level degrees or at least

---

<sup>1</sup><https://www.nature.com/articles/d41586-019-01607-7>, last accessed on 06.10.2021.

rewarded them with bonuses. Participation in higher education peaked. This period was the heyday of private education: no fewer than 410,000 students commenced their studies in private institutions in 2008/2009. In fact, private education and fee-paying public education now covered over 70% of Romania's 1,000,000+ students (CNFIS 2014).<sup>2</sup> Massification had led to public scandals on the issue of quality, with a growing perception that “everyone could go to university”. Demographic factors (the decline of birth cohorts after 1990), greater scrutiny over the quality of private education, a decline in employment and wages brought about by the global financial crisis, and a tighter control of fraud at the baccalaureate examination would ultimately halve student numbers in as little as four years.

As the global financial crisis was commencing, a second project of education reform was prepared under the patronage of then-president Traian Basescu. A presidential commission chaired by professor Mircea Miclea developed a set of recommendations that became the object of a political pact and, to a large degree, influenced the development of a new education law in 2010. Early in 2011, the law was passed under minister Daniel Funeriu. The law, nr. 1/2011, proposed sweeping reforms of the education system. Autonomy was further strengthened, with local authorities now being involved in pre-tertiary education in an increasing manner. The law impacted the entire education system, being transformative in nature but containing several provisions that were to be phased in over several years. Ultimately, political pressure meant that many of the more radical provisions were postponed *sine die*, while some were repealed altogether. The law was heavily modified over the following years, with some articles being changed multiple times, often in contradictory directions.

One prominent problem with education reform was the fact that the topic had become excessively politicized: party politics meant that narrow agendas were often more influential in dictating policy than any long-term concerns over the nature of the education system. In a few cases, even the same political parties managed to operate steep U-turns over a relatively short timeframe. For example, secondary level trade (VET) schools were abolished, then reinstated, and finally made a priority education stream benefiting from public scholarships all within the space of four years (2009–2013). Such inconsistencies have fueled both reform fatigue and reduced compliance, as the transitory nature of many regulatory changes led to an expectation of superficial or minimal implementation or generated a compliance culture metaphorically called by Falkner and Treib (2008a) “the world of dead letters”.

It was in these circumstances, and in a context of political cohabitation, that the “Educated Romania” project was born. A political project, initiated by a constitutionally neutral actor—the President of Romania—that was rooted both in a culture of broad consultation and in an acceptance of the need for a more *realpolitik* approach to legislative changes in the field of education.

---

<sup>2</sup>CNFIS, 2014 report—retrieved from <https://www.edu.ro/sites/default/files/fi/C8%99iere/studii%20si%20analize/2016/CNFIS/CNFIS-Raport-public2013-final.pdf>, last accessed at 06.10.2021.

## 2 A New Reform Agenda and a New Approach

The “Educated Romania” project, born in 2016, was initially a consultation exercise. Members of the public were surveyed via a website with regard to their views on the future of society and, consequently, how they see education contributing to that future. Surveys enabled them to select the societal transformations they believed education should strive to react to, but also a few direction points for the system as a whole.

In order to enable debates at the regional level, consultation events were organized in each NUTS-2 region (8 in total), with each region hosting a topic. The debates were geared towards the identification of problems deep within the education system as opposed to engaging with examples of good practice. For example, the debates on VET were held in the North-Eastern region rather than Transylvania (where most German-style dual VET schools are situated).

The topics covered in the consultations included: graduate profiles, the teaching career, vocational education and training, research, the assessment of learning outcomes, the internationalization of higher education, and functional illiteracy. At the end of the consultation process, an aggregation exercise was organized with the aid of the Executive Agency for Higher Education, Research, Development and Innovation Funding (UEFISCDI), producing an initial report. The report was based on both the regional conferences and the results of the online consultation, and it offered an initial synthesis of the prominent ideas covering the future development of Romanian education.<sup>3</sup>

This first document provided the outlines for a vision on the development of Romanian education, and work soon started on its further development. While the first stage of the project (2016–2017) was open to widespread public participation, the second focused on consulting experts (2017–2018). Seven working groups were created focusing on the main themes identified in the first stage. These were:

- The teaching career
- Equity in the education system
- The professionalization of educational management
- Vocational education and training
- Autonomy, quality and internationalization in Higher Education
- Accessible early childhood education
- Student assessment

Each working group contained a mix of NGO representatives, stakeholders (unions, student representatives, university representatives, etc.), public sector experts, and academics. Membership was broad, and towards the end of group-level drafting, a few persons in each group helped prepare a cross-sectorial document. Editorial work was conducted by the Education and Research Department in the Presidential

---

<sup>3</sup>[https://www.presidency.ro/files/userfiles/Raport\\_atelier\\_integrare.pdf](https://www.presidency.ro/files/userfiles/Raport_atelier_integrare.pdf), last accessed at 06.10.2021.

Administration. Consultations with the public continued, although in a more hands-off manner. Civil society organizations could apply for “Educated Romania” label for their events, under the condition that they debate current issues in the education system and provide a report to the Presidential Administration. This approach was strategic from another viewpoint as well: prior attempts at reforming the education system had failed. They had often been railroaded and developed by fairly narrow groups of experts, leading to a lack of internalization within the wider system. As soon as the political alignment of the government and key parliamentary committees changed, reforms were often repealed with little resistance in the system. The system lacked the ownership to react negatively, which facilitated a culture of impunity when regulatory change had detrimental effects.

“Educated Romania” attempted to develop a vision and strategy in cooperation with other stakeholders, in as broad a fashion as possible. While this had the downside of necessitating steep compromises in certain areas (stakeholders do not necessarily agree on what reforms should entail), it did offer the benefit of a multifaceted dialogue and a certain level of grounding that allowed for more realism in identifying boundaries for any sustainable would-be regulatory changes.

Content-wise, the “Educated Romania” project was heavily focused on pre-tertiary education, which was a consequence of the fact that most of the serious issues in the system had roots at this stage. This is of particular importance for higher education as well, as prior policy interventions in the sector tended to be very insular. For example, efforts to improve access to higher education were often centered on social scholarships, facilitating access to low-cost dormitories, or offering academic support to students from disadvantaged backgrounds. But these, themselves, only target those students that have actually managed to reach higher education.

As Hâj and Țucă (2021, present volume) point out, the share of young people aged 19 who meet the eligibility requirements to enter higher education is already low by European standards. Losses accumulate, over time, in each cohort and reflect early school leaving, emigration or failure to pass the baccalaureate exam. The share of young people who end up being eligible for entry to higher education is less than half of each cohort, a proportion that is lower than the educational attainment of a few other EU members. This is likely to be further aggravated in the future, as certain universities rely on recruiting students from demographically vulnerable regions, as Santa and Fierăscu’s paper (2021, present volume) noted.

As such, themes such as equity, transition reform, curricular reform, earlier entry to formal education, and others soon emerged as key elements within the project. The “Educated Romania” approach focused on trying to ensure that as many children and young people as possible benefit from a qualitative education that allows them to complete their upper secondary studies with a wide choice for future development.

This direction was clear when the thematic reports and an integrated vision document were released in December 2018 for public consultation.<sup>4</sup> Hundreds of emails,

---

<sup>4</sup><http://www.romaniaeducata.eu/wp-content/uploads/2019/01/Viziune-si-strategie-Romania-Educata.pdf> and <http://www.romaniaeducata.eu/wp-content/uploads/2019/01/Rapoarte-grupuri-de-lucru-Romania-Educata.pdf>, last accessed at 06.10.2021.

discussions, and further stakeholder events enabled the public to provide feedback. A EU-funded technical assistance project allowed contracting OECD experts to develop expansive policy proposals on the teaching career, early childhood education and training, funding and management. All these inputs enabled the development of a final document, ready to become the centerpiece for further education reform in Romania. This document was adopted by the government in July 2021.<sup>5</sup>

The final “Educated Romania” document, integrating the thematic reports and overall vision and strategy, further developed previous content themes and added new fields, including STEAM and a greater focus on literacy. The latter had been exposed as a major issue with societal implications during the Covid-19 pandemic, as misinformation hit Romania severely and contributed to a poor vaccination rate in a country that had participated in EU procurement. This final version of the report included several policy choices that were endorsed by the project’s initiator, the President of Romania. These included new educational routes for Vocational Education and Training (VET), with more bridges to higher education and to other routes (theoretical or vocational), competence-based exams at the end of the lower-secondary education, as well as at the end of high school, but also access to alternative routes for entering the teaching career. The report remains at the level of a strategic vision, with a clear understanding that an implementation plan would be developed and endorsed by the Government and the Parliament (from a legal reform point of view).

The document has already begun to shape Romanian education. The Romanian plan associated with the Recovery and Resilience Facility drew heavily from “Educated Romania” priorities, as has the National Defense Strategy,<sup>6</sup> voted by Parliament. These developments are important for higher education, as they include a series of revolutionary proposals. Notably, universities are likely to become central components in the development of vocational centers of excellence, pairing them with campuses, secondary VET schools, and businesses in the creation of professional development ecosystems.

Of course, whether the approach proposed by “Educated Romania” proves its resilience and manages to push through a more long-lasting agenda than prior attempts at reforming the education system remains to be seen. With politics in Romania being notoriously fickle and with a culture of constant regulatory upheaval, the way in which the system reacts to a new reform proposal cannot be accurately predicted. Nevertheless, it is equally clear that the *status quo*, the product of incrementalism and prior reforms, has not had much impact.

---

<sup>5</sup><http://www.romaniaeducata.eu/wp-content/uploads/2021/07/Raport-Romania-Educata-14-iulie-2021.pdf>, last accessed at 06.10.2021.

<sup>6</sup>[https://www.presidency.ro/files/userfiles/Documente/Strategia\\_Nationala\\_de\\_Aparare\\_a\\_Tarii\\_2020\\_2024.pdf](https://www.presidency.ro/files/userfiles/Documente/Strategia_Nationala_de_Aparare_a_Tarii_2020_2024.pdf), last accessed at 06.10.2021.

### 3 Significance

Looking back at the history of education reforms in Romania and focusing on the higher education arena in particular, it is not difficult to see that many of the most significant and lasting reforms had roots in Romania's European integration process. The most visible case is that of Bologna-inspired reforms, but other changes were brought about by the need to implement the *acquis communautaire*<sup>7</sup> in order to prepare for EU membership. Even today, it is often EU directives that spearhead notable modernization strides, for example, the case with residency rights for non-EU graduates (see Santa and Haj 2020) or the enhanced recognition of professional qualifications. We have already seen Romania placed in the position of being a policy borrower in areas such as internationalization (see Deca 2020), and this extends to other policies as well. Of course, when it comes to pre-tertiary education, policy borrowing is limited by the lack of significant European integration beyond issues that pertain to mobility or measuring the qualifications' attainment.

The idea of a domestic reform agenda is fraught with problems due to the lack of any barriers in reversing reforms at a later date or in reverting to a regulatory "frenzy". And it is here that we can see a gap between reforms with external drivers and reforms with internal drivers, at least when it comes to the longevity of implementation. In this regard, the "Educated Romania" project is an endeavor to spearhead homegrown reforms based on inputs from domestic stakeholders precisely with the idea of having sufficient consensus to reduce the temptation for later adjustments. If successful, it will reduce the distance between problems within the education system and policy development at the core of the national government, while at the same time not ignoring global realities and not becoming an instrument of party politics.

A large part of the success of the project will depend, in the authors' view, on the team responsible for implementation. The project lasted as the only large scale reform in education for the past six years due to a combination of strong political commitment from the President of Romania and democratic inclusive approach, which generated ownership throughout the system, but also, more notably, in the private and non-governmental (NGO) sector. Such assets are clearly needed in the next phases, coupled with an increased policymaking capacity at the level of the Ministry of Education.

For higher education, in particular, it is essential that the "Educated Romania" project succeeds. Many core issues in higher education are the product of secondary education's numerous failings and unresolved issues. From limiting university access due to poor education outcomes, to perpetuating urban-rural disparities and to focusing insufficiently on critical and analytical thinking, pre-tertiary education is possibly the predominant factor in ensuring a successful future for Romanian higher education.

---

<sup>7</sup>Acquis communautaire is used here as the accumulated legislation, legal acts and court decisions that constitute the body of European Union law.

## References

- Deca, L. (2015). International norms in the reform of Romanian higher education: A discursive analysis. *European Journal of Higher Education*, 5(1), 34–48.
- Deca L. (2016). *Understanding the internationalization of higher education as a policy process: the case of Romania* (Doctoral dissertation, University of Luxembourg). Retrieved from <http://orbilu.uni.lu/handle/10993/31206>
- Deca L. (2020). Internationalization of higher education in Romania and Portugal—strategies and transitions at the (semi-) periphery. In A. Curaj, L. Deca & R. Pricopie (Eds.), *European higher education area: challenges for a new decade*. Cham: Springer. [https://doi.org/10.1007/978-3-030-56316-5\\_5](https://doi.org/10.1007/978-3-030-56316-5_5)
- European Commission. (2020). Education and training monitor. <https://doi.org/10.2766/637450>
- Falkner, G., & Treib, O. (2008a). Three Worlds of Compliance or Four? The EU-15 Compared to New Member States. Wiley-Blackwell: Journal of Common Market Studies.
- Falkner, G., & Treib, O. (2008b). Three worlds of compliance or four? The EU-15 compared to new member states. *JCMS Journal of Common Market Studies*, 46(2), 293–313. <https://doi.org/10.1111/j.1468-5965.2007.00777.x>
- Hăj, C. M. & Țucă, P. (2022). Access to higher education: Losing precious human resources before the start line. In A. Curaj, J. Salmi & C.M. Haj (Eds.), *Higher education in Romania: Overcoming challenges and embracing opportunities* [Manuscript submitted for publication]. Springer.
- National Council for Higher Education Funding (CNFIS). (2014). *Raportul public anual: Starea finanțării învățământului superior și măsurile de optimizare ce se impun*. Retrieved from [https://www.edu.ro/sites/default/files/\\_fi%C8%99iere/studii%20si%20analize/2016/CNFIS/CNFIS-Raport-public2013-final.pdf](https://www.edu.ro/sites/default/files/_fi%C8%99iere/studii%20si%20analize/2016/CNFIS/CNFIS-Raport-public2013-final.pdf) on September 23rd 2021
- Santa, R. & Fierăscu, S. (2022). Access patterns in Romanian higher education. A story of asymmetry and polarization. In A. Curaj, J. Salmi & C.M. Haj (Eds.), *Higher education in Romania: Overcoming challenges and embracing opportunities* [Manuscript submitted for publication]. Springer.
- Santa, R., & Haj, C. M. (2020). The role of demographic policies in the internationalization of Romanian higher education. In A. Curaj, L. Deca, & R. Pricopie (Eds.), *European higher education area: Challenges for a new decade* (pp. 131–143). Cham: Springer.

**Ligia Deca** is the Presidential Adviser for Education and Research within the Romanian Presidential Administration. In this capacity, she also coordinates the “Educated Romania” National Project, aimed at adapting the Romanian education system to the challenges of the 21st century. She graduated a Ph.D. program in Political Sciences and Educational Policies at the University of Luxembourg and was a research fellow at the “New Europe College”, with a focus on internationalization of higher education. Author of several papers and studies in the field of educational policies, Deca also worked as an expert for the Council of Europe, European Commission, EQAR, DAAD, etc. In 2014 she was a member of the ‘Science in Education Expert Group set-up by the European Commission, and in 2019, she was chosen as an evaluating expert for the European Universities pilot project. She has maintained an intense academic activity throughout the past few years, publishing several articles on topics ranging from the internationalisation of higher education to adaptive educational practices in the context of the COVID-19 pandemic. Ligia Deca was also a member of the Board of Directors at Fulbright in Romania (2017–2020).

**Robert Santa** Recently awarded a Ph.D. in Political Science by the National University of Political Studies and Public Administration of Bucharest, a graduate of UCL’s Institute of Education in London and Deusto University in Bilbao, Robert Santa has been active in the student movement at the local, national and European levels. He has previously been employed in the private sector on graduate employability issues, and has conducted research work on a variety of education-related topics in multiple projects. He is currently working as an adviser within the Education and Research Department of the Romanian Presidency.



**Open Access** This chapter is licensed under the terms of the Creative Commons Attribution 4.0 International License (<http://creativecommons.org/licenses/by/4.0/>), which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.



**Increasing Participation and Success  
in Higher Education (Coordinated  
by Jamil Salmi)**

# Access Patterns in Romanian Higher Education. A Story of Asymmetry and Polarization



Robert Santa and Silvia I. Fierăscu

**Abstract** The sharp decline in fertility rates that has occurred in Central and Eastern Europe in the immediate aftermath of the collapse of communist regimes has generated a realignment of social, economic and political realities across the region. Romania is no exception, and the ageing of its population has influenced a sharp reversal of the admissions boom of the 90s and 2000s. Universities are struggling to attract enough students while overall participation in higher education, when measured by the share of 30 to 34-year-olds with at least a bachelor's degree, places Romania last among the 27 EU members. Drawing upon data from the National Matriculation Registry (RMU), the paper aims to analyse trends in student admissions and map university recruitment flows. The paper uses network analysis of existing student populations to identify universities with demographically vulnerable recruitment basins. The paper then discusses the impact of these vulnerabilities and analyse the wider challenges posed for universities by changing demographics and low cohort intakes. We find that variations in attractivity and demographic transformations combine to fuel a realignment of the structure of the Romanian Higher Education system that is already visible in enrolment patterns. This asymmetry does not only impact higher education but also development patterns and higher education funding policies. On the one hand, the paper informs policymakers on how existing demographic trends and recruitment flows are likely to influence the economic viability of existing universities, as well as how the currently low level of tertiary education attainment is reflected at a regional level. On the other hand, the paper encourages universities to rethink their competitive advantages in this revealed complex competition system to make better data-driven, evidence-based decisions when it comes to recruitment strategies in a context of scarcity and uncertainty.

---

R. Santa (✉)

National University of Political Studies and Public Administration, Bucharest, Romania

e-mail: [robi.santa@gmail.com](mailto:robi.santa@gmail.com)

S. I. Fierăscu

West University of Timisoara, Timișoara, Romania

e-mail: [silvia.fierascu@e-uvt.ro](mailto:silvia.fierascu@e-uvt.ro)

© The Author(s) 2022

A. Curaj et al. (eds.), *Higher Education in Romania: Overcoming Challenges and Embracing Opportunities*, [https://doi.org/10.1007/978-3-030-94496-4\\_2](https://doi.org/10.1007/978-3-030-94496-4_2)

**Keywords** Social network analysis · Access to higher education · University recruitment flows · Higher education landscape · Student demography

## 1 Demographic Transformations and Higher Education Recruitment Patterns

Romania is part of a number of countries in Central and Eastern Europe that experienced a sharp change in demographic trends in the 1990s. Fertility decline in the wake of the collapse of the communist regime kickstarted a process of rapid ageing in the general population, with the size of each annual cohort of new births shrinking sharply. For example, while annual births in 1990 were still as high as 315,000, they had fallen to just under 200,000 by 2019.<sup>1</sup>

At the same time, the elimination of restrictions on higher education enrolment saw a boom in student numbers, with both traditional students (i.e. upper secondary graduates) and mature learners enrolling in numbers that would have been impossible under the communist regime's strict *numerus clausus*.

Given that enrolment in higher education in Romania occurs at age 18 or 19, the fertility decline began to be felt in the higher education system after the 2008/2009 academic year. This initiated a two-stage demographic transition in higher education. The first stage was one of rapid contraction in student numbers, happening exactly 19 years after the abrupt decline in birth numbers which occurred in Romania in 1989–1991. After around 2013–14, a plateau emerged, with Romanian Statistics reporting a stable number of around 540,000 students throughout the following five years.<sup>2</sup> This can be described as a second stage, though in itself it represents merely a stop-gap at constant participation rates: demographic decline resumed at a slower pace after the mid-1990s.

The first stage of this transition, which essentially halved student numbers, represents one of the more seismic contextual shifts in contemporary European higher education. After going through massification starting in the 1990s, the dramatic collapse in the number of students attending universities was seen in almost all categories, but there were also dramatic changes in the shares of students by type of provider and funding (CNFIS 2013; Curaj et al. 2013).

In particular, the rapid transition of 2009–2014 upended funding patterns. By 2008, roughly 25% of the income of public universities came from tuition fees (CHEPS, 2010 as cited in Kwiek 2014). As student numbers fell after that year, the share of income derived from regular fees declined at public universities, with fee-paying student numbers halving over the next five years (CNFIS 2013; CNFIS

---

<sup>1</sup>Data from INS Tempo. Note that methodology changed in 2012 to account for emigration and that even with this, there is a suspicion of over-reporting due to registrations by Romanians who de facto live abroad.

<sup>2</sup>INS Tempo table SCL103D, retrieved on September 1 st 2021.

**Table 1** Decline in student numbers during the rapid 2008–2013 demographic transition

Year	Total students	Public-state	Public-tax	Private
2008/2009	1,035,513	284,616	340,038	410,859
2009/2010	938,843	282,237	334,269	322,337
2010/2011	816,228	288,580	287,710	239,938
2011/2012	661,241	289,087	231,766	140,388
2012/2013	572,415	285,652	187,087	99,676
2013/2014	540,560	287,032	174,282	79,246
2018/2019	533,749	297,994	150,970	65,818

Source CNFIS 2013 and CNFIS 2020

2014). Private institutions, where almost all places were fee-paying, lost some 80% of their students. State-funded study places, which were not reduced over the period, came to represent a majority of university study places. The once large distance-learning programmes offered by certain private and even public universities have seen a fall in enrolment. The number of long-distance and part-time students enrolled in private universities fell by 90% between 2008 and 2013 (CNFIS 2013, p. 9). This abrupt trend was bolstered by legal and reputational issues surrounding many of these programmes.

Coupled with stricter supervision of *baccalaureate* examinations, student numbers did not rebound over the coming decade. The private university sector never recovered its pre-2008 size, though the public sector also saw declines in student numbers. Overall, the public sector now dominates, though smaller universities struggle to attract sufficient students. In fact, some of the smaller universities have ended up being funded from non-regular channels. An example is the use of the Ministry of Education's emergency funding stream to finance regular activities in some of the smaller, more vulnerable universities (Santa 2018). Nevertheless, after 2013, the number of students has broadly stabilised, partially influenced by a relative stability in both cohort size and access levels (Table 1).

As mentioned before, the demographic transition is ongoing. The demographic decline has continued after the 1990s, and while rising fertility rates limited the year-on-year (y-o-y) declines in cohort sizes, there is growing evidence of regional divergence in general demographic trends. These already became apparent at the 2011 census, with some regions that hitherto had a lower average age and relative population stability seeing steep falls in population numbers. And while the expected 2021 census has been postponed due to the Covid-19 global pandemic, there are growing signs that Romania's demographic landscape is changing, with the population increasingly concentrating in a few regions, while others are seeing a steeper demographic decline. Unlike in the past, these trends seem to be largely influenced by economic considerations. For example, many North-Eastern counties

are losing population via emigration (despite their higher fertility rates), while more developed regions seem to maintain demographic stability and even growth.<sup>3</sup>

Universities, which see their funding broadly tied to student numbers, have recruitment basins that differ in nature and coverage. Most of the universities that have a broad geographic appeal tend to be those that already existed before the 1989 Revolution, though some older universities also struggle to appeal beyond the local counties. This paper identifies recruitment typologies among Romanian universities and discusses vulnerability and opportunity in the context of ongoing demographic transformation. In particular, it explores this topic in an environment in which the dominant funding model is one that links financial allocations to student numbers.<sup>4</sup> Given the structural constraints of these financing models in the current context of change, we emphasise the opportunity for universities to understand their local and global competition environments, to be able to better assess alternative ways to attract scarce students, retain talent, and emerge as unique educational and resource pillars in Romanian society.

Broadly, the paper will try to achieve three major objectives. First, it aims to analyse trends in student admissions and map university recruitment flows. Secondly, it aims to analyse student recruitment networks of key Romanian universities using RMU data. Lastly, it aims to critically discuss the implications for Romanian universities taking into account demographic changes taking place at the regional level.

## 2 Data and Methodology

The article derives its conclusions based on the use of RMU (Unique Matriculation Register) registration data for students, which have previously been employed in the development of a UEFISCDI demographic forecasting paper (*see* Santa and Fierăscu 2020). For recruitment patterns, first-year student registrations were used. The students registered in the database might not be a completely accurate reflection of actual matriculations as, upon database processing, certain errors were uncovered. Nevertheless, the RMU database remains the best measure to date of enrolment patterns across universities, using a single methodological approach to data collection. The RMU data we could access covers the period 2015–2019 and refers to information about recruitment destinations and high school information for more than 1 million Romanian and international students.

It is important to note that the following discussion is bounded by the context of domestic enrolment to Romanian universities, excluding the impact of degree mobility abroad, i.e., when a county's higher education participation patterns are analysed, the information refers strictly to those students that have applied to study

---

<sup>3</sup>Delays to the 2021 census make it impossible to fully gauge the extent of these trends before early results are released, tentatively estimated for 2023.

<sup>4</sup>There are multiple criteria, though student numbers are determinant in overall funding allotment.

**Table 2** Distribution of first-year students and differences in participation in higher education, 2015–2018

First year-students	No. students	% students	Consecutive year difference (%)	Difference to 2015 (%)
2015–2016	199,811	27		
2016–2017	183,694	25	–2	–2
2017–2018	191,512	26	1	–1
2018–2019	158,328	22	–5	–6
<b>Total</b>	<b>733,345</b>	<b>Average</b>	<b>–2</b>	<b>–3</b>

Data Source RMU

in Romania. The breakdown of RMU student registrations is detailed in Annex 1—Distribution of first-year students in our RMU data sample (Table 2).

The methodology used to analyse the data samples is Social Network Analysis (SNA) (Scott 1988), an approach often found in Applied Network Science (Barabasi 2016). In the network framework, universities are nodes, and the shared student recruitment flows are edges. Two universities are connected if they share student recruitment basins. The thickness of the edges represent proportions of shared recruitment basins. Social Network Analysis is a theoretical, analytical and visual framework to explore, analyse and visualise this complex ecosystem of recruitment (Wasserman and Faust 1994) in order to statistically characterise the ecosystem, the clusters of universities with similar recruitment patterns, and the key players in this space. SNA is a methodology that does not depend as much on the size of the ecosystem influencing inferences from different levels of analysis. It is, however, sensitive to missing data. Take, for example, the missing link between the maritime universities in Constanta. It is likely that we missed other smaller edges among universities and even some universities due to the random cut-off point of the data sample we worked with. However, the sample does include the main Romanian universities, if different sizes, profiles and geographical locations. The missing edges and nodes are not likely to alter the main results of the analysis nor invalidate the conceptual framework that focuses on the mechanism at work that generates such network structures.

Based on university enrolment patterns, we construct a network of recruitment flows among Romanian universities in a bipartite fashion, operationalising nodes of two types: node type 1—universities/university centres; node types 2—recruitment basins at the level of counties. The bipartite network was projected on inter-university linkages based on common recruitment basins in counties. The resulting network of interest makes explicit the national level network of competition among universities in their recruitment patterns. Furthermore, we categorise key universities based on their positions in this complex network of recruitment flows, allowing us to zoom into the specific profiles of key universities. We thus employ the method to better understand the structure of the recruitment landscape and the emerging network communities but also identify potential vulnerabilities and strengths of the overall higher education system as it is.

RMU data offers a snapshot of the student recruitment patterns captured in the past few years. However, university recruitment basins are likely to be influenced by changes to regional demographics in the near future. When analysing the demographic vitality of the recruitment basins themselves, proxy data was broadly employed, as the intercensal period is approaching its end, with many formal databases being calculated in virtue of 2011 results. While Romania does keep a formal account of the resident population that is distinct from nominal domiciles (which often ignore migration), this is still unlikely to be accurate. Indeed, the effect of migration flows and faulty registrations was visible in a few “improbable” y-o-y variations identified in INS databases. The use of proxy data enables us to identify a series of recruitment basins that are particularly vulnerable to future demographic change.

### 3 Recruitment Typologies and Network Organization

Instead of operationalising recruitment patterns in terms of similarity and diversity of student characteristics (which assumes independence of observations), we choose to reveal university profiles using an often-hidden aspect of recruitment—similarity and diversity of recruitment flows (which assumes universities are interdependent in their competition for recruitment because they target similar potential student pools). We redefine recruitment in terms of flows to highlight the interdependency of universities in the Romanian higher education landscape—when it comes to student recruitment.

The profiles identified in this setup reveal the main vulnerabilities and strengths of universities in terms of their resilience to demographic changes, as well as in the context of competition. We thus conceptualise two dimensions across which we assess universities’ positions in the national recruitment network: (a) diversity of recruitment basins for each university and (b) structure of the universities’ local recruitment environments.

#### 3.1 *Diversity of Recruitment Basins: Narrow Verses Diverse Recruitment Networks*

This perspective reveals university centres that depend on narrow recruitment (i.e., single-basin recruitment) versus diverse recruitment (multi-basin recruitment) when it comes to a shrinkage of the supply, the potential student populations.

Universities with single-basin or narrow-basin recruitment are expected to suffer more from the ongoing demographic transformations, though this remains partially dependant on demographic trends in the counties that dominate each basin. When the basin shrinks, the number of students recruited by these universities shrinks as well;



therefore their financial budget shrinks too. In the network position, they are expected to be peripheral to the system and dependent on only one or two shared recruitment basins with a single central entity. Starting new recruitment bases in other counties further require resources, and the dependence on the university's actions towards adapting the recruitment strategy is higher.

Universities that attract students from multiple counties are expected to adapt better to changing recruitment flows. When one or a few channels of recruitment shrink, the university can attempt to compensate by increasing recruitment from other counties. Also, nearby universities in decline can be targeted for mergers, thus expanding recruitment basins. Good examples include mergers between Cluj's UTCN and UBB universities and smaller public institutions in other counties.

### ***3.2 Structure of Local Recruitment Environments: Open Verses Closed Recruitment Networks***

Assessing the network of higher-education institutions and their recruitment patterns also allows us to identify the embeddedness of universities in open or closed co-dependence networks on similar recruitment basins.

Universities that have an open local network recruit exclusively from various counties (star configurations). Their advantage is in their exclusive recruitment flows from smaller regions, with the regions themselves not competing with each other. Universities that have a closed local network co-recruit from shared basins (clique configurations). We often see shared recruitment patterns with other universities in the same or nearby university centres.

Network theory posits that open networks rely on exclusive ties to diverse recruitment basins, which give them visibility and monopoly over those regional basins, while closed networks enter constructive competition among universities of shared potential student pools. Embeddedness of universities in these configurations links them to the resilience they have in the face of major demographic and mobility transformations.

### ***3.3 Network Self-Organisation: Vulnerabilities and Resilience***

The connection between network embeddedness and resilience has been demonstrated across a wide range of empirical networks and complex ecosystems, from studies of urban development to studies of cancer and cell re-organisation around systemic shocks (Callaway et al. 2000; Newman 2003; Boccaletti et al. 2006).

Network Theory informs us that the structure of the ecosystem encodes information about the vulnerability or resilience of the landscape itself. If the network is

**Table 3** Conceptual mapping of vulnerabilities and strengths in co-dependencies of universities on shared recruitment basins

Structure of local recruitment environments			
		Open	Closed
Diversity of recruitment basins	Narrow	Low embeddedness—low resilience (high university investment into alternative recruitment strategy)	High embeddedness—low resilience (although universities here remain relevant at a regional level, rather than national level)
	Diverse	Low embeddedness—high resilience (university investment into existing recruitment basins)	High embeddedness—high resilience (network self-organisation)

dense, cohesive and clustered, it is more resilient to random shocks (even if those shocks are endogenous or exogenous to the system). If the network is, on the other hand, fragmented, centralised and sparse, random shocks can substantially affect the connectivity of the system or its main characteristics, leading to an irreversible impact on the landscape (Table 3).

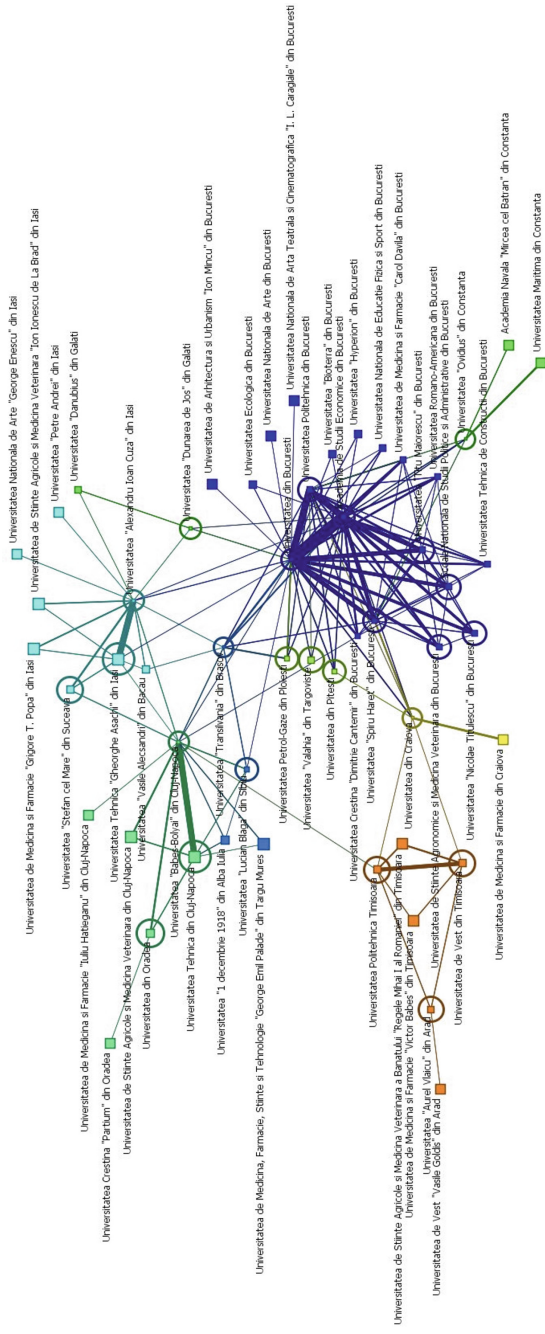
In other words, if universities have clustered and diverse recruitment networks, major changes that affect recruitment flows and the positions of universities in the landscape have minor repercussions on these communities for two reasons: (a) students have visible alternatives in their university choices and (2) universities have visible alternatives in their recruitment basins. If, on the other hand, universities have open and narrow recruitment networks, major changes that affect recruitment flows can irreversibly affect their ability to reinvent themselves after such systemic shocks (Figs. 1 and 2).

The following sections of the paper offer a descriptive account of the higher education recruitment flows in Romania, linking them to patterns of demographic transformation, to better frame the debate over the role of universities in effectively managing a rapidly changing environment. We thus propose to address questions about the motivation or the reasons why the landscape looks like this in further research and dedicate this paper to mapping and contextualising the embeddedness of universities into network structures.

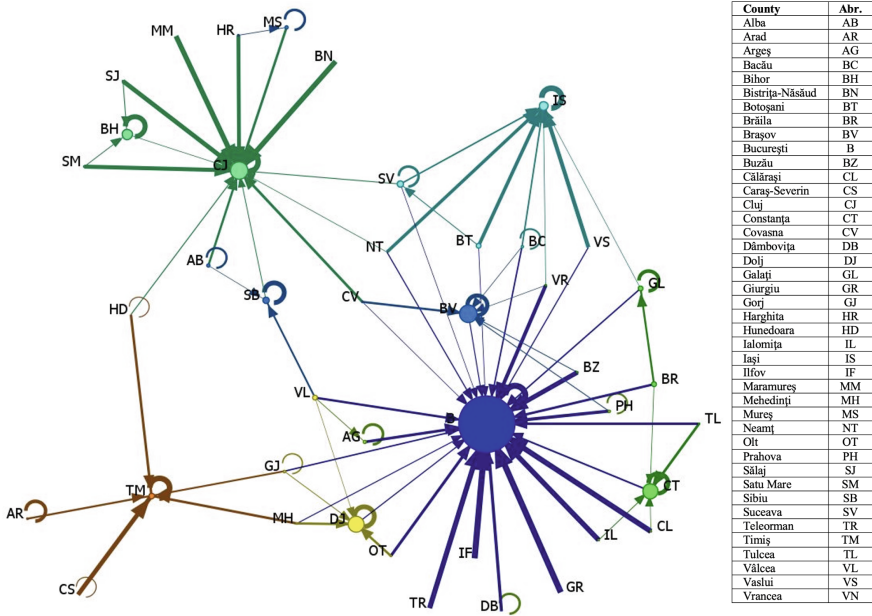
## 4 Results

### 4.1 *Patterns of Enrolment: The Recruitment Basins*

A key dimension in the identification of future demographic health in various university recruitment basins is the mapping of said basins today. Of course, enrolment



**Fig. 1** Network of Romanian universities' recruitment flows. Each node is a university. The edge connecting two universities represents the share of total recruitments for each university that is from the same recruitment basin. The thicker the link, the higher the overlap in recruitment between two universities. Node colours reflect network communities, identified using the Louvain clustering algorithm. A network community is defined by stronger connectivity patterns among nodes from the same community than with the rest of the network. Circled nodes are key universities, defined as important based on network centrality measures (in this case, relative Betweenness Centrality scores)



**Fig. 2** County recruitment flows in degree-awarding Romanian higher education institutions. The nodes are counties connected among each other based on the rate of students enrolled in local universities coming from different geographical areas (width of the links). The size of the node reflects the In-Degree score (the number of incoming links). The larger the node, the more attractive that county is for first-time students

patterns can change in the long run—especially if Romania manages to overcome some of its deeply entrenched access issues—but existing data can only paint an overall picture of what the situation is today. The small time period of available RMU registrations (2015–19) does not permit any extensive mapping of variations in enrolment trends.

The data revealed a complex hierarchy when it came to the size of recruitment basins among universities. The first broad conclusion is that there are just four large university centres that manage to attract students from multiple counties, having diverse recruitment basins and displaying dense and cohesive networks. These are Bucharest, Cluj-Napoca, Timisoara and Iasi. Outside of the city proper, Bucharest universities are the main destinations for students from no fewer than 12 counties, Cluj universities attract students from 8 counties, Timişoara universities from five and Iaşi universities from four. Constanţa universities are the main destination for students from Tulcea county, but the dominance here is moderate (being a plurality only), with just slightly fewer students opting for Bucharest universities. It is important to note that study programmes undertaken in extensions (campuses situated in other cities/regions) count towards the student totals of the home university. In the case of Cluj-Napoca, both the generalist UBB university and the technical UTCN university

**Table 4** Share of students from local county per university

County	% Students from same county	County	% Students from same county
Cluj-Napoca	23	Târgoviște	74
București	40 <sup>a</sup>	Alba Iulia	76
Iași	40	Oradea	77
Brașov	41	Ploiești	83
Timișoara	42	Târgu Jiu	90
Sibiu	44	Reșița <sup>b</sup>	92

Data Source RMU

<sup>a</sup>For Bucharest, “local” includes both the city proper and the suburban Ilfov county

<sup>b</sup>Currently merging with UBB University in Cluj

have a number of notable extensions, chief among these being UTCN’s North Campus in Baia Mare, formerly an independent university.

There are several university centres that manage to attract a majority of students in their home country but only smaller numbers of students from other regions. In some cases (Sibiu, Brașov), even though the university is dominant in the local county only, the number of applicants attracted from other regions is sufficient to end up forming a majority of the entire student body. For example, Sibiu has a comparable share of out-of-county students to Timișoara, but it is the primary destination only in Sibiu County itself.

Another key pattern is the dominance of urban students among total intakes. This comes as no surprise as factors leading to low access have been documented in other studies. We know that rural students have lower success rates at the *Baccalaureate* examination needed for university admission.<sup>5</sup> We also know that this, in turn, is influenced by trends that include higher rates of material deprivation in rural areas. In some areas, the urban/rural gap is the widest in the EU. For example, severe housing deprivation in rural areas tops 26%, but is less than 5% in urban settings. In sharp contrast, the București-Ilfov region, which is entirely urban and suburban.<sup>6</sup>

A crucial finding is that there is no major university with a majority rural student population. The highest share of rural students among top 20 universities can be found at the Valahia University of Târgoviște, standing at 49%. This is, in fact, higher than the national weight of the rural population, but when analysing the recruitment basin of the university, we see that it largely rests on the Dâmbovița County, which at the 2011 census was among the counties with the second-highest share of rural population, at 71%. So, even here, there is a clear situation of under-representation among students with a rural background (Table 4).

<sup>5</sup><https://uefiscdi.gov.ro/resource-824104-policy-brief-no2-1-.pdf>.

<sup>6</sup>Though not necessarily by Romanian statistic classifications, which still attribute rural domicile to persons living in the suburbs without formal town status. See Eurostat chart Severe housing deprivation rate, 2018 (% , by degree of urbanisation).

All of these particularities influence the structure of the nationwide network of recruitment flows. Table 7 shows that a primary clusterisation among universities can be made based on local county recruitment dependence. That is, between universities that have geographically diverse recruitment basins and institutions that cater to local communities. The latter are uniquely vulnerable to demographic trends in their local counties. This means that universities such as those in Reșița or Târgu Jiu, situated in regions with poor demographics, are more vulnerable than those in Ploiești, Oradea or Suceava, which are situated in counties with either stable demographics or higher overall populations. That said, having a diverse recruitment basin is not an automatic insulation from the effects of demographic decline, as most counties in Romania are currently estimated to be seeing population decline and ageing.

In practice, however, university centres with wider geographical appeal tend to attract students both from buoyant regions and from counties facing demographic decline. A notable example is Timișoara. It attracts most applicants from Timiș county, but the rest of its recruitment basin consists of counties with a recent history of steep demographic decline (Caraș-Severin, Hunedoara) or rapid ageing (Mehedinți). Timiș itself is, conversely, one of the only two counties to have recorded population growth between the last two censuses.

In the case of universities' appeal within their home settings (local counties), there are also wide variations. For example, there are universities that attract the overwhelming majority of secondary education graduates within a county. No fewer than 96% of Bucharest and Ilfov students opt to study in Bucharest. 91% of Timiș and Iași students, as well as 88% of Cluj students also study in local universities. There are counties where students overwhelmingly opt for a single out-of-county destination. For example, Giurgiu County sends 95% of its students to Bucharest, with Călărași sending 85% and Ialomița and Teleorman 81% each. Cluj attracts 82% of students from Bistrița-Năsăud and 81% of those from Maramureș, though in this case, many study in extensions. In most of these cases, geographical proximity seems to play a major role (students opting for the closest major university centre), though the economic vitality of the nearby university centre seems to play a role as well. While prosperous cities such as Cluj and Bucharest attract overwhelming majorities of students from nearby counties, this pattern does not exist in counties close to Craiova or Galați, also legacy universities that existed before 1989.

The most intriguing cases are those of small public universities that have been designed to cater mainly to regional applicants or non-traditional students but fail at meeting significant recruitment benchmarks, even locally. The most extreme case at the time of data collection and processing (early 2020) was Caraș-Severin, where there is a local university, yet 72% of students opt for a university in Timiș county. Just 17% of those that enrol in a university do so locally. The consequence is that the local public university relies on a tiny recruitment pool, given that the county is already one of the least populous in Romania.<sup>7</sup>

Looking at the numbers from Table 5, it becomes clear that there are, in fact, several cases of counties that house a non-religious, public university only to have

---

<sup>7</sup>The university is no longer an independent institution, as explained below.

**Table 5** Dominant destination for studies per county

County	Main destination	University	County	Main destination	University
Alba	Cluj	YES	Harghita	Cluj	NO
Arad	<b>Arad</b>	YES	Hunedoara	Timiș	YES
Argeș	<b>Argeș</b>	YES	Ialomița	București	NO
Bacău	<b>Bacău</b>	YES	Iași	<b>Iași</b>	YES
Bihor	<b>Bihor</b>	YES	Ilfov	București	NO
Bistrița-Năsăud	Cluj	NO	Maramureș	Cluj	NO
Botoșani	Iași	NO	Mehedinți	Timiș	NO
Băiila	București	NO	Mureș	<b>Mureș</b>	YES
Brașov	<b>Brașov</b>	YES	Neamț	Iași	NO
București	<b>București</b>	YES	Olt	București	NO
Buzău	București	NO	Prahova	București	YES
Călărași	București	NO	Sălaj	Cluj	NO
Caraș-Severin	Timiș	YES	Satu Mare	Cluj	NO
Cluj	<b>Cluj</b>	YES	Sibiu	<b>Sibiu</b>	YES
Constanța	<b>Constanța</b>	YES	Suceava	<b>Suceava</b>	YES
Covasna	Cluj	NO	Teleorman	București	NO
Dâmbovița	București	YES	Timiș	<b>Timiș</b>	YES
Dolj	<b>Dolj</b>	YES	Tulcea	Constanța	NO
Galați	<b>Galați</b>	YES	Valcea	București	NO
Giurgiu	București	NO	Vaslui	Iași	NO
Gorj	Timiș	YES	Vrancea	București	NO

Data Source RMU

the majority of students opt to study outside the county. This pattern exists in no fewer than six counties (Alba, Caraș-Severin, Dâmbovița, Gorj, Hunedoara, Prahova). In two other cases (Bacău, Argeș) only a plurality of students opt for the local university, with significant numbers still leaving the counties for study. In the case of Bacău, this is almost a 3-way tie between students opting for the local institution (28%), Iași (25%) and Bucharest (23%).

The data, of course, refers to the post-2015, after student numbers have already declined versus their 2008–2009 peak, so enrolment patterns might reflect better access to state-funded study places in more prestigious university centres. Nevertheless, it does point to the fact that some public institutions cater to a very small number of students from a limited geographic region.

In fact, there is a legal framework that permits and encourages university mergers with the purpose of enticing smaller institutions to pool resources with institutions from large university centres. Two mergers have already taken place, both with Cluj-based institutions. The first was the merger of Baia Mare's North University with Cluj's Technical University UTCN, while the more recent is the merger of Reșița's

Eftimie Murgu University with Cluj's Babeş Bolyai University. These mergers transform smaller institutions into *de facto* extensions, allowing the new university to keep existing infrastructure while saving funding via better use of human and administrative resources.

#### ***4.2 Different Patterns of Depopulation Within University Recruitment Basins***

The current demographic recruitment basins of Romanian universities offer us a static picture. It tells us where students hail from currently. It does not provide information on the nature of the demographic recruitment basins themselves and evolutions that occur within. Now, using the INS database<sup>8</sup> for residents and inter-census variations, we get a picture of demographic trends in recruitment basins from formal statistics. Measuring 2019<sup>9</sup> versus 2012<sup>10</sup> numbers, the INS estimates that only one county (Teleorman) saw double-digit population contraction, and that six actually saw a population increase. In annualised terms, this represents a slower rate of population decline when compared to the 2002–2011 inter-census period, despite a rise in the natural population decline of the population. With migratory flows difficult to track, but with various sources indicating high ongoing levels of emigration,<sup>11</sup> it is likely that—much like before the 2011 census—the impact of outflows on populations is underestimated. Furthermore, there are growing indicators that internal population dynamics have been changing.

While, before 2011, internal migration was modest—with most Romanians seeking to work outside their communities doing so abroad—there are numerous indicators that certain regions are benefiting from significant migratory inflows. This is reflected in sharp differences in employment recovery after the Global Financial Crisis, growing differences in birth numbers between counties and housing construction. Of course, each of these indicators can be influenced by factors other than population concentration: employment can rise due to higher labour force participation, birth rates due to changes in fertility rates, and construction booms can reflect falling household sizes. Nevertheless, the combination of multiple factors is likely reflective of a positive demographic environment. Conversely, the opposite is true: falling employment numbers, birth numbers and low housing construction activity are likely reflective of a social and demographic environment that has been negatively affected by out-migration, ageing or both.

---

<sup>8</sup>INS Tempo Table POP106A, retrieved on July 3rd 2021.

<sup>9</sup>Last year, with definitive data as of July 2021.

<sup>10</sup>First year in which residence-based population estimates derived from the 2011 census are available.

<sup>11</sup>Among others, over 900,000 Romanians applied for the UK post-Brexit settlement scheme, far above initial estimates for the Romanian population in the UK, and the total number of Romanians in Germany hit a record 1,000,000.



In fact, there are signs that the depopulation of certain counties is accelerating. Regions that gravitate economically towards Bucharest tend to see some of the fastest population declines. Teleorman county saw around 2,600 births in both 2018 and 2019. Deaths, however, exceeded 6,000 in both years, and preliminary data from 2020 points to just one birth for every three deaths. This natural decline is both a symptom and a fortifier of strong trends towards long-term demographic ageing. And this pattern is visible in many other areas. Over 40% of new houses are being built in and around Bucharest, Cluj and Timișoara, the country's most dynamic cities, even though their share of the overall population is under 20%. The share of these metropolitan areas in total employment has also been rising after the post-2008 global financial crisis, which contributed to a realignment of the Romanian economy. In fact, a majority of Romanian counties have not yet recovered their pre-crisis employment levels, despite the country as a whole surpassing pre-crisis employment levels in 2019.<sup>12</sup> But, while overall job numbers have grown by little over 2% from 2008 to 2019, that growth topped 20% in Cluj county, 10% in Timiș and nearly 50% in Bucharest's suburban Ilfov county. The share of national employment in these top cities has been constantly growing.

This phenomenon is, to some degree, self-reinforcing. Existing theoretical and empirical work has already identified networks as being key facilitators for migration via the construction of safety nets or the sharing of information (Palloni et al. 2001; Schapendonk and van Moppes 2007). With networks built up during the past 30 years often leading Romanians to seek work abroad, the networks existing inside Romania are concentrated on a few larger cities. And as the population increasingly concentrates in these cities and their metropolitan environs, there is an emerging risk that students from depopulating areas end up accessing low quality services and struggling to make use of existing opportunities. This phenomenon is increasingly prevalent across Europe and has even started to take a political dimension. In Spain, the question of the *España vacía* and the claims of a right to minimal services for regions with low demographic viability has emerged. Indeed, the province of Teruel sent a party called *Teruel Existe* (Teruel exists) to signal the plight of depopulation in Madrid.<sup>13</sup> There is also a network of European regions that is devoted to fighting the impact of depopulation.

While not a prevalent political issue in Romania as of yet, universities are likely to be among the first to feel the impact of ageing and declining populations. There is a lag of 18–19 years between any change in cohort sizes at birth and university entry, and migration (either as part of families or upon graduating secondary education) tends to contribute to falling cohort sizes as well.

---

<sup>12</sup>As per INS Tempo FOM104D data.

<sup>13</sup>As per El Diario article [https://www.eldiario.es/politica/ano-teruel-existe-congreso-amenazas-pandemia-reconstruccion-presupuestos\\_1\\_6478503.html](https://www.eldiario.es/politica/ano-teruel-existe-congreso-amenazas-pandemia-reconstruccion-presupuestos_1_6478503.html) retrieved on July 26th 2021.

## 5 Discussion—Sustainable Universities?

Given the above findings, we can see a number of patterns emerge. One of these patterns is the growing concentration of population around cities that are—at the same time—major university centres. More people live in places such as Bucharest, Cluj-Napoca and Timișoara, as well as their environs. The exact extent of their absolute or relative growth will only be known after the 2022 census is processed,

Incidentally, universities located in these cities—as well as Iași, Brașov and Sibiu—tend to attract numerous out-of-county applicants. Other large universities (i.e. from among those established before 1990), including Craiova, Galați or Constanța, have ended up mainly catering to local students. Employment in these areas was, as of 2019, still down on 2008 levels, and housing construction numbers lagged the three top cities and their environs.

These patterns could indicate either a role for universities in fixing population and attracting local investments (i.e. part of a virtuous circle of development) or a preference by students to opt for universities situated in cities that offer a better range of professional development opportunities. The universities that seem attractive to students have thus often given access to employment in the same town.

Conversely, the large number of public universities that struggle to attract even local students reflects poorly on the current structure of the university network. Public money is generally allotted per capita, though capacity is, of course, also adjusted to take into account differing numbers of students. Nevertheless, smaller universities have increasingly resorted to applying for emergency funding or other compensatory mechanisms (e.g., enrolment of Moldovan students on scholarships). However, these strategies are detrimental to the rationality of using public money, and many of these smaller universities are unlikely to be able to sustain economies of scale should local populations of students decline further. Already existing legal channels that enable mergers offer a partial solution, though extensions themselves do maintain higher infrastructure costs.

In the long run, a picture emerges of universities that seem particularly vulnerable to negative demographic trends. The network approach analytically supports the link between universities' embeddedness into local networks of exclusivity and competition over potential student recruitment basins with their ability to survive major shocks to their recruitment flows. In practical terms, this means that universities at the periphery of the recruitment flow network will have to find alternative strategies to remain financially viable, particularly if their recruitment basin faces accelerated demographic decline.

Universities embedded into dense, cohesive and clustered structures, such as the universities in Bucharest, Cluj and Iași, are more resilient to random shocks to the ecosystem. Their location in these structures allows for faster re-organisation, reshuffling of recruitment patterns because they offer visible alternatives for both universities to reach target groups, as well as students to access alternative institutions. For universities that are, on the other hand, embedded into fragmented, centralised and sparse network structures, such as the universities in Oradea, Galați or Craiova,

random shocks to the recruitment flows can substantively affect their connectivity to the system, leading to an irreversible impact on their recruitment landscape.

In other words, if universities have clustered and diverse recruitment networks, major changes that affect recruitment flows and the positions of universities in the landscape have more limited repercussions on these communities for two reasons: (a) students have visible alternatives in their university choices and (2) universities have visible alternatives in their recruitment basins. If, on the other hand, universities have open and narrow recruitment networks, major changes that affect recruitment flows can irreversibly affect their ability to reinvent themselves after systemic shocks. Such changes are particularly likely if recruitment basins are situated in demographically vulnerable regions.

One possible strategy for vulnerable universities is to design and implement new, attractive study programs that rethink their financial dependency on local recruitment basins and compete on attracting students based on the relevance, quality, and competencies new study programs offer. This strategy is in line with emerging national higher education directions towards internationalisation, engaging diaspora in teaching and research programs back home, designing study curricula that strengthen the link between education and employability and strengthening links to partner organizations (in business, civil society and government) in designing and delivering these new study programs.

It is important to note that there are certain factors that influence admissions in Romanian higher education that are independent of demographic trends or university efforts to improve attractivity. Chief among these is the low rate of access for the overall population. Romania is last in the EU in terms of its share of 30–34-year-old students who have completed tertiary education. There are mounting calls to attempt an expansion of access, often linked to calls for reforms in secondary education.<sup>14</sup> If tertiary education access and retention do rise, it is likely that a new layer of demand—possibly with unique socio-demographic characteristics—will arise. Whether these expanded admissions opt for metropolitan or regional universities does not change the fact that overall numbers of potential front-loaded students continue to decline. A slow rise in access would be—for many counties—completely offset by a more rapid decline in average annual cohort sizes. The pressure to rationalize the university networks—at least in the public sector—is unlikely to disappear.

The fact that recruitment basins are naturally urbanising and concentrating on large cities is likely to bring certain benefits. The existing social infrastructure in universities (such as dormitories) caters largely to out-of-town students and is likely to see less demand-driven pressure. A larger proportion of newly admitted students would have likely attended top quality schooling and had access to informal and nonformal learning opportunities that are more likely to exist in large cities.

---

<sup>14</sup>The “Educated Romania” project launched by the Presidential Administration envisages the expansion of dual professional education to the tertiary section and an upwardly revised participation target.

This, of course, does not offset the likely problems associated with depopulation. Romania already operates a network of “simultaneous” education schools in which multiple grades are taught at the same time in sparsely populated communities. Commuting is also problematic over longer distances, and the network of pre-tertiary dormitories was dismantled during the 1990s. All of these are salient issues, given that depopulation will require significant efforts to maximize the number of children in isolated, ageing communities receiving quality schooling and having a chance at reaching tertiary education. Access to better social infrastructure in tertiary education has no impact on early school leavers, and access to quality and supportive secondary education should remain a key policy priority.

Lastly, Romania needs—and currently lacks—an adaptation strategy for ageing, depopulating regions. This should, among others, include provisions on facilitating access from early education all the way to university learning, if it is to prevent the consolidation of an opportunities gap.

## Annex: Distribution of First Year Students in Our RMU Data Sample

See Tables 6, 7 and 8.

**Table 6** Top 10 universities in our sample, by number of enrolled students

University	No. students	% students
Universitatea “Babeş-Bolyai” din Cluj-Napoca	82,379	7.86
Universitatea din Bucureşti	70,426	6.72
Universitatea “Alexandru Ioan Cuza” din Iaşi	49,340	4.71
Academia de Studii Economice din Bucureşti	49,166	4.69
Universitatea Politehnica din Bucureşti	45,437	4.33
Universitatea “Transilvania” din Braşov	40,966	3.91
Universitatea Tehnică din Cluj-Napoca	40,569	3.87
Universitatea din Craiova	38,480	3.67
Universitatea de Vest din Timişoara	33,010	3.15
Universitatea “Lucian Blaga” din Sibiu	30,250	2.88

**Table 7** Geographic distribution of enrolled students by county of university

County	No. students	% students
București	328,058	31.29
Cluj	155,120	14.79
Iași	106,874	10.19
Timiș	84,024	8.01
Dolj	45,757	4.36
Constanța	43,085	4.11
Brașov	41,861	3.99
Sibiu	33,430	3.19
Bihor	31,296	2.98
Galați	30,512	2.91
Argeș	23,459	2.24
Arad	23,283	2.22
Mureș	19,502	1.86
Suceava	18,303	1.75
Prahova	14,084	1.34
Bacău	11,680	1.11
Dâmbovița	11,071	1.06
Alba	10,017	0.96
Hunedoara	7,317	0.70
Gorj	6,096	0.58
Caraș-Severin	3,277	0.31
Ilfov	380	0.04
Neamț	89	0.01
<b>Total</b>	<b>1,048,575</b>	<b>100</b>
<b>Avg</b>	<b>45,590</b>	
<b>StdDev</b>	<b>70,266</b>	
<b>Over-represented</b>	<b>&gt;= 115,856</b>	

**Table 8** Top over-represented study domains

Study domain	Nr. students	% students
Law	71,817	6.86
Healthcare/medicine	56,641	5.41
Business administration	39,854	3.80
Accounting	36,984	3.53
Management	35,331	3.37
Education	33,552	3.20
Psychology	29,372	2.80
Informatics	26,442	2.52
Language and literature	25,091	2.40
Finance	24,840	2.37
Engineering and management	24,224	2.31
Administrative studies	23,636	2.26
Communication	23,050	2.20
Industrial engineering	23,031	2.20
Computers and ITC	22,999	2.20

## References

- Barabasi, A. L. (2016). *Network science*. Cambridge University Press.
- Boccaletti, S., Latora, V., Moreno, Y., Chavez, M., & Hwang, D. U. (2006). Complex networks: Structure and dynamics. *Physics Reports*, 424(4–5), 175–308.
- Callaway, D. S., Newman, M. E., Strogatz, S. H., & Watts, D. J. (2000). Network robustness and fragility: Percolation on random graphs. *Physical Review Letters*, 85(25), 5468.
- Curaj, A., Deca, L. & Haj, C.M. (2013). *Romanian Higher Education in 2009–2013. The Bologna Process and Romanian Priorities in the Search for an Active European and Global Presence*. Springer.
- Kwiek, M. (2014). *Social Perceptions versus Economic Returns of the Higher Education: The Bologna Process in Poland*. In Kozma, T., Rebay, M., Ohidy, A., Szolar, E. (Eds.) (2014). *The Bologna Process in Central and Eastern Europe*. Springer.
- National Council for Higher Education Funding (CNFIS). (2014). *Raportul public anual: Starea finanțării învățământului superior și măsurile de optimizare ce se impun*. Retrieved from [https://www.edu.ro/sites/default/files/\\_fi%C8%99iere/studii%20si%20analize/2016/CNFIS/CNFIS-Raport-public2013-final.pdf](https://www.edu.ro/sites/default/files/_fi%C8%99iere/studii%20si%20analize/2016/CNFIS/CNFIS-Raport-public2013-final.pdf) on September 23rd 2021
- National Council for Higher Education Funding (CNFIS). (2020). *Raportul public anual: Starea finanțării învățământului superior*. Retrieved from [http://www.cnfis.ro/wp-content/uploads/2020/12/raport\\_public\\_CNFIS\\_2019.pdf](http://www.cnfis.ro/wp-content/uploads/2020/12/raport_public_CNFIS_2019.pdf) on August 23rd 2021
- Newman, M. E. (2003). The structure and function of complex networks. *SIAM Review*, 45(2), 167–256.
- Palloni, A., Massey, D. S., Ceballos, M., Espinosa, K., & Spitted, M. (2001). Social capital and international migration: A test using information on family networks. *American Journal of Sociology*, 106(5), 1262–1298.

- Santa, R. (2018). The Future of European Higher Education in an Age of Demographic Headwinds: The Impact of Demographic Decline on Higher Education System Structures Funding in Romania Poland Russia. In A. Curaj, L. Deca & Pricopie R. (Eds.), *European Higher Education Area: The Impact of Past and Future Policies*. Springer.
- Santa, R. & Fierăscu, S. (2020). *Anticiparea principalelor tendințe demografice și a impactului lor asupra populației de studenți din România*. Published online. Retrieved from [http://pocu-intl.uefiscdi.ro/images/Rezultate/Forecast\\_Seria\\_1\\_v3\\_1\\_2.pdf](http://pocu-intl.uefiscdi.ro/images/Rezultate/Forecast_Seria_1_v3_1_2.pdf) on August 23rd 2021
- Schapendonk, J., & van Moppes, D. (2007). *Migration and information: Images of Europe, migration encouraging factors and en route information sharing (Report 16)*. Nijmegen: Radboud University.
- Scott, J. (1988). Social network analysis. *Sociology*, 22(1), 109–127.
- Wasserman, S., & Faust, K. (1994). *Social Network Analysis: Methods and Applications*. Cambridge University Press.

**Robert Santa** Recently awarded a Ph.D. in Political Science by the National University of Political Studies and Public Administration of Bucharest, a graduate of UCL's Institute of Education in London and Deusto University in Bilbao, Robert Santa has been active in the student movement at the local, national and European levels. He has previously been employed in the private sector on graduate employability issues, and has conducted research work on a variety of education-related topics in multiple projects. He is currently working as an adviser within the Education and Research Department of the Romanian Presidency.

**Silvia I. Fierăscu** is Lecturer at the Department of Philosophy and Communication Sciences, Founder and Director of FabLab - Social Fabrics Research Lab, and Researcher at the Big Data Science Laboratory, all at the West University of Timisoara. She holds a Ph.D. in Political Science with a specialization in Network Science from Central European University in Budapest and is Head of OrgMapper Academy at Maven7 Network Research Inc. Her research interests are on applications of network and data science to social science problems. She works in various international, intersectoral, interdisciplinary, and multimedia projects, translating complex problems into solutions for organizational development, change management, better communication, good governance, public policy, and social impact.

**Open Access** This chapter is licensed under the terms of the Creative Commons Attribution 4.0 International License (<http://creativecommons.org/licenses/by/4.0/>), which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.



# Access to Higher Education: Losing Precious Human Resources Before the Start Line



Cezar Mihai Hâj and Petrișor Laurențiu Țucă

**Abstract** In the last five years in Romania, a series of measures and policies have been adopted that aimed to increase the enrolment and participation of Romanian citizens in higher education. However, we are still witnessing a decline in the number of students even though Romania has the lowest proportion of graduates (30–34 years) with a higher education diploma in the EU. Through this paper, we will follow the educational path of students in final grades in upper secondary education to analyse how many of them graduated from the national baccalaureate exam and later became students. The data come from the interconnection of two important databases from the Romanian education system, the National Student Register (RMUR) and the Integrated Information System of Education in Romania (SIIR). Access to higher education must be viewed not only from the perspective of the admissions process but also from the perspective of generational losses that have a direct impact on the human resources eligible for higher education. Thus, we will insist on analysing the “losses” of human capital registered in the national education system in the last year of study in pre-university education, looking at the same time at the characteristics of students who manage to enter higher education. The current analysis is based on the work done within the project “Quality in higher education: internationalization and databases for the development of Romanian education” (code POCU/472/6/8/126766/21.11.2018, implemented by the Executive Agency for Higher Education, Research, Development and Innovation Funding (UEFISCDI) in partnership with the Ministry of Education (ME).

**Keywords** Baccalaureate • Polarised • Participation • Higher education • Under-represented groups • Access • Geography • Admission process • Mature students • Obstacles • Final year

---

C. M. Hâj

Executive Agency for Higher Education, Research, Development and Innovation Funding,  
Bucharest, Romania

e-mail: [cezar.haj@uefiscdi.ro](mailto:cezar.haj@uefiscdi.ro)

P. L. Țucă (✉)

University Politehnica of Bucharest, Bucharest, Romania

e-mail: [tucapetrisor@gmail.com](mailto:tucapetrisor@gmail.com)

© The Author(s) 2022

A. Curaj et al. (eds.), *Higher Education in Romania: Overcoming Challenges and Embracing Opportunities*, [https://doi.org/10.1007/978-3-030-94496-4\\_3](https://doi.org/10.1007/978-3-030-94496-4_3)



## 1 Introduction

One of the main challenges European countries face is having a highly-skilled workforce to meet the increasing needs of the economy for professionals, which have increased exponentially in recent years. This is especially the case for many Eastern European countries, which already had a low number of higher education graduates even before joining the European Union. Now, these EU members are also facing a demographic decline, combined with high emigration rates. As their higher education systems were already very selective, the composition of the student body has not significantly changed with regards to including vulnerable groups.

As part of the Bologna Process, all member countries committed to implementing national policies towards increasing access, progress and graduation of students coming from vulnerable groups (Bologna Process 2007). Nevertheless, even after ten years since the launch of the European Higher Education Area (EHEA), this is still an outstanding issue that needs to be addressed by countries.

Gender, parental education, socio-economic background still play an important role when looking at the level of access or the chosen educational path. As the Bologna Process Implementation Report (Commission/EACEA/Eurydice 2018) shows, women are highly underrepresented in fields such as services, engineering or information and communication technologies, while being overrepresented in the field of education, health and welfare and arts and humanities. Parental education is a strong predictor of student chances to access and finalise higher education. Data is showing that “entrants coming from low and highly educated families, the general patterns apply: while the share of new entrants with parents with low educational background is marginal, new entrants with highly educated parents are overrepresented.” This is especially true in countries like Romania, Poland, Croatia or the Czech Republic. Higher education represents an important instrument to improve the fairness of societies. Not only for guaranteeing personal development via fairer access to education but also for developing a real knowledge society, a productive economy, increased social mobility and social cohesion etc.

Looking at the specific literature, one can see that definitions of fairness vary between societies and are differently translated depending on the structure of the higher education systems structures, organizational cultures within the academia and the involved actors within this sector. At the same time, access as an instrument is both path-dependent and embedded in multiple structures and changing processes. Actors, uses and users of access and admission policies change over time. This has consequences for both research and policies. Because these processes are multi-dimensional, they can only be comprehended through bringing together multiple research approaches.

### **State of Research in the Field**

Literature on higher education transitions discusses a number of factors influencing the outcomes of transition processes. As (Coertjens 2021) sum up, research on transitions into higher education has focused on the “development of a student identity, students’ emotions, their motivations and learning strategies.” Haj et. all (2018)

define the main selection mechanisms within the education system as those “limiting the share of pupils achieving the qualification necessary to enter HE, selecting after secondary schooling at the point of transition, and selecting during the study process”. The same authors underline how prior academic qualification (educational pathway), student choice and higher education institutions (HEIs) recruitment interact. These three actors are affected by regulations, incentives and information campaigns, which are the result of policy (Bemelmans-Videc 1998) (Howlett 2004). As such, these policy instruments can be changed to affect the way the three actors behave or to encourage certain behaviour. On the admission systems, there are a number of studies that map, categorise or classify systems of admission or components thereof (Clancy 2010; European Commission/ EACEA/ Eurydice 2014; Commission/EACEA/Eurydice 2018; Orr 2010). Broadly, an admission system determines not just how students end up (or do not end up) in higher education but also how they end up at a particular HEI and a particular programme of study. Even though there is extensive research looking at the process of admission and at first-year students, there is less research looking at students who do not reach higher education, besides the specific literature on early school leavers and drop out as there are many students that even though they manage to finalise upper secondary education, they do not have the necessary credentials or simply do not apply to access higher education.

### **Massification and the Decrease in Student Numbers**

According to the National Institute of Statistics, Romania has passed through a massification process after the fall of the communist regime during which a centralised system was in place. The number of Higher Education Institutions, study programs and students increased exponentially, starting with 48 public universities in 1990 to a peaking number of 121 universities in 2000 (out of which 63 were private universities). This massification process was followed by a decline in both student numbers (by over 50% between 2007 and 2019) and in the number of universities (90 universities in 2019). This process was influenced by demographics and by the changes in the baccalaureate exam, and it impacted especially private institutions. (84% decrease in student numbers between 2007 and 2019).

All this influenced the participation of under-represented groups that has been preserved at a very low level. “Only 3.8 % of young people aged 25–29 from the 20 % of the poorest family backgrounds have graduated one cycle of higher education compared to 52.4 % of the top 20 % affluent sector” (World Bank 2011).

### **Romania—Last Place Regarding the Average Share of 30–34-year-Olds with Tertiary Educational Attainment**

In the spring of 2009, the Council of Europe adopted the strategic framework for European cooperation in vocational education and training, and the main conclusion on tertiary education was that the proportion of people aged 30–34 attending and completing tertiary education should be at least equal to 40%. According to the monitor of education and training (European Commission 2020), at the level of the European Union, the objective was met, even the initial assumption was exceeded. In the case of Romania, the commitment assumed was 26.7%, and the education monitor shows that Romania has the lowest level of tertiary education (age 30–34)—24.6%

in 2019, and in 2020 the level increased by just over one percent, without fulfilling the commitment, at 25.8% in the EU.

### **Access to Higher Education**

According to Romanian legislation, until 2020, compulsory education included all levels of education between primary education and the first two years of upper secondary education.<sup>1</sup> The baccalaureate exam represents the final exam that assesses the competencies acquired by graduates in upper secondary education. High school graduates take a series of assessment tests, both oral and written. In order for a candidate for the baccalaureate exam to be declared “admitted”, he must pass all oral tests, receive the minimum “5” grade at all written tests and an average “6” grade.

Admission to Romanian higher education for bachelor study programs is organised by each Higher Education Institution based on the principle of university autonomy in accordance with the general framework. The framework includes a national methodology for admission to Romanian higher education with a series of minimum provisions that should be found in the institutional admission methodologies; a Government Decision with the fields of study and university study programs that includes the maximum student capacity<sup>2</sup>; and a Government Decision coupled with a Ministerial Order with the number of study places funded by the state for each higher education institution<sup>3</sup> The number of subsidised study places is allocated at the institutional level, and it is the universities’ decision to what study programs these places are being allocated.

A baccalaureate graduate may apply for several undergraduate programs at the same university or at other universities simultaneously but may pursue a single state-funded program. Admission is usually organised in two sessions (summer and autumn) and may include different types of admission, such as:

- Dossier competition, where only the average grade from the baccalaureate exam matters (or some grades for specific topics within the baccalaureate exam);
- Interviews;
- Written exam;
- Aptitude test, found especially in vocational bachelor’s degree programs;
- A hybrid variant, in which both the average from the baccalaureate exam and the results obtained at a written exam or interview count.

---

<sup>1</sup>Since 2020, compulsory education covers four years of upper secondary education.

<sup>2</sup>Established by the Quality Assurance Agency in Romania (ARACIS) in the accreditation/evaluation process.

<sup>3</sup>In addition to these study places, universities can also offer places for which candidates have to pay tuition fees.

## 2 Methodology

The analysis is based on data from the National Student Registry (RMUR) correlated at the individual level with the data from the baccalaureate exam through the Integrated Educational Register (REI), which is a platform that provides access to a person's educational path by interconnecting the management systems in the educational sector. RMUR is a digital platform that provides integrated data management for all students enrolled in the Romanian higher education system for all study cycles.

In order to evaluate the proportion of high school students graduating and registering for the baccalaureate exam, statistical data from the Integrated Information System of Education in Romania (SIIIR) was used through the [data.gov.ro](http://data.gov.ro) portal.

For the analysis, the selected cohort was the 2018 population of high school students enrolled at the beginning of the school year 2017/2018 in their final year of study in upper secondary education (XII class for full-time courses and XIII class for part-time courses).

A statistical analysis was conducted regarding the enrolment in the baccalaureate exam. For the baccalaureate exam, the selected population was "*students from current generation*" defined as students that graduated from upper secondary education in 2018. A unique database was created by interconnecting the data from each session of the baccalaureate from 2018, where only the last entry for students that participated in more than one session was kept. The analysis of first-year students at the bachelor level, the academic year 2018/2019, was conducted by examining the selected cohort. The academic status of this cohort was followed until the beginning of the 2020/2021 academic year to assess the "losses" from the normal academic path. Because of the limits regarding the available data on upper secondary students, the analysis regarding the transition towards higher education is not differentiated by the urban/rural background. This was analysed only for students that managed to enter higher education (based on the data from the National student Register).

As a secondary cohort, all first-year students from the academic year 2018/2019 were analysed in order to provide a full image of the student population entering higher education. While looking at the 2018 high school generation from the last years of upper secondary education to the third year in higher education, it is also important to understand who else enters higher education from an equity perspective. As the analysis will show, there is a considerable percentage of first-year students that are not part of the generation that graduates upper secondary education in the same year. This population may represent a way to mitigate the loss of human capital highlighted in this article.

The main objective of the analysis was to measure the losses of human capital between the final year of upper secondary education and third year of higher education and to identify the main pathways or typologies of students that have lower chances regarding access to higher education.

For the purpose of the analysis, the authors considered as losses all students who deviated from the standard academic progress (students with no delayed academic progress).

### 3 The Losses of Human Capital in Romania

#### Human Capital Losses—A General Perspective

##### Upper Secondary Education

At the beginning of the 2017–2018 school year, 149,689 high school students were enrolled in the final year of upper secondary education.

A first loss of “talent” at this point is found at the baccalaureate exam, where only 124,465 high school students were enrolled (current promotion). This means that almost 17% of high school students enrolled at the beginning of their final school year did not participate in the baccalaureate exam. The national legislation regarding compulsory education, prestige and stratification, as well as the funding system, play an important role in this regard.

As compulsory education means that all students, regardless of their academic performance at the national evaluation exam (after the eighth grade), have the right to enrol in an upper secondary education (Romanian Parliament 2011), the problem regarding underprepared students from lower secondary education will be “passed” on to the upper secondary sector.

This leads to the second factor, “prestige”, which is connected to the admission system in upper secondary. Because of the grades in lower secondary/national evaluation, underprepared students will end up in the least “prestigious” upper secondary schools, as the distribution is also based on the parents’ ranking of upper secondary schools<sup>4</sup> (Ministry of Education 2013). At the same time, students with the best grades will choose the best schools based on the lowest average admission grade from the previous year published in the official admission brochure (as an indicator of the probability of getting admitted to a specific high school) and the passing rate at the baccalaureate exam (as this is considered to be the best indicator of the schools quality). As the pass rate at the baccalaureate exam becomes an indicator of a school’s prestige, there are questions if teachers and schools may be inclined to “tip the scale” by not letting some students, that have low chances of passing the exam, graduate upper secondary education in time for enrolling at the baccalaureate exam.<sup>5</sup>

As the admission process in upper secondary education leads to a stratification process, another factor that will influence the decision to enrol on the baccalaureate exam will be how students from disadvantaged groups and areas together with students coming from streams with a very low passing rate (e.g. technological stream) perceive their chances to pass the baccalaureate exam, enter and progress in the higher education system. As the “Study on the impact of admission systems on higher education outcomes” shows, *“In disadvantaged areas, there are no targeted efforts to highlight higher education benefits in terms of student support services*

<sup>4</sup>According to the law, the distribution in upper secondary (non-vocational) schools is computerized, and it takes into account the grades in lower secondary education, the grade at the national evaluation exam (at the end of eighth grade) and the parents’ ranked list of upper secondary schools.

<sup>5</sup>This phenomenon has been contested by public authorities, and research on the phenomenon is scarce.

(*scholarships, facilities—dormitories, canteens, etc.*)” (Usher et al. 2017). As a consequence, students who feel they have little to no chance to pass the baccalaureate exam, or students who perceive that costs for higher education may be too high will be less likely to enrol on the baccalaureate exam.

The third factor, “the funding system”, can also influence schools in promoting students until the end of the study cycle as the per-capita formula would influence the amount of money a school receives. This, correlated with the fact that a school needs a minimum number of students (300) to avoid a merger with another school, will put pressure on school administrators and teachers.

Looking at the baccalaureate exam results, 11,351 students did not take all the subject exams. As a result, they were considered “absent”. These students represented over 9% of all students enrolled in the baccalaureate exam and were not taken into account in the final official calculation of the passing rate of the exam.

This loss is highlighted separately because of methodological issues. As the ministry is calculating the passing rate at the baccalaureate exam, “absent” students are not taken into account. Moreover, students that know they failed the oral or written tests and chose not to participate at the rest of the tests, are considered absent. As the data shows, the number of students in this category is high enough to be considered an important loss.

At the end of the baccalaureate exam, 91,004 students from the 2018 promotion were declared admitted, and 33,461 did not pass the exam, meaning an official pass rate of 73.12%.

### **Higher Education**

Out of the total number of Romanian students enrolled into the first year of the bachelor programs in the academic year 2018/2019, approx. 59% were students from the 2018 generation<sup>6</sup> (that passed the baccalaureate exam in the same year).

The rest of the first-year student population was comprised of students who passed the baccalaureate exam in the previous four years (approx.18%) and students that passed the baccalaureate exam before 2014 (23%).

Moreover, looking at the 2018 generation approx. 26% will not be enrolled in the third year of the bachelor program by 2020/2021 (Table 1).

By comparing the 50k students who managed to go from the last year of high school to the third year of the bachelor program with the three control groups (the group of students that did not enrol at or pass the baccalaureate exam, the group of students that have enrolled in a higher education bachelor program but did not manage to make the transition to the third year of the bachelor program in time), some conclusions arise.

---

<sup>6</sup>Romanian citizens.

**Table 1** The evolution of the student cohort between 2017/2018 and 2020/2021

	Number	Percentage (% of A)
High school students enrolled at the beginning of the year 2017/2018 in the last years of study (XII class for full-time studies and XIII class for part-time studies) (A)	149,689	100
High school students, from the “current generation”, that were enrolled at the bacculaureate exam	124,465	83.15
High school students from the “current generation” who were declared “absent” at the end of the bacculaureate exam	11,351	7.6
High school students from the “current generation” who did not pass the bacculaureate exam	33,461	22.35
High school students from the “current generation” who passed the bacculaureate exam	91,004	60.8
Students from the “current generation” enrolled in Romanian higher education institutions in 2018	68,415	45.7
Students from the “current generation” enrolled in Romanian higher education institutions in 2021 in the third year of study	50,495	33.73

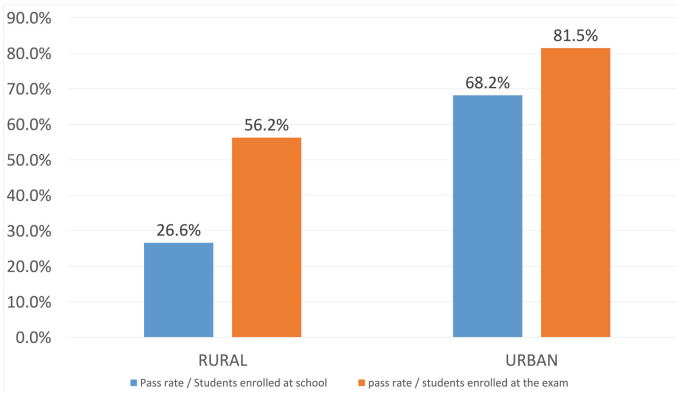
*Data source* data.gov.ro, National Student Register, Integrated Information System of Education in Romania (SIIIR), author analysis

## The Factors That Influence Access to Higher Education

### 1. Geography

#### Urban Verses Rural Areas

*Students from rural background have less chances of entering upper secondary education.* With 80,000 students in rural areas enrolled in the last year of lower secondary education compared to only 10,000 upper secondary study places in high schools located in rural areas, students with rural background face serious obstacles in accessing upper secondary education. The first barrier encountered by students living in rural areas and choosing to pursue upper secondary education in a high school located in an urban area is the financial expenses caused by daily travel. This also means extra time for students to get to and from school, which can translate into less time spent studying and creating obstacles in socialising with colleagues.



**Fig. 1** Pass rate at the baccalaureate exam by referenced cohort and upper secondary institution location. *Source* data.gov.ro, author analysis Note 1: The population “students enrolled at school” included all students that were enrolled in their final years of study (class XII for full-time courses and class XIII for evening or part-time classes). Note 2: The population “students enrolled at the exam” includes all students from current generation who enrolled at the baccalaureate exam and participated in all exam tests. This population is the reference population for the official statistics

*For the students that manage to access an upper secondary institution located in the rural area, data shows that only 26.6% of the students enrolled in the final year of upper secondary education manage to pass the baccalaureate exam (with a lower average mark of 7.41 compared to 7.95 for students that have studied in high schools from urban areas). Once these students manage to enter higher education, the percentage of “losses” by the third year is similar to students that have studied in urban areas (+1.7%).*

*Looking at the declared residence of the student population from the first year of the bachelor degree (current generation), 35.5% of the students had their declared residence in a rural area (Figs. 1 and 2). Looking at their progress in higher education, the data also shows similar “losses” with students with urban residence (−1%).*

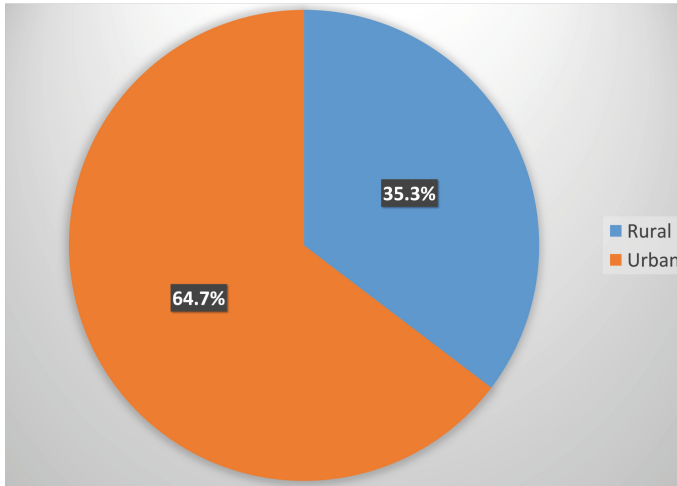
**Area of Residence**

***Students from certain counties in Romania have less chances to enter higher education.*** Data shows that students residing in certain counties<sup>7</sup> have less chances to register at the baccalaureate exam, to pass the exam and/or to enter the Romanian higher education system. As previously shown, the national legislation regarding compulsory education, prestige and stratification, as well as the funding system, play an important role in the enrolment rate at the baccalaureate exam. For example, Caraş Severin county (69.4%), Mehedinţi county (72.1%) or Olt (73.81%) have much lower enrolment rate at the baccalaureate exam compared to counties like Harghita (92.5%), Ialomiţa (90.0%) or Sălaj (90.1%).

---

<sup>7</sup>NUTS3 areas.





**Fig. 2** Percentage of first-year students by area of residence N: 56066. *Source* RMU, author analysis

Student passing rate at the baccalaureate exam also varies between counties, with some counties having a low passing rate: Giurgiu (54.3%), Teleorman (57%), Călărași (60%), while other counties like Cluj, Bacău and Iasi have over 80% passing rate. This can be explained by the fact that the quality of education that students receive differs substantially between counties and is in particular much lower in rural areas (Fig. 3).

## 2. The Upper Secondary Stream

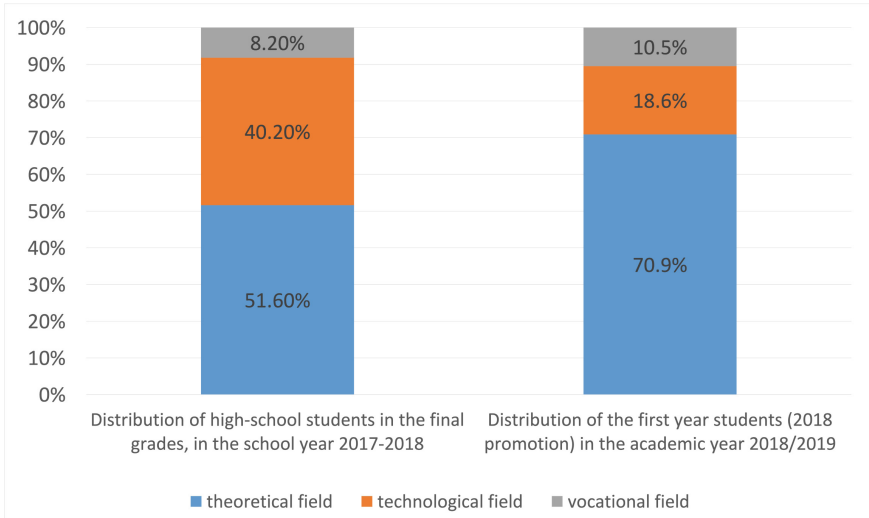
*The path towards higher education is established long before the point of entry in higher education, and some streams give low probabilities for students to enter higher education.*

Even before upper secondary, streams are being formed that will influence the chances of students entering higher education. As the results in the National Evaluation exam are defining in which upper secondary institution students are being assigned (based on a list of preferences), the perceived image of different streams and institutions from upper secondary plays an important role in the composition of the population of students that enter each stream in upper secondary education. Elitist “national colleges” from the theoretical stream<sup>8</sup> will receive students with the best grades, while the technological stream will have students with the worst grades. As in Romania upper secondary education is still part of compulsory education, and the funding of schools is dependent on the number of students, most of the students will be able to reach the final years of high school.

Looking at the upper secondary flow of the student population in the last year of study in 2018, the data shows 40.2% of high school students attended high school

<sup>8</sup>Academic stream.





**Fig. 4** Distribution of the number of students by field of study in the final year of upper secondary education (2017/2018) and first year of the bachelor program (2018/2019). *Data source* data.gov.ro, National Student Register, Integrated Information System of Education in Romania (SIIR), author analysis

**Table 2** Average grade received by high school students at the baccalaureate exam by stream of study

Stream	Average grade at the baccalaureate exam
Theoretical field	8.17
Vocational field	7.67
Technological field	6.43

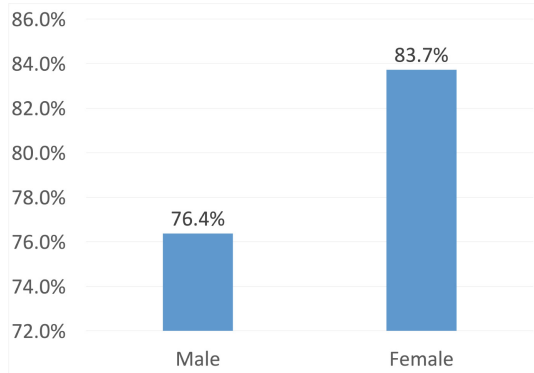
that have over three years difference compared to the standard age of students (art.25 (2)—Education law 1/2011). 17,305 students were enrolled in their final year of upper secondary education. Only 5,150 students were enrolled on the baccalaureate exam (which included previous generations). Out of these, only 781 students managed to pass the baccalaureate exam. No data was available regarding their progression to higher education.

**4. Gender**

With an almost 10% difference in the passing rate at the baccalaureate exam (77.4% vs. 68%), the number of female students eligible to enrol in higher education is higher (Fig. 5).

Looking at the current generation (2018), there are no relevant differences regarding access to higher education based on gender in terms of quantity, as almost 75% of the population that passed the baccalaureate exam had enrolled in higher education

**Fig. 5** Pass rate at the baccalaureate exam (2018)-current promotion. Source data.gov.ro, author analysis



(74.7% male graduate population and 75.8% from the female graduate population). This is not the case when talking about the received grade, as female graduates have an average of 8.10 verses an average of 7.71 for male graduates. Nevertheless in terms of progress, the female student population will lose 23.4% in the first three years compared to 30% in the case of the male population.

**5 The type of university that students apply to**

Depending on the type of university, the composition of the student population can be different.

*Looking at all students enrolled in the first year of bachelor degree within the private universities*, one can see that these universities play an important role in attracting mature students, as the average age is five years higher (27.1 vs. 21.9 years). This is also correlated with the number of students that tried more than once to pass the baccalaureate (18.3% vs. 9.0%) and the average grade at the baccalaureate exam (7.58 vs. 8.03).

*Looking at the students that were enrolled into the top five universities by number of students and diversity of geographical recruitment areas (basins) (UEFISCDI, 2020)*, the data shows that the average grade at the baccalaureate exam of the enrolled students (8.39) is higher than the average grade at the baccalaureate exam of the students enrolled in the rest of the universities (7.90). Looking at the type of upper secondary schools from which students come from, these five universities have the highest percentage of students coming from “national colleges”<sup>9</sup> (49%), which are considered to be the best upper secondary schools, compared to the rest of the universities which have an average of 39%. At the same time, in the selected universities, 30% of the students come from a rural background compared with 37% in the rest of the universities.

<sup>9</sup>All national colleges are located in urban areas.

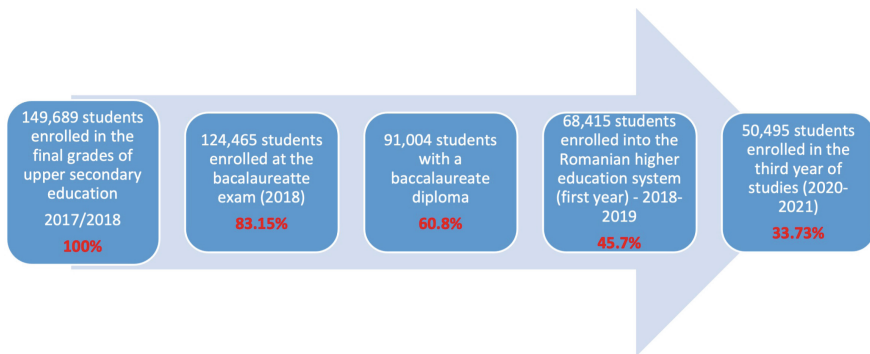
## 4 Conclusions and Recommendations

**Access to higher education in Romania is polarised.** Looking at the cohort enrolled in upper secondary education in the final year of study in 2018,<sup>10</sup> only 41% managed to access the Romanian higher education system, and 30% managed to be enrolled in the third academic year (2020/2021).

The impressive human capital loss is clear at every milestone of the academic progress. **From the final year of study in upper secondary to the third year of study in higher education, Romania losses a quarter of its students at almost every milestone** (enrolling at the baccalaureate exam—16.9%, passing the baccalaureate exam—26.9%, entering the Romanian higher education system—25.5% and enrolling in the third year of studies—26.1%) (Fig. 6).

**Access to higher education depends on geography (in terms of urban/rural but also in terms of county).** The geographical area of origin or study in upper secondary education has a major impact on the academic path of the direct beneficiaries. A series of structural factors, such as lack of high schools close to home, lack of adequate infrastructure to the house or easy transportation to schools and quality of education, create barriers in terms of access. The local policy towards student progression and enrolment in the baccalaureate exam can also contribute to the decline of students participating in higher education.

Also, because of the differences in the grades obtained at the baccalaureate exam and the fact that the use of the baccalaureate exam has become the main criteria of selection for most of the study programs in higher education, access to prestigious study programs and universities is hampered for students from under-represented groups.



**Fig. 6** Evolution of the number of students from the 2018 promotion at different stages of their academic path and the percentage of the students enrolled in the final years of study that reached the milestone. *Data source* data.gov.ro, National Student Register, Integrated Information System of Education in Romania (SIIIR), author analysis

<sup>10</sup>School year 2017/2018.

*There are streams in upper secondary education (e.g. technological studies) that represent a serious obstacle toward access to higher education.* Technological education represents a barrier in itself to access higher education for students pursuing secondary education in this field. Even though it represents the 40% of the upper secondary system, with over 60,000 students enrolled in the final years of study, only 13,000 will study in a Romanian Higher Education Institution.

*Students studying in evening or part-time classes have a very small chance of entering higher education.* With a small enrolment rate at the baccalaureate exam and a passing rate of 15.2%, the number of students that study in part-time/evening classes is very small.

*The admission process at the point of entry does not differentiate between male and female candidates.* At the same time, female students have better grades at the baccalaureate exam, a higher passing rate, and even though in terms of quantity almost the same percentage of female baccalaureate graduates access the Romanian higher education, there is a difference in terms of the type of university and resilience as male students have higher “losses” by the third year.

*Private universities play an important role in attracting mature students.* This is important as mature students can mitigate the impact the “losses” of human capital from the current generation.

**Recommendations to Reverse the Negative Trends from an Equity Viewpoint**  
**Enrolment on the baccalaureate exam**—As long as enrolment on the baccalaureate is done long before the end of the school year and schools need to update anyway the enrolment list with students that did not manage to graduate, enrolment should be mandatory or automatic for all students in the last year of study in upper secondary education. This would increase the number of students that take part in the exam as the current system does not allow students to enrol on the baccalaureate exam past the deadline.

**Addressing obstacles students from rural areas face in accessing upper secondary education.** Covering travel expenses, accommodation and even food is essential to improve the equity of the educational system as students coming from rural areas face disadvantages that affect their academic results, crucial for their progress in the educational system.

**Reform of the upper secondary institutional architecture.** As very few of the students enrolled in the technological stream, and especially in part-time classes, manage to enter higher education, it is important that the main intended goal is clear. Taking into account that a big part of these students can enter the labour market with a recognised qualification, as most of them (over 65%) undergo a separate certification exam, it is important that their courses during upper secondary reflect actual qualifications needed for the labour market.

## References

- Bemelmans-Videc, M. L., Rist, R. C., & Vedung, E. O. (1998). *Carrots, sticks, and sermons: policy instruments and their evaluation* (Vol. 1). Transaction Publishers.
- Bologna Process. (2007). London Communiqué. Retrieved June 09, 2021, from [http://ehea.info/Upload/document/ministerial\\_declarations/2007\\_London\\_Communique\\_English\\_58869.pdf](http://ehea.info/Upload/document/ministerial_declarations/2007_London_Communique_English_58869.pdf)
- Clancy, P. (2010). Measuring access and equity from a comparative perspective. In H. Eggins (Ed.), *Access and equity: Comparative perspectives* (pp. 69–102)
- Coertjens, L., Brahm, T., Trautwein, C., & Lindblom-Ylänne, S. (2017). Students' transition into higher education from an international perspective. *Higher Education*, 73(3), 357–369. <https://doi.org/10.1007/s10734-016-0092-y>
- Commission, E. A. C. E. A., & Eurydice, E. (2018). *The European higher education area in 2018: Bologna process implementation report*. Luxembourg: Publication Office of the European Union.
- European Commission. (2020). Education and training monitor. Retrieved June 8, 2021, from <https://op.europa.eu/webpub/eac/education-and-training-monitor-2020/en/chapters/foreword.html>
- European Commission, E. A. C. E. A., & Eurydice. (2014). *Modernisation of higher education in Europe: Access, Retention and Employability*: Publication Office of the European Union. Retrieved from <https://doi.org/10.2797/72146>
- Haj, C. M., Geanta, I., & Orr, D. (2018). A typology of admission systems across Europe and their impact on the equity of access, progression and completion in higher education. In A. Curaj, L. Deca, & R. Pricopie (Eds.), *European higher education Area: The impact of past and future policies* (pp. 171–187). Cham: Springer.
- Howlett, M. (2004). Beyond good and evil in policy implementation: Instrument mixes, implementation styles, and second generation theories of policy instrument choice. *Policy and Society*, 23(2), 1–17.
- Ministry of Education. (2013). Ministerial Order no. 4925/2013 regarding the admission procedures in the public upper secondary sistem for the 2014/2015 school year.
- Orr, D. (2010). *Organisation des Hochschulzugangs im Vergleich von sieben europäischen Ländern* [Organisation of higher education access in comparison of seven European countries]. HIS GmbH.
- Romanian Parliament. (2011). National Education Law, no. 1.
- The Council of the European Union. (2009). Council conclusions of 12 May 2009 on a strategic framework for European cooperation in education and training (ET 2020). Retrieved June 8, 2021, from <https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=celex%3A52009XG0528%2801%29>
- UEFISCDI. (2020). *Anticiparea principalelor tendințe demografice și a impactului lor asupra populației de studenți din România - Studiu de forecast* [Anticipation of the main demographic tendencies and their impact on the student population in Romania - Forecast study]. Retrieved from <https://uefiscdi.gov.ro/Publicatii-1>
- Usher, A., Haj, C., Orr, D., Atherton, G., & Geanta, I. (2017). Study on the impact of admission systems on higher education outcomes Volume II: national cases study. <https://doi.org/10.2766/698050>
- World Bank. (2011). *Romania functional review for higher education*. World Bank.

**Cezar Mihai Hâj** holds a Ph.D. in Political Science from the National University of Political Studies and Public Administration (SNSPA) in Bucharest. His experience as a policy expert includes coordinating a number of studies on internationalization, equity, university management, internal quality assurance, and data collection. He has written articles in Springer and Central European University publications and recently co-authored the “Study on the impact of admission systems on higher education outcomes” commissioned by the DG-EAC. He is a member of the Bologna Follow-Up Group and Social Dimension Advisory Group. He is currently coordinating an extensive national project focused on delivering evidence-based policy recommendations.

**Petrișor Laurențiu Țucă** is the head of the quality assurance department at the “POLITEHNICA” University of Bucharest. In 2021 he became a doctoral student at the same university and will conduct research on the digital transformations of higher education. Since the autumn of 2020 he has been a member of the permanent commission of engineering sciences ARACIS and has collaborated with the Executive Unit for the Financing of Higher Education, Research, Development and Innovation (UEFISCDI) as an expert in educational policies. In the period 2018–2020, he was the president of the National Alliance of Student Organizations in Romania (ANOSR). He was also a full member of the board of the Romanian Agency for Quality Assurance in Higher Education (ARACIS) and a guest member of the National Council for Financing Higher Education (CNFIS) and the Social Dialogue Commission (CDS) of the Ministry of Education (ME).

**Open Access** This chapter is licensed under the terms of the Creative Commons Attribution 4.0 International License (<http://creativecommons.org/licenses/by/4.0/>), which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter’s Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter’s Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.





# The Impact of Social Scholarships and of Reserved Places for Graduates from Rural High Schools in Improving Access to Higher Education and Academic Performance



**Diana-Maria Cismaru, Nicoleta Corbu, Valeriu Frunzaru, Cezar Mihai Hâj, and Oana Ștefăniță**

**Abstract** Although the level of tertiary education attainment as a share of the population aged 30 to 34 increased in Romania up to 26.3% in 2017, it is still modest in comparison with the EU average (39.9% in 2017) (Eurostat, 2021). Therefore, while the rate of young people exposed to the risk of poverty and exclusion increased in the last decade in Romania, there is a need to evaluate the support measures for students from disadvantaged categories. The paper presents the results of two impact studies for two public policies, social scholarships and reserved places for graduates from rural high schools. In order to find out to which extent the two public policies fulfil their aims in supporting students from vulnerable social categories to graduate higher education, a mix of quantitative and qualitative methods has been used. The quantitative analysis used data extracted from two national databases for higher education and data collected by a survey to which about half of the Romanian universities responded. The data for qualitative analysis were collected by face-to-face interviews (with professors in management positions and students beneficiary of the two policies) from eight universities with different profiles, located in five regions of Romania. The results of the quantitative analysis revealed that the social scholarships policy fulfils its objectives of improving academic performance and increasing the chances of graduation for beneficiaries. The results of the qualitative analysis

---

D.-M. Cismaru (✉) · N. Corbu · V. Frunzaru · O. Ștefăniță  
National University of Political Studies and Public Administration, Bucharest, Romania  
e-mail: [diana.cismaru@comunicare.ro](mailto:diana.cismaru@comunicare.ro)

N. Corbu  
e-mail: [nicoleta.corbu@comunicare.ro](mailto:nicoleta.corbu@comunicare.ro)

V. Frunzaru  
e-mail: [valeriu.frunzaru@comunicare.ro](mailto:valeriu.frunzaru@comunicare.ro)

O. Ștefăniță  
e-mail: [oana.stefanita@comunicare.ro](mailto:oana.stefanita@comunicare.ro)

C. M. Hâj  
Executive Agency for Higher Education, Research, Development and Innovation Funding,  
Bucharest, Romania  
e-mail: [cezarc.haj@uefiscdi.ro](mailto:cezarc.haj@uefiscdi.ro)

© The Author(s) 2022

A. Curaj et al. (eds.), *Higher Education in Romania: Overcoming Challenges and Embracing Opportunities*, [https://doi.org/10.1007/978-3-030-94496-4\\_4](https://doi.org/10.1007/978-3-030-94496-4_4)

revealed a high level of satisfaction of beneficiaries with both policies and a positive evaluation of both policies by the management of universities.

**Keywords** Education policy · Impact · Equity · Higher education

## 1 Introduction

The evolution of the significant indicators for evaluating the higher education situation in Romania in the last two decades showed an improvement. However this improvement was modest in comparison with the EU average. For example, the tertiary education attainment in population aged 30–34, a key indicator in the EU policy, increased from 14% in 2007 to 27.3% in 2017 (while EU policy was 39.9 in 2017).<sup>1</sup> Also, the share of young people aged 16 to 29 at risk of poverty and exclusion increased from 23% in 2010 to 26.1% in 2018.<sup>2</sup>

Moreover, there is a considerable gap between the rural area and the urban area in regard to the level of educational attainment. About 65% of high school graduates from rural areas did not enrol in higher education, compared to approximately 35% from urban areas. (UEFISCDI-CNFIS, 2019). In 2017, 31% of the adults in urban areas graduated from higher education compared to only 6.1% in rural areas.

The two public policies that are the focus of this study are the social scholarships for students and the reserved places for graduates of rural high schools. Social scholarships are available for students from disadvantaged families, with low income or with medical and social problems, in order to secure a minimum standard of living. The scholarship amount is fixed by each university, starting from the minimum level proposed each year by the National Council for the Financing of Higher Education. An important change was introduced by the 3392 Order of the National Education Ministry in 2017, by which the amount of the social scholarship increased, being connected with a minimum level of accommodation and meal. According to the Policy Brief on social scholarships in higher education (UEFISCDI, 2020), the largest increase in social scholarships between 2014 and 2019 was 149.4%. In the academic year 2018/2019, the recommended average value of the social scholarship was 580 RON (equivalent to 117.4 Euros). However, for the same year, the average value of the social scholarship was below the recommended national value at 11.4% of universities.

With regard to the reserved places for graduates of rural high schools, starting with the academic year 2018–2019, 2,000 fully subsidized places were distributed each year to the universities, only for the undergraduate level.

---

<sup>1</sup>Eurostat (2020) The share of higher education graduates in adults aged 30–34 years (variable tgs00105).

<sup>2</sup>Eurostat (2020). The share of young people at risk of poverty and exclusion (variable ilc\_li02).

In this context, this study aims to investigate the impact of the two policies on increasing access and retention in higher education for students from vulnerable social categories.

## 2 Literature Review

In the field of education, a clear distinction was made between programmatic measures (individual measures) and systemic approaches (De Witte and Cabus, 2013, p. 157). The first approach aims to identify students in risk situations on an individual basis and to create alternative programs in order to keep them enrolled in schools, while the systemic approach includes multiple levels of analysis, including the family, the school and the community. Therefore, the systemic approach was preferred by several authors (Di Maggio et al., 2020; Osgood, 2012; Ziomek-Daigle, 2010).

Retention and dropout from higher education can be conceptualized by several perspectives. Thus, the psychological perspective explains dropout as individual response, emphasizing the internal factors influencing the decision to remain or not enrolled (Bean & Eaton, 2000). By contrast, the sociological perspective considers that the decision to leave school is a consequence of social attributes. Dropout and retention are considered an effect of the social strata (Bourdieu, 1977; Hauser & Featherman, 1978), meaning that the social status of the student's family influences its level of educational attainment and employment status. At the same time, the institutional perspective focused on the impact of the academic environment on the behaviour of students (Berger, 2001). Institutional elements as structure, resources, communication, climate can have an important effect on socializing models and consequently on retention. Finally, the interactionist view aimed to integrate the three perspectives (psychological, sociological and institutional), considering dropout as a result of the dynamic interaction between individual and environment (Tinto, 1992). Thus, in this approach, dropout and retention are considered results of serial interactions between an individual with distinct psychological and socio-economical characteristics and an institutional system (Braxton et al., 2011).

Using this approach, the study proposed the following research questions:

RQ1. How has the number of beneficiaries for the two policies evolved in the last years?

RQ2. To what extent did the social scholarships and, respectively, the reserved places for graduates of rural high schools increase access to higher education of candidates from disadvantaged social categories?

RQ3. To what extent did the social scholarships and the reserved places for graduates of rural high schools reach their aim to reduce dropout and increase performance and chances of graduation for beneficiaries?

RQ4. What are the factors that influence the academic performance of students (including social scholarships, residence in the rural area or graduation of rural high schools)?

### 3 Methodology

A mix of quantitative and qualitative methods has been used. The quantitative analysis has been carried out as secondary analysis on data collected from two databases, the National Student Record (NSR) and the National Platform for Higher Education Data (NPHEd), and a survey to which approximately a half of Romanian public universities responded (N=25). The qualitative analysis relied on a series of interviews in eight universities with beneficiaries of the two policies and management representatives.

In the case of the first database (NSR), for social scholarships, the authors considered the cohort 2015–2019, but only on a sample of 6 universities that shared the necessary data. For the reserved places of graduates of rural high schools, a sample of universities was built according to the reliability and consistency of data and included 6 universities with an engineering profile (a total of 17,694 students in the cohort enrolled in 2015), 6 universities with a medical profile (a total of 6,453 in the cohort enrolled in 2015) and 7 comprehensive universities (39,159 students in the cohort enrolled in 2015).

In the case of the second database (NPHEd), the analysis was performed on a total of 318,315 students for the academic year 2014–2015, 342,395 students for the academic year 2015–2016, 337,669 students for the academic year 2016–2017, and 406,675 students for the academic year 2017–2018. The data belonged to a total of 56 universities from Romania, from which the greatest part were public universities. Among these universities, more than a third had a comprehensive profile (19 universities), while the others had various profiles (agronomical, engineering, artistic, and medicine).

The survey focused on the data not collected in the two databases, i.e. the number of applications for social scholarships and accommodation, degree of selectivity in the admission examination, including the competition for the reserved places for graduates of the rural high schools. Twenty-five universities (approximately a half of the public universities from Romania) responded to the survey: 13 comprehensive, 4 agronomical, 3 engineering, 2 medical.

The qualitative research was performed in December 2019–February 2020 in eight universities placed in five regions of development and having different profiles (comprehensive but also specific—technical, agronomical, medical). Ninety beneficiaries of the two policies participated in collective interviews in the eight universities, together with 17 interviews with professors in management positions (vice-rector, dean or vice-dean), who responded individually.

## 4 Findings

### 4.1 *Evolution of the Number of Beneficiaries of the Two Policies and Aspects of Implementation*

Relying on the data extracted from the National Platform for Higher Education Data (NPHEd) database, the average number of student beneficiaries of public places increased from 60.1% in the academic year 2014–2015 to 66.1% in the academic year 2017–2018. The total number of scholarship beneficiaries (regardless of category) increased from 22.1% in 2014–2015 to 28.52% in 2017–2018. On average, 31.8% of students come from the rural areas.

The share of social scholarships in the total number of scholarships increased. While study scholarships and merit scholarships are granted on performance criteria, social scholarships are granted solely on socio-economic criteria to students from families with no income or a very low income or to students with a chronic disease or disability. The total number of 11,788 social scholarships allocated in 2016–2017 increased to 26,798 social scholarships allocated in 2017–2018 (a quarter of the total 103,195 scholarships in all categories). Thus, a change in the procedure ordered by the National Education Ministry in 2017 had a substantial effect on the share of social scholarships in the total of scholarships. As a result, the number of students who benefitted from social scholarships grew from 4.8% in 2014–2015 to 7.1% in 2017–2018.

The universities with a medical education profile presented the lowest number of standard students<sup>3</sup> who received a social scholarship, followed by comprehensive universities and universities with an engineering profile. The universities with an agronomic profile and the universities with an artistic or sport profile had a higher number of beneficiaries of social scholarships. There was an increase in the number of beneficiaries for all types of universities, starting with the academic years 2016–2017 and 2017–2018 (Table 1). As mentioned in the introduction, starting with the academic year 2016–2017, the amount of social scholarships increased, being connected with a minimum level of accommodations and meals.

The average amount of the social scholarship increased from 237 RON (S.D. = 86) in 2014–2015, to 588 RON (S.D.= 43) in 2017–2018 (Table 2). Also, the minimum amount is three times greater in 2016–2017 in comparison with 2014–2015, increasing to a minimum quantum of 434 RON in 2017–2018.

As far as the number of graduates of rural high schools is concerned, there is no increase in their number in the universities in the sample in the five years (Table 3).

---

<sup>3</sup>The social scholarships were allocated according to the university decision: 4 months, 5 months, 10 months or 12 months in one or two semesters. Therefore, to have a common comparison basis, the indicator has been calculated for “standard student” that benefits from a 12-month scholarship, using the formula: number of social scholarships x number of months of benefit of social scholarship x 100/12 (months) x total number of students in the university. For example, in the academic year 2014–2015 4.78% of standard students from all universities of the sample benefitted from the theoretical 12-month social scholarships.

**Table 1** The share of standard students who received social scholarships, by types of universities

	2014–2015	2015–2016	2016–2017	2017–2018
Comprehensive universities	2.98	2.44	4.85	5.68
Agronomic universities	5.18	4.8	8.84	12.16
Engineering universities	4.82	4.23	4.83	6.55
Art/sport universities	5.48	3.01	6.95	6.1
Medicine universities	2.37	2.53	3.78	4.07

**Table 2** Average quantum of social scholarship

	2014–2015	2015–2016	2016–2017	2017–2018
Universities	46	37	47	48
Missing values	9	18	5	7
<b>Average</b>	<b>237</b>	<b>244</b>	<b>480</b>	<b>588</b>
Standard deviation	86	89	69	43
Minimum	100	133	317	434
Maximum	650	650	620	700

**Table 3** The evolution of the number of graduates of rural high schools

		2015–2016	2016–2017	2017–2018	2018–2019	2019–2020
N <sup>r</sup>	Valid	17	18	18	21	21
	Missing	9	8	8	5	5
<b>Average</b>		<b>55</b>	<b>56</b>	<b>53</b>	<b>55</b>	<b>58</b>
Standard deviation		69	64	59	56	57
Minimum		0	0	0	0	0
Maximum		199	192	174	168	207

According to the survey, there are universities where there is a competition for the reserved places for the graduates of rural high schools. The average competition increased from 0.85 students per subsidized place (in the first year in which it was implemented) to 0.96 (for the second year). This increase shows that the policy is needed and has an immediate effect, even if the places are not yet fully used (Table 4).

In regard to the number of applications for social scholarships, there is an increase in the academic year 2017–2018 in comparison with the previous academic year 2016–2017 in all the 25 universities that responded to the survey (Table 5).

**Table 4** Competition at the admission contest for the reserved places for graduates of rural high schools (candidates on one place)

		2018–2019	2019–2020
N <sup>r</sup>	Valid	24	25
	Missing	2	1
<b>Average</b>		<b>0.85</b>	<b>0.96</b>
Standard deviation		0.47	0.49
Minimum		0.00	0.00
Maximum		1.55	2.00

**Table 5** The evolution of the average number of applications for social scholarships

	2015–2016	2016–2017	2017–2018	2018–2019	2019–2020
Mean	326.3	363.9	570.6	562.2	531.7
Standard deviation	387.3	390.1	477.3	436.5	460.8

**Table 6** The share of allocated social scholarships in the total number of applications for social scholarships, on academic years

	2015–2016	2016–2017	2017–2018
Mean	0.72	0.78	0.77
Standard deviation	0.19	0.23	0.24
Minimum	0.45	0.35	0.3
Maximum	0.99	1.00	1.00

The data collected by the survey have been connected with the data extracted from the NPHEd database in order to see the percentage of a positive resolution of the applications to social scholarships. The share of allocated social scholarships in the total number of applications for social scholarships increased by 5–6% starting with the academic year 2016–2017 (Table 6).

## 4.2 *Specific Analysis of Individual Data Relevant for the Two Policies*

### 4.2.1 **The Impact of Social Scholarships on Performance and Retention**

Only six universities registered complete data in the National Student Record (NSR) database regarding the number of social scholarships for all the three (or four years, in some cases) years of undergraduate study. The total number of students in the six

universities was 15,296. Of the six universities, five are comprehensive, and one has an engineering profile, while the undergraduate studies last for three or four years.

For the first year of study, 22.3% of the students without social scholarship have problems (as dropout, repetition of the year, expulsion), while only 7.6% of the students with social scholarship were in this situation. Among the students without a social scholarship, 46.4% of the students passed the exams integrally, while 61.3% of the students with social scholarship passed the exams integrally (Annex 1).

In the second year of study, 9.8% of the students without social scholarship encountered problems in comparison with only 4.9% of the students with social scholarship (Table 8). Among the students without social scholarship, 39.2% passed the next academic year relying on credits, while among the students with social scholarship, the similar share was 36.3%. The latter passed the exams integrally to a greater extent (58.8%) in comparison with only 51% among the students without a social scholarship.

In the third year of study, the tendency for the beneficiaries of social scholarships to have fewer problems and pass the exams integrally to a greater extent was maintained. Thus, from the beneficiaries of social scholarships, only 3.9% encountered problems in comparison with 14.2% of the students without a social scholarship. 28.9% of the students without social scholarship passed to the next year relying on credits, in comparison with only 17.6% of the beneficiaries of social scholarship. Also, 78.4% of the beneficiaries of social scholarships passed the exams integrally in comparison with only 57% among the students without a social scholarship.

In the fourth academic year, only 5.6% of the students with social scholarship were registered with problems, in comparison with 12.1% among the students without a social scholarship. 17.8% of the students with social scholarship passed the exams integrally, in comparison with 14.4% of the students without a social scholarship. Also the percentage of graduation is higher in the case of students with social scholarships, 73.6% in comparison with 69.3% among students without a social scholarship.

If the residence of the high school is taken into account, the beneficiaries of social scholarship are, to a greater extent, graduates of high schools from rural areas than urban areas. Among the graduates of rural high schools, 12.3% received a social scholarship for one year, while 9.1% received it for two years, and 5.8% received it for three years in comparison with the graduates of urban high schools. Among this last category, 6.8% received a social scholarship for one year, 5.2% received it for two years, and 3.3% received it for three years (Table 7).

Additionally, students from rural areas were, to a greater extent, beneficiaries of a social scholarship in comparison with students from urban areas. Thus, among students from rural areas, 9% had a social scholarship for one year, 7.7% for two years, 4.9% for three years, and 3.1% for four years. Among students from urban areas, only 5.4% received a social scholarship for one year, 3.6% for two years, 2.3% for three years, and 1.1% for four years. In total, 87.6% of students from the urban area never received a social scholarship in comparison with 75.3 of students from the rural area (Table 8).



**Table 7** The number of years in which students received a social scholarship related to the graduated high school

		.00	1.00	2.00	3.00	4.00	Total
High school Urban	Count	4,248	346	264	167	99	5,124
	%	82.9%	6.8%	5.2%	3.3%	1.9%	100.0%
Rural	Count	110	19	14	9	2	154
	%	71.4%	12.3%	9.1%	5.8%	1.3%	100.0%
Total	Count	4,358	365	278	176	101	5,278
	%	82.6%	6.9%	5.3%	3.3%	1.9%	100.0%

Note. The relationship between the numbers of years in which students received social scholarships and graduated high school is significant (Chi-Square = 16.841, df = 4, p<0.01)

**Table 8** Numbers of years in which students received social scholarships related to their residence

		.00	1.00	2.00	3.00	4.00	Total
Residence Urban	Count	3,109	192	129	80	39	3,549
	%	87.6%	5.4%	3.6%	2.3%	1.1%	100.0%
Rural	Count	1,418	169	146	93	58	1,884
	%	75.3%	9.0%	7.7%	4.9%	3.1%	100.0%
Total	Count		361	275	173	97	5,433
	%		6.6%	5.1%	3.2%	1.8%	100.0%

Note. The relationship between the numbers of years in which students received a social scholarships and their residence is significant (Chi-Square = 141.939, df = 4, p<0.01)

In conclusion, the social scholarship had a significant impact on academic performance, increasing the possibility that the students from families with low income or medical issues (students eligible for social scholarships) could successfully finish the undergraduate academic studies. The correlation between social scholarship and academic performance was positive. The beneficiaries of social scholarships passed exams integrally to a greater extent and registered fewer dropout cases during their academic route. Also, students from rural areas and students who graduated rural high schools received to a greater extent social scholarships in comparison with students from urban areas or students who graduated an urban high school.

#### 4.2.2 Factors that Influence the Academic Performance of Students and Graduates from Rural Area High Schools

In order to find out the factors that influence academic performance, several variables have been taken into account: the final score at the baccalaureat exam, ethnicity,

the rural vs. urban high school, age, residence, gender. The variables were tested separately on categories of universities, using linear regression analysis. The results were different according to the profile of the university, as follows.

*(a) Universities with an engineering profile*

For universities with an engineering profile, the variables with significant predictor value were: the residence in the rural or urban area, the final score of the baccalaureate exam, the gender—women having a better performance than men, and ethnicity (Annex 2).

*(b) Universities with a medical profile*

In the case of medical universities, among the variables tested as predictors for the academic performance, only the score of the baccalaureate exam, the ethnic group and the gender were significant as predictors. In the case of these universities, the number of students from rural areas was very small.

*(c) Universities with a comprehensive profile*

Among the variables analyzed as predictors of academic performance, only the final score of the baccalaureate exam, the graduation of urban versus rural high schools, residence in the urban area versus the rural area and year of birth were significant predictors.

### ***4.3 Perception and Evaluation of the Two Policies by the Interview Respondents***

The interviews with beneficiaries and management representatives showed complementary insights. A prominent result was that universities allocate a distinct place to social policies in their strategy of management and promotion and are more flexible in this regard. They reveal a strong interest in helping students who belong to disadvantaged social categories through a large range of complementary support measures financed by the universities themselves. As a consequence, the universities collect various benefits (financial or reputational). By attracting candidates from vulnerable social categories, they can reach to a maximum use of the allocated budget places, using the funds from the public budget entirely. At the same time, by presenting the social policies in their promotional communication with potential students, they benefit from a public perception as an advanced university, which offers a variety of options for the support of students, becoming thus attractive for all the categories of candidates.

As far as the social scholarship policy is concerned, the fact that it was launched many years ago was useful for its notoriety. However, among the factors that repositioned the social scholarship in the perception of beneficiaries was the substantial increase in the scholarship amount after 2016 and the possibility for students to benefit from multiple categories of scholarships.

Integrating the responses of beneficiaries of social scholarships with the responses of the management representatives, the policy was positively evaluated. Both cat-

egories of respondents emphasized the support role of social scholarships in the continuation of studies. Three types of evaluations were expressed: a part evaluated the policy as being effective as it is, while others considered that more social scholarships (or in a greater quantum) should be available; a third category of respondents considered that some conditions should be introduced (for example, the obligation of frequenting courses or passing exams integrally).

In regard to the effect of social scholarships as a policy, the respondents considered that they are effective in supporting students to obtain a satisfactory level of performance during undergraduate studies. However, the social scholarships did not influence them in choosing a specific specialization. The factors that influenced the option for a certain specialization were the profile of the high school, recommendations of family or friends, passion for a certain field or occupation, or the reputation of the desired occupation on the job market.

Most of the interviewees stated that the information regarding the application to social scholarships were accessible and known before the admission exam. Thus, even if the social scholarships do not have a direct influence in attracting candidates to some specializations, they have an indirect effect, because candidates perceive them as an element in a range of support measures offered by universities. Even though students could choose a program based on the scholarships it offers, this never happens, according to students interviewed in this study.

The other aim of social scholarships, to support students from disadvantaged groups to graduate higher education, is reached. Students and management representatives mentioned that the social scholarships contribute to reaching a satisfactory level of performance.

Regarding the perception and evaluation of the second policy, the situation is slightly different. Due to its novelty, the policy is little known by the potential beneficiaries. Among the student respondents, some found out after the admission exam. Thus, the perception of the policy is positive, even if the effectiveness cannot still be evaluated. However, the management of the universities considered it a useful policy, which will prove its effectiveness over time.

## **5 Discussion**

The results of the quantitative research showed important differences among universities. As the survey results showed, in some universities, the number of applications for social scholarship is smaller (as in the universities of medicine), while in other universities, the number of applications is greater than the available funds, or some applicants do not fulfil the conditions. Overall, the data showed an increase of the average number of applications for social scholarships and an increase in the number of scholarships granted. This evolution shows an increase in the number of students from disadvantaged social categories, but also an increase in the capacity of the university to integrate and to maintain them in the system. On the other hand, the fact that approximately the fifth part of applications do not have a positive outcome

suggests that there is a need for additional measures because some students from disadvantaged social categories do not receive support, even though they need it.

One of the core results of the quantitative research was that academic performance is correlated with social scholarships: the beneficiaries of social scholarships have better results and less issues related to dropout or repetition in comparison with the students without social scholarships.

These results are similar to other studies. Angrist et al. (2009) tested alternative systems to enhance retention and academic performance in a university from USA (the system of stimulus for increasing performance versus the scholarship system). As a result, a mixed system consisting of allowances combined with orientation services was the most effective, but also the system that relied only on financial allowance had a positive impact on performance. In the same line, Barrow et al. (2012) observed that the allowance of a scholarship determined the decrease of dropout and increase of performance among the beneficiaries. In the case of an Australian university (Zacharias et al., 2016), by internal monitoring of the system of scholarships, it was discovered that the beneficiaries had a higher level of performance than the other students.

Though the universities have complex mechanisms to make sure the scholarships are distributed both on merit and to those who need them the most, there are situations in which students drop out because they do not have the means to support themselves throughout college. However, the policy regarding the social scholarship has helped many students finish their studies throughout the years. Additionally, even though the policy regarding the reserved places for graduates of rural high schools has started being implemented only two years ago, this study shows its potential to add to the supporting system offered by the scholarship policy. Benefitting from both, a student from a poor family from a rural area could have a better chance of graduating from higher education in the next years.

## 6 Conclusions

This is the first study that used the recently implemented databases, namely the National Student Record (NSR) and the National Platform for Higher Education Data (NPHEd), which allowed the collection of statistically representative data. Based on these data, the statistical analysis showed that the beneficiaries of the social scholarships had better academic performance and lower dropout rates. The potential impact of the two policies has been influenced by the different periods of application. Thus, while the social scholarships have more than two decades of implementation, the reserved places for graduates of rural high schools were implemented only in the last two academic years.

Referring to the first research question, according to the data, there was a visible increase in the number of applications for social scholarships beginning with the academic year 2017–2018. In consequence, there was an increase in the number of beneficiaries of social scholarships (together with other types of scholarships) starting

with the academic year 2016–2017 and in the quantum of the social scholarships. The beneficiaries of social scholarships reside in the rural area to a greater extent, and that justifies the connected analysis of the support policies for vulnerable groups and for students from rural areas in the future. Additionally, there was an increase of the competition on the reserved places for graduates of rural high schools in the second year of implementation (the academic year 2019–2020).

The third research question explored the extent to which the two policies reach their aim, to facilitate the access of students from vulnerable groups to higher education and to support them until graduation. From the statistical analysis of data, it appears that the beneficiaries of the social scholarships passed the exams successfully to a greater extent in comparison with the control sample. Moreover, the qualitative research results demonstrated that both policies are positively perceived and offer effective financial and psychological support for students from disadvantaged social categories.

For responding to the second research question, the qualitative data revealed that the social scholarships do not represent the most important facilitator of access to higher education of students from vulnerable social categories (the decision to enrol relies on a more complex set of factors). Still, the qualitative research showed that the integrated perception of support measures offered by universities contributed to the decision to enrol in higher education.

The academic performance of students is predicted by the score of the baccalaureate exam for all types of universities. In the case of universities with an engineering profile, the academic performance is also predicted by residence and ethnicity. In the case of universities with a medicine profile, gender and ethnicity are also predictors of academic performance. In the comprehensive universities, the additional predictors are residence and year of birth.

As a recommendation for future evaluation of support policies, monitoring instruments would be useful in order to allow an effective intervention in individual cases. Other suggestions are the improvement of information for the potential beneficiaries and connection of multiple social support measures for students from social vulnerable categories. Finally, reducing bureaucratization by digital applications, reducing the number of documents in the application and clarifying information would increase the success rate of the policies.

The research showed that not all the applications received a positive response in some universities on the ground of limited funds. Covering all the eligible applications would increase predictability and trust of potential beneficiaries in the support received until graduation. In the medium and long term, the equity perspective should be developed in Romanian universities, considering the fact that students come from a social background in which inequality and deprivation are increasingly present and need support at all levels.

### Annex 1: Relationship between social scholarship—academic performance

IN YEAR I		Problems	Passed next year on credits	Passed integrally	Total	
Social scholarship	No scholarship	Count 3234 % 22.30%	4533 31.30%	6713 46.40%	14480 100.00%	
	With scholarship	Count 61 % 7.60%	249 31.10%	491 61.30%	801 100.00%	
Total		Count 3295 % 21.60%	4782 31.30%	7204 47.10%	15281 100.00%	
IN YEAR II		Problems	Passed next year on credits	Passed integrally	Total	
Social scholarship	No scholarship	Count 1104 % 9.80%	4427 39.20%	5758 51.00%	11289 100.00%	
	With scholarship	Count 31 % 4.90%	230 36.30%	373 58.80%	634 100.00%	
Total		Count 1135 % 9.50%	4657 39.10%	6131 51.40%	11923 100.00%	
IN YEAR III		Problems	Passed next year on credits	Passed integrally	Total	
Social scholarship	No scholarship	Count 855 % 14.20%	1744 28.90%	3443 57.00%	6042 100.00%	
	With scholarship	Count 24 % 3.90%	108 17.60%	480 78.40%	612 100.00%	
Total		Count 879 % 11.50%	1852 27.80%	3923 59.00%	6654 100.00%	
IN YEAR IV		Problems	Passed next year	Passed integrally	Graduated	Total
Social scholarship	No scholarship	Count 550 % 12.10%	190 4.20%	652 14.40%	3138 69.30%	4530 100.00%
	With scholarship	Count 25 % 5.60%	14 3.10%	80 17.80%	331 73.60%	450 100.00%
Total		Count 575 % 11.50%	204 4.10%	732 14.70%	3469 69.70%	4980 100.00%

Note. The relationships between the social scholarship and the academic performance is significant in all four academic years (Chi square test)

## Annex 2: Predictors of academic performance

Predictors of academic performance (linear regression) in engineering universities.

Model		Unstandardized Coefficients		Standardized Coefficients Beta	T	p
		B	Std. Error			
1	(Constant)	9,255	2,380		3,888	0,000
	score_baccalaureate	0,403	0,039	0,187	10,448	0,000
	rural_high school	0,222	0,277	0,014	0,800	0,424
	Residence	0,267	0,081	0,058	3,292	0,001
	Gender	0,492	0,082	0,107	6,002	0,000
	ethnic_group	-0,431	0,198	-0,038	-2,170	0,030
	birth_year	0,000	0,001	-0,003	-0,179	0,858

a. Dependent Variable: Academic performance; Adj Rsqare = 0,058

Predictors of academic performance (linear regression) in medicine universities.

Model		Unstandardized Coefficients		Standardized Coefficients Beta	T	Sig.
		B	Std. Error			
1	(Constant)	-35,642	26,793		-1,330	0,184
	score_baccalaureate	0,255	0,026	0,269	9,826	0,000
	rural_high school	0,178	0,153	0,030	1,162	0,245
	Residence	0,040	0,045	0,024	0,881	0,379
	Gender	0,129	0,043	0,077	3,011	0,003
	ethnic_group	0,249	0,038	0,181	6,560	0,000
	birth_year	0,022	0,013	0,043	1,671	0,095

a. Dependent Variable: Academic performance; Adj Rsqare=0,089

Predictors of academic performance (linear regression) in comprehensive universities.

### Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.
		B	Std. Error			
1	(Constant)	-84,074	33,399		-2,517	0,012
	score_baccalaureate	0,753	0,040	0,437	18,842	0,000
	rural_high school	-0,363	0,184	-0,042	-1,972	0,049
	Residence	-0,191	0,084	-0,049	-2,279	0,023
	Gender	0,075	0,083	0,020	0,897	0,370
	ethnic_group	-0,429	0,290	-0,031	-1,480	0,139
	birth_year	0,045	0,017	0,057	2,698	0,007

a. Dependent Variable: Academic performance; Adj Rsqare = 0,226

## References

- Angrist, J., Lang, D., & Oreopoulos, P. (2009). Incentives and services for college achievement: Evidence from a randomized trial. *American Economic Journal: Applied Economics*, 1(1), 136–63.
- Barrow, L., Richburg-Hayes, L., Rouse, C. E., & Brock, T. (2012). Paying for performance: The education impacts of a community college scholarship program for low-income adults, Working Paper, No. 2009-13, Federal Reserve Bank of Chicago, Chicago, IL, disponibil la <https://www.econstor.eu/bitstream/10419/70559/1/729000133.pdf>
- Bean, J. P., & Eaton, S. B. (2000). A psychological model of college student retention. *Reworking the Student Departure Puzzle*, 1, 48–61.
- Berger, J. B. (2001). Understanding the organizational nature of student persistence: Empirically-based recommendations for practice. *Journal of College Student Retention: Research, Theory & Practice*, 3(1), 3–21.
- Bourdieu, P. (1977). *Outline of a Theory of Practice* (Vol. 16). Cambridge University Press.
- Braxton, J. M., Hirschy, A. S., & McClendon, S. A. (2011). *Understanding and reducing college student departure: ASHE-ERIC Higher Education Report, volume 30, number 3* (Vol. 16). Wiley.
- De Witte, K., & Cabus, S. J. (2013). Dropout prevention measures in the Netherlands, an explorative evaluation. *Educational Review*, 65(2), 155–173.
- Di Maggio, I., Ginevra, M. C., Santilli, S., Nota, L., & Soresi, S. (2020). The role of career adaptability, the tendency to consider systemic challenges to attain a sustainable development, and hope to improve investments in higher education. *Frontiers in Psychology*, 11, 1926.
- Eurostat, <https://ec.europa.eu/eurostat/data/database>
- Hauser, R. M., & Featherman, D. L. (1978). *Opportunity and change*. New York: Academic.
- Osgood, E. (2012). An entrepreneurial system approach to positive youth development: A new approach to dropout prevention. *Applied Developmental Science*, 16(3), 113–121.
- Tinto, V. (1992). Student attrition and retention. *The Encyclopedia of Higher Education*, 3, 1697–1709.
- UEFISCDI-CNFIS. (2019). *Raportul public 2017 și 2018. Starea finanțării învățământului superior* [The public report 2017 and 2018. The state of financing higher education in romania] available at [http://www.cnfis.ro/wp-content/uploads/2020/01/Raport\\_public-CNFIS\\_2017-2018-integrat.pdf](http://www.cnfis.ro/wp-content/uploads/2020/01/Raport_public-CNFIS_2017-2018-integrat.pdf)
- UEFISCDI. (2020). Policy Brief. Bursele sociale din învățământul superior. [Social scholarships in higher education] available at <https://uefiscdi.gov.ro/resource-824482-policybrief2020-burselesocialeininvatamantulsuperior.pdf>
- Zacharias, N., Cherednichenko, B., Ryan, J., George, K., Gasparini, L., Kelly, M., Mandre-Jackson, S., Cairnduff, A., & Sun, D. (2016). *Moving beyond 'acts of faith': effective scholarships for equity students*: Final report submitted to the National Centre for Student Equity in Higher Education - February 2016. National Centre for Student Equity in Higher Education (NCSEHE), Australia, available at <https://eprints.qut.edu.au/109027>
- Ziomek- Daigle, J. (2010). Schools, families and communities affecting the dropout rate: Implications and strategies for family counselors. *The Family Journal*, 18(4), 377–385.

**Diana Maria-Cismaru** is a doctor in sociology, Full Professor and Head of Public Relations Department at the College of Communication and Public Relations in the National University of Political Studies and Public Administration, Bucharest. She participated as an expert in national and international research projects, from which: State of the Nation (POCA, SNSPA and Government Administration Unit, 2016–2019), Internationalization, equity and management for quality in higher education (POS-DRU, UEFISCDI, 2014), EHR- Entrepreneurship for Human Resources (POS-DRU, SNSPA, 2012–2013), Scrutinizing the impact of CCS communication on general and local public (national scientific coordinator, ERA-NET/CNMP, 2009–2010), Horizontal and vertical partnerships for increasing the access to higher education (POS-DRU, SNSPA, 2010–2013).



She had a research stage at George Washington University in 2011, from which she developed the research laboratory Organizational Learning. She is the author or co-author of several books and more than 40 articles in the field of strategic communication, social media communication, and education.

**Nicoleta Corbu** is a professor at the College of Communication and Public Relations, SNSPA. She currently coordinates, as executive director, the Center for Research in Communication. She is a member of the Council of the Romanian Agency for Quality Assurance in Higher Education since 2013. She holds a Ph.D. diploma in sociology; she is the recipient of a Fulbright grant in the United States (University of Georgia, 2008–2009) and was visiting professor at Florida Gulf Coast University (2012). Nicoleta Corbu coordinated and participated in strategic and research grants, covering political communication, education policies, media effects. She published books in the fields of European studies (*Identity and Intercultural Communication*, 2014, co-editor, *The Crisis of the European Union. Identity, Citizenship, and Solidarity Reassessed*, 2013, co-editor), theories of communication (*Istoria comunicării*, 2007, co-author), political communication (*Telepresidents. An Inquiry into a Presidential Election*, 2011, co-author), semiotics of advertising (*Brandurile globale. O perspectiva cross-culturală*, 2009), education (*Învățământul universitar din România*). *Dialog cu elevii, studenții și profesorii*, 2013, co-author; *Acces și echitate în învățământul superior din România*. *Dialog cu elevii și studenții*, 2011, co-author). She published more than 60 articles and book chapters. She has been a member of Network of European Political Communication Scholars (NEPOCS) since 2018.

**Valeriu Frunzaru** is an Associate Professor and vice-dean at the National University of Political Studies and Public Administration from Bucharest. He has extensive teaching and research experience in the fields of employment, education, and social values (especially materialistic values). He has been a member of numerous research groups that investigated topics related to access and equity in higher education and students' expectations with respect to higher education and labour market. Valeriu has examined the reshaping of the role of the university as a higher education institution continuously connected to the labour market and community needs. Recently, he has extended his research interest to the study of the impact of social network websites on students.

**Cezar Mihai Hâj** holds a Ph.D. in Political Science from the National University of Political Studies and Public Administration (SNSPA) in Bucharest. His experience as a policy expert includes coordinating a number of studies on internationalization, equity, university management, internal quality assurance, and data collection. He has written articles in Springer and Central European University publications and recently co-authored the "Study on the impact of admission systems on higher education outcomes" commissioned by the DG-EAC. He is a member of the Bologna Follow-Up Group and Social Dimension Advisory Group. He is currently coordinating an extensive national project focused on delivering evidence-based policy recommendations.

**Oana Ștefăniță** is a senior lecturer at the College of Communication and Public Relations, National University of Political Sciences and Public Administration, teaching Mass media & society, Media psychology, and Research methodology. Oana holds a Ph.D. in Communication Sciences (tackling the role of media in the Europeanization process) and was the beneficiary of a Fulbright scholarship for research at James M. Cox Jr. Center for International Mass Communication Training and Research, University of Georgia, USA. She is also a researcher within the Center for Research in Communication, Media Studies Lab (currently being involved in research projects on digital disinformation) as well as in external projects on education and public policies. Her research interests regard media effects and education.

**Open Access** This chapter is licensed under the terms of the Creative Commons Attribution 4.0 International License (<http://creativecommons.org/licenses/by/4.0/>), which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.



# The Socio-Economic Challenges in Access to Romanian Higher Education. Student Perception and Funding Policy Directions



Oana-Alexandra Dervis, Elena Trifan, and Gabriela Jitaru

**Abstract** Access to education, specifically in relation to socio-economic background, is one of the enduring issues in educational research. The theme is particularly salient for the Romanian case from a policy perspective, given the increase in social polarisation specific to the post-communist transition and its effect on access to higher education. Recent reforms in university funding have started to address this issue, with the inclusion of several mechanisms that allocate financial resources according to university efforts towards social equity. The main objective of our research is to provide an overview of the policies concerning the inclusion of students from low socio-economic backgrounds and assess the degree to which progress has been made towards reaching current national targets regarding access to higher education. We argue that although significant improvements have been made at the level of policy initiative, more precise targeting is needed in order to meet labour market demands, given that most current efforts are directed either at fresh high school graduates or at diminishing the dropout rate. These efforts, even if 100% successful, will not prove sufficient given current demographic trends. Therefore, we consider another potential avenue for increasing student numbers, suggesting that an orientation towards non-traditional students (adult students) might be beneficial. With this in mind, in the second half of the paper, we explore the main characteristics and trends concerning Romanian mature students using the results from the EUROSTUDENT VI and EUROSTUDENT VII studies, with the goal of formulating policy proposals that aim to unlock the potential of this demographic.

---

O.-A. Dervis (✉) · E. Trifan · G. Jitaru  
Executive Agency for Higher Education, Research, Development and Innovation Funding,  
Bucharest, Romania  
e-mail: [oana.dervis@uefiscdi.ro](mailto:oana.dervis@uefiscdi.ro)

E. Trifan  
e-mail: [elena.trifan@uefiscdi.ro](mailto:elena.trifan@uefiscdi.ro)

G. Jitaru  
e-mail: [gabriela.jitaru@uefiscdi.ro](mailto:gabriela.jitaru@uefiscdi.ro)

National University of Political Studies and Public Administration, Bucharest, Romania

**Keywords** Access to education · Mature students · Inclusion policies · Equity in education · Performance funding

## 1 Introduction

Widening access to higher education remains one of the key political goals at the European level. For the last 20 years, the social dimension of education has been a central concern of the—now—49 countries of the European Higher Education Area, present both in the initial Prague Communiqué (2001) and recently reiterated in the Rome Communiqué (2020). Commitment to building inclusive higher education systems is also present in the European Commission’s Modernisation Agenda for Higher Education, making equal access to education a priority for action.

From an economic perspective, investment in education is indispensable given the highly skilled human capital needed to create jobs and sustain economic growth in modern digitalised societies. It is estimated that by 2025, over 50% of European jobs will require higher education qualifications. As a response, through the Europe 2020 Strategy, the European Commission has set the goal of achieving an education attainment of 40% among European citizens aged 30–34. Given the strain of past educational policy specific to the communist regime and subsequent transition period, Romania set a more modest goal of reaching 26.7% higher education graduates in the same age group. By 2020, this goal was not yet met.

However, increasing the number of beneficiaries of higher education is not just a question of economic growth. From a normative standpoint, it is deeply connected to the social commitment to equality of opportunity, as it concerns one of the services that can most influence an individual’s chances of achieving in life. Education’s twofold relation to social polarisation is well-documented. Firstly, striving for equal access to education can attenuate the imbalance in opportunity caused by other socio-economic inequalities (Augustine et al. 2009). Secondly, maintaining the status quo does not just preserve current inequalities (Calarco 2014) but is a clear-cut recipe for the entrenchment of privilege (Augustine et al. 2009). Empirically, many studies have also linked schooling with better health and longer life (Bauldry 2014; Zajacova and Lawrence 2018).

More recent studies have found “a large, positive, statistically significant and stable relationship between inequality of schooling and income inequality, especially in emerging and developing economies and among older age cohorts” (Coady and Dizioli 2018). The existing research suggests that education expansion will continue to contribute to reducing inequality, and while this role will diminish as countries develop, it could further be enhanced through a stronger focus on reducing inequality in the quality of education (Coady and Dizioli 2018). Finally, the data also shows that education has a positive impact on civic and social engagement (Campbell 2006)

Striving for equality of opportunity in education is a relevant goal from a pragmatic standpoint, as well. Increasing the rate of education attainment in order to maintain a competitive labour market does not easily translate into policy, as simply increasing

the number of admissions to universities might not have the intended results, given that limited access to education traditionally affects certain groups more than others. Therefore, one cannot talk about widening access to higher education without discussing the traditional barriers to access.

The paper is divided into three sections to provide an overview of the current Romanian situation concerning the inclusion of students, assess the degree to which progress has been made towards reaching current national targets regarding access to higher education, and explore possible avenues of improvement. Firstly, we present the available data on the socio-economic characteristics that make individuals more likely to face barriers in attending Romanian universities. Secondly, we argue that although significant improvements have been made at the level of policy initiative, more precise targeting is needed in order to meet labour market demands, given that most current efforts are directed either at attracting fresh high school graduates or at diminishing the university dropout rate. These efforts, even if highly successful, will not prove sufficient given current demographic trends and will not, in the end, fully satisfy economic and normative demands. Therefore, we take into consideration the inclusion of non-traditional mature students as a beneficial policy direction. With this in mind, in the last section of the paper, we explore the main characteristics and trends concerning Romanian mature students using the results from the EUROSTUDENT VI and EUROSTUDENT VII studies, with the goal of formulating policy proposals that aim to unlock the potential of this demographic.

## **2 Social Background as a Limiting Factor in Access to Higher Education**

At the European level, the list of socio-economic characteristics that make individuals more likely to face barriers in attending university includes gender, age, physical or psychological impairments, geographical location, migration background, race and ethnicity, and the educational attainment and socio-economic background of parents (Eurostudent VI, Synopsis).

At the national level, from a socio-economic standpoint, there are significant discrepancies in access to higher education. According to data from national registries and INS (The National Statistics Institute), the most notable differences are tied to student background (rural/urban residence, which is closely correlated with parent educational attainment), ethnicity, disability, gender, and age.

When taking into consideration the most significant number of individuals between 18 and 24 years old excluded from tertiary education, the most relevant demographic group is represented by potential students from rural areas. In 2020, 53% of Romanians between 18 and 24 years resided in rural areas (INS), but rural residents made up only 28% of students enrolled in public universities (ANS). In other words, if you were the appropriate age and lived in a city in Romania, you were 150% more likely to be enrolled in a public higher education programme than a

rural resident. In numbers, only 132,071<sup>1</sup> rural residents attended university in 2020, compared to the 654,335 rural residents of the relevant age, while 457,230<sup>1</sup> urban residents attended university from a potential pool of 536,679.

Another severely underrepresented demographic is revealed when analysing the same age interval according to ethnicity. Roma individuals aged 18–24 made up 2.25% of the age group population in 2015 (Moldoveanu 2015), while they represented only 0.23% of enrolled students at the time—almost ten times less.

Individuals with a disability are also underrepresented in higher education, in 2020 accounting for 0.23% of students (according to data from ME, reported by universities in the ANS platform) while, according to official data, comprising 0.75% of the relevant age group (according to data from The National Authority for People with Disabilities). It should also be noted that individuals with disabilities make up roughly 19% of the population at European level, which signals that the unofficial number of individuals with a disability might be significantly larger and underreported in Romania, therefore making the discrepancy in higher education attainment even more pressing. 87 million persons in the EU have some form of disability, and only 29.4% of them attain a tertiary degree compared to 43.8% of those without disabilities.<sup>2</sup>

From the standpoint of gender, the Romanian situation is quite similar to the European one. Although women are the majority among students enrolled at higher education institutions, significant discrepancies in gender distribution can be outlined according to the subject area. While the gender representation is not as skewed in ICT and STEM-related fields,<sup>3</sup> Romania compensates by having females overrepresented in Education by 80%, compared to the 40% average, according to the Eurostudent VI Synopsis of Indicators.

Finally, the age of students, while overlooked in the past, is starting to be acknowledged as a relevant factor when assessing the overall capacity for inclusion of an educational system (Kottmann et al. 2019). We would like to make the case that, especially if the overall level of educational attainment in the population is low, the inclusion of mature students becomes a salient issue from the standpoint of equity.

Given the evident socio-economic discrepancies between students who manage direct transition to higher education, a case can be made that the potential pool for mature students contains preponderantly individuals from families with lower socio-economic backgrounds. According to a 2019 EU report concerning social inclusion policies in higher education, in countries that have managed to continue increasing their student numbers (France, Ireland and Scotland), there is evidence that the most

<sup>1</sup>Although the numbers mentioned also count older students enrolled in university, they, nevertheless, paint an accurate picture of the discrepancy.

<sup>2</sup>“European Commission presents the Strategy for the Rights of Persons with Disabilities 2021–2030”, available at the following address: <http://www.inclusion-europe.eu/european-commission-presents-strategy-for-the-rights-of-persons-with-disabilities-2021-2030/#:~:text=87%20million%20persons%20in%20the,17.8%25%20of%20persons%20without%20disabilities>.

<sup>3</sup>The gap between Romanian women and men enrolled in ICTs subjects is 27%, compared to a 60% average gap at the European level (DZHW 2018). The gap between Romanian women and men enrolled in STEM subjects is 12%, compared to a 17% average in the EU (EIGE Gender Statistics Database 2015).

well-off parts of the population are more likely to make the direct transition to university (Kottmann et al. 2019). This is consistent with other data which shows that, more often than not, age is not the only difference between mature students and their colleagues. A 2018 study<sup>4</sup> by the UK Universities and Colleges Admissions Service revealed that older students are more likely to live at home while studying full-time and to favour universities with lower tuition fees. Also, applications tend to be higher when the job market is weaker and concentrated on specific vocational fields like medicine (especially nursing), education and social studies. Moreover, as age increases, so does the percentage of females and self-declared black students enrolled, with more than 70% of mature students over 31 enrolled in 2017 in the United Kingdom being female.

Currently, in Romania, there is no direct pathway into higher education for students without a Baccalaureate degree, and almost all students with the degree are likely to directly enrol in higher education. The situation is similar to the Irish one, where admission to the preferred study programme depends on points achieved in the final school examination, and just like in Ireland, students from higher social backgrounds have more (cultural, financial) resources available to achieve higher outcomes in the final exam. However, in recent years, Ireland has managed to raise the percentage of mature students to 18% (2015), while in 2020 Romania it remains significantly lower (according to data from the Romanian National Student Registry). The Irish progress has mostly been achieved by investigating and addressing specific inequalities facing particular groups, with mature students being explicitly targeted, along with students from manual or unskilled working classes, disabled/impaired students and students from the Irish traveller community.<sup>5</sup>

In the next section, we present the progress made in recent years towards a more inclusive admissions and educational attainment policy in Romania. Given the wide discrepancies presented so far, we argue that more remains to be done, specifically with regard to targeting specific groups in the population.

### **3 Romanian Challenges and Commitments to Increasing Access and Inclusivity**

It is important to note that the first three categories of disparities mentioned in the previous section do not arise at the university level, but they are, at least partially, a consequence of inequalities persistent in and inherited from primary and secondary education. The distribution of individuals who pass the Baccalaureate exam is signif-

---

<sup>4</sup>UCAS, 2018, Admissions patterns for mature applicants, 2017 cycle, available for download at the following link: <https://www.ucas.com/corporate/news-and-key-documents/news/mature-students-local-focused-and-female>.

<sup>5</sup> Department of Education and Skills, 2011, The Irish National Strategy for Higher Education to 2030 - Report of the Strategy Group, distributed by the Government Publications Sales Office, available at the following address: <https://www.education.ie/en/publications/policy-reports/national-strategy-for-higher-education-2030.pdf>.

icantly skewed towards non-Roma urban dwellers compared to the distribution in the population of individuals with these characteristics (CNFIS 2019). Therefore, when considering tertiary education, the pool of candidates is significantly constrained by previous educational attainment. Current Romanian targets in increasing population-wide educational access should take into account this limitation and propose policies that work around it. Presently, while this context is addressed in legislation and some projections, more could be done from a policy perspective.

Tertiary Education Attainment is one of the three pillars of reform in Romanian Tertiary Education, being focused on promoting and encouraging broad tertiary education attainment, particularly for underrepresented groups. The main directions of policy at national level<sup>6</sup> plan to address the following: routes into tertiary education, financial support, underrepresented groups and non-traditional learners, and information regarding educational opportunities and outcomes.

According to the results of a background analysis meant to support the implementation of the measures outlined by the 2015–2020 National Strategy for Tertiary Education, limiting dropouts and absorbing all yearly Baccalaureate graduates, while welcomed interventions, would not suffice in order to increase the level of educational attainment among future 30 to 34-year olds.<sup>7</sup> Reaching the goal of 26.7% higher education graduates in this age group by 2020 would require that these measures be complemented by policies designed to attract non-traditional learners and, more specifically, adults without a previous higher education degree.

The same analysis mentioned that increasing the number of all underrepresented groups in higher education should be a policy priority, identifying the low high school participation among students with low socio-economic status as one of the most pressing issues (only 6% of high school graduates come from rural area high schools, and they make up only 0.08% of higher education graduates). Another outlined proposed direction of reform concerned linking measures designed to increase the participation and graduation of students from underrepresented groups with measures aimed at study programme diversification in order to meet labour market and student demand directly.<sup>8</sup> It was recommended that these actions be complemented by a national system of needs-based grants for covering program study costs and living costs. Counselling and special social support at a university level were also signalled as areas in need of significant improvements.<sup>9</sup>

In this direction, the Romanian Secondary Education Project (ROSE) is the most important national project (funded through a loan of 200 million EUR from the World Bank to Romania and to be implemented over a period of seven years, between 2015 and 2022) that has as primary objectives reducing dropout in upper secondary and

---

<sup>6</sup>According to the 2015–2020 National Strategy for Tertiary Education (accessed in 14.05.2021, with the following link: [https://www.edu.ro/sites/default/files/fisiere%20articole/Strategie\\_inv\\_tertiar\\_2015\\_2020.pdf](https://www.edu.ro/sites/default/files/fisiere%20articole/Strategie_inv_tertiar_2015_2020.pdf)).

<sup>7</sup>Individuals who will be 30–34 years old in 2020.

<sup>8</sup>This is one of the actions comprised in the first pillar of the National Strategy.

<sup>9</sup>“Direcții strategice pentru dezvoltarea echității în învățământul superior”, accessible at the following address: [https://iemu.forhe.ro/wp-content/uploads/2015/12/A4.2.4\\_Propuneri\\_de\\_direc%C8%9Bii\\_strategice\\_privind\\_echitatea.pdf](https://iemu.forhe.ro/wp-content/uploads/2015/12/A4.2.4_Propuneri_de_direc%C8%9Bii_strategice_privind_echitatea.pdf).



tertiary education and increasing the rate of success at the bacalaureate exam in project-supported institutions.<sup>10</sup> The component for higher education (University-Level Interventions and Bridge Programs) aims to support the needs of students at risk of dropping out from public institutions through two grant schemes, a non-competitive one (remedial programs, tutoring, counselling and support services for students, for over 85% of faculties that teach in fields of potential economic growth in Romania, such as agriculture, engineering, science and medicine) and a competitive one (summer bridge programs for high school students - courses, partnerships between high schools, universities and the labour market, tutoring programs in campus—or through learning centres, for academic support services, in line with student needs).<sup>11</sup>

Alongside these actions, in order to support rural students or those from other disadvantaged groups and non-traditional students to participate in tertiary education, the Romanian Ministry of Education continues to implement several social programs: special places for rural graduates, scholarships, subsidies for accommodation and meals, partial subsidies for transport. According to data from the beginning of the current academic year 2020–2021, over 6,500 students were enrolled in “special places”, of which about 3,900 were students who graduated from high schools in rural areas, and 900 were Roma students. In the last academic year, about 26,000 social scholarships were awarded at the national level. In 2020, a policy impact analysis was published concerning social scholarships and “special places” allocation to graduates from rural area high schools. It aimed to demonstrate the correlations between the successful implementation of these social policies and the improvement of access and academic progress for direct beneficiaries. At the same time, a series of policy briefs were prepared on topics related to access to higher education or the distribution of social scholarships. These show that the number of social scholarships granted has increased by 30% in recent years, and their average value has increased by approx. 150%, while the share of funds for social scholarships in total funds allocated by universities for scholarships varies between 5% and 42% (PNR 2021).

However, even if students with rural backgrounds now have access to more opportunities, some inadequacies still persist. Firstly, potential beneficiaries are not very well-informed, with an impact study<sup>12</sup> reporting that most of the students that currently benefited from the policies concerning special places or other social benefits

---

<sup>10</sup>Information concerning “Proiectul Privind Învăţământul Secundar” is available at the following address: <http://proiecte.pmu.ro/web/guest/rose>.

<sup>11</sup>Under the ROSE—University Grant Schemes program, all universities are implementing grants from the Student Support Competitive Grant Scheme and 38 grants for Learning Centres grants, and until now, 201 grants are in the implementation phase under the Non-Competitive University Grants Scheme (2021, PNR). In order to strengthen an inclusive approach (by supporting rural pupils, disadvantaged groups and non-traditional students), in the same project, 105 grants are in the implementation for university summer programs, representing the maximum possible number of grants of this type.

<sup>12</sup>Politici publice privind echitatea în învăţământul superior: Impactul politicii de alocare a locurilor speciale pentru absolvenţi ai liceelor din mediul rural, accesibil la adresa: [https://uefiscdi.gov.ro/resource-825272-20210125\\_studiu-impact-allocare-locuri-absolventi-liceu--rural.pdf](https://uefiscdi.gov.ro/resource-825272-20210125_studiu-impact-allocare-locuri-absolventi-liceu--rural.pdf).

found out about these opportunities after or while they were already in the process of enrolling. Others were informed by their high school teachers who knew about the policy from former students. Even when informed, some candidates erroneously believed that the competition would be higher for occupying a special place than it would be for normal places. Therefore, without a wider popularisation of the measures, their impact will continue to be substantially diminished. This being said, given that the policy is still new, there are signs of improvement, and universities seem to be making timid progress in assimilating special places in their educational offer and better disseminating the relevant information to potential beneficiaries. And while finer tuning is necessary both in implementation and in monitoring the effects of the policy, there is room for optimism.

It must be noted, however, that the policies mentioned in the previous paragraphs do little to attract non-traditional learners and do not offer significant incentive for enrolment (nor information, for that matter) to individuals from older cohorts, with their implementation being focused primarily towards new high-school graduates. When promoting educational offers, universities are either content to only target this demographic, or lack the information, support or know-how to orient their efforts more widely.

This brings us to the wider policy context surrounding the issue of student participation. The public funding methodologies that regulate budget allocation to Romanian state universities must be mentioned as central in providing incentives for universities to increase access to higher education. While indirectly incentivising universities to increase the number of attending students by allocating budgetary resources according to the number of students enrolled in each study programme, the funding schemes also provide direct stimuli for inclusion.<sup>13</sup> The two main components of institutional funding that directly reward or encourage and support universities implementing institutional policies aimed at disadvantaged students are the Institutional Development Fund and the Supplementary Funding. Both have been in place since 2016, and both have components that directly target these policies or their results:

(a) The Institutional Development Fund (FDI), which is a direct mechanism that supports universities in implementing their institutional strategic plan, is awarded based on the results of a project competition among universities, with one of the directions for funding being enhancing equity and social access to education. Through the FDI, 41 institutional projects that focus on equity and access have been implemented in 2020 in 41 Romanian Universities, with a total of over 200 projects being implemented since 2016.

(b) The Supplementary Fund (FS), which allocates financial resources based on performance indicators, comprises quality indicator 4.1 aimed at integrating people from disadvantaged socio-economic backgrounds. Five percent of total Supplemen-

---

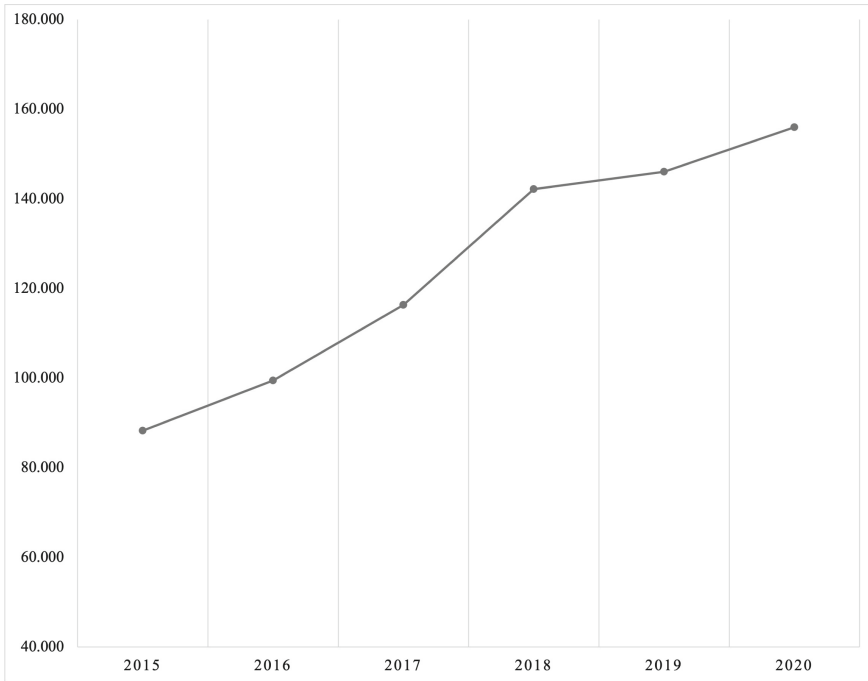
<sup>13</sup>The annual public funding methodologies can be consulted on the CNFIS webpage, available at the following address: <http://www.cnfis.ro/finantare/finantarea-de-baza/>. They are only available in Romanian.

tary funding (about 61 out of 1,218 million lei for 2020) is allocated each year according to this indicator.

The data linked to the implementation and evaluation of the two mechanisms permits an overview of the evolution of access to higher education among less advantaged groups (FS) and of the institutional directions taken to influence it (FDI). Thus, as emerging from a detailed preliminary analysis covering all projects implemented through the Institutional Development Fund from 2016 to 2018 (conducted in the project POCU 126766, *Quality in higher education: internationalization and databases for the development of Romanian education*, implemented by UEFISCDI in partnership with the Ministry of Education in the period 2019–2022), the main three general objectives which were pursued by over 77% of universities, out of the seven recommended at national level for the Equity and Labour Market Direction, concerned the promotion of the university's educational offer; improving counselling and career guidance services, and providing support to students from disadvantaged backgrounds. Specifically, in almost all cases, the three objectives were pursued through marketing campaigns in high schools from disadvantaged environments, supporting a number of students from disadvantaged backgrounds, organising guidance and professional counselling programs and facilitating the procedure for enrolling to college for fresh high school graduates. While such initiatives were sorely needed in most Romanian universities, it is important to point out that they were all targeted either at the population of fresh baccalaureate graduates or at already-enrolled students with the goal of limiting dropouts.

In consequence, according to the data used for Supplementary Funding, it would appear that the number of individuals with a disadvantaged socio-economic background attending university has increased in the last four years, as can be observed in Fig. 1. However, this increase, although substantial compared to previous numbers, is still insufficient for current targets.

Therefore, although the incentives exist, more precise targeting is needed if we want the current progress made to be accelerated. As mentioned earlier, current policies tend to focus on a limited demographic - fresh Baccalaureate graduates, with little interest in exploring other avenues (at least in practice), while official statistics and prognosis suggest that this strategy will not be sufficient to meet the labour market for qualified workforce. Furthermore, ignoring other demographic groups has the downside of neglecting or limiting the fulfilment of equity-related commitments and targets.



**Fig. 1** The evolution of the number of disadvantaged students enrolled in Romanian universities 2015–2020

#### **4 Mature Students as a Target for Further Policy—Eurostudent Results and Emerging Trends**

In the previous section, we showed that existing policies at the university level are addressed either to a limited number of potential students who pass the Bacalaureate exam every year or to already enrolled students, with the goal of limiting abandonment among these demographics. However, it has also been pointed out that a significant demographic group is left out of major policy efforts towards increasing higher educational attainment. This section is dedicated to investigating the particularities of this demographic group, with the aim of exploring future policy avenues.

According to Eurostat, in 2020, a total of 601,600 Romanian adults from 25 to 29 years old finished upper secondary or postsecondary non-tertiary education,<sup>14</sup> but they were yet to finish any tertiary studies. Most of these individuals are, of course, active on the labour market and would not consider broadening their educational attainment, as undertaking such a commitment while also working requires significant effort, but a comparison with other European countries reveals a significant

<sup>14</sup>Eurostat, “Population by educational attainment level, sex and age”, available at the following address: <https://ec.europa.eu/eurostat/web/education-and-training/data/database>.

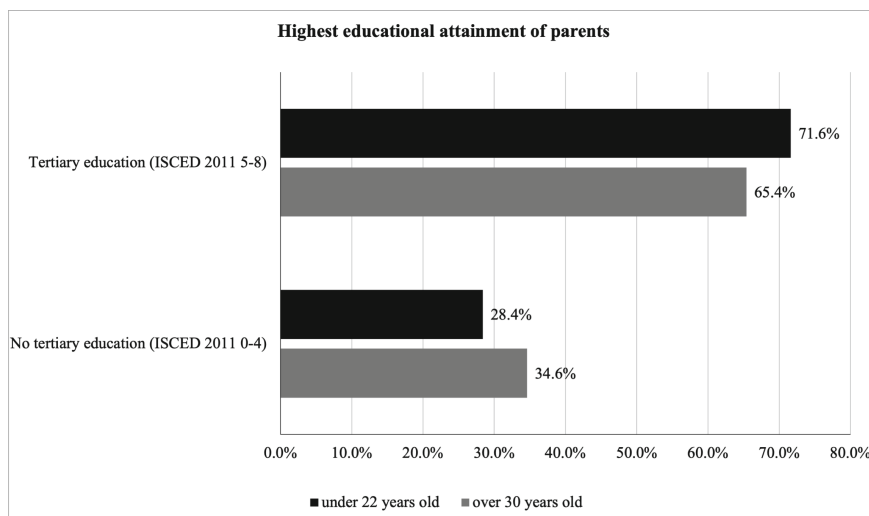
gap between the proportion of current mature students enrolled and the potential this demographic could have.

In order to identify the broader characteristics and needs that differentiate mature students from other members of the student population, this section presents the most relevant characteristics of this population in Romania, as they emerge from the recent Eurostudent survey (2020–2021). Where necessary, the results are supported by data from the Romanian National Student Registry (RMUR).

One important trend emerging from the Eurostudent results coupled with the official data shows that the number of mature students (30+ years old) has increased since 2017: in 2021, 17.5% of respondents are over 30 years old, compared with 12.6% in 2017. The official data from the National Student Registry (RMU) confirms this trend, although it is important to mention that the total percentages of mature students enrolled in Bachelor's programmes make up a lower share of the total.

Comparing students' backgrounds makes an important difference clear: mature students have a more disadvantaged socio-economic background. When looking at the highest educational attainment of parents, 34.6% of students over 30 have parents without any tertiary education background, while 28% of younger students do, as seen in Fig. 2. At the same time, for 37.6% of mature students, their parents are not well off, compared with 24.7% of all students. This aligns neatly with the international trends discussed in the first section of this paper.

In Romania, around 44% of mature students study in universities located in cities with less than 300,000 inhabitants, whereas only 29.2% of students aged 21 and younger study there. There is also a significantly higher percentage of mature students not studying in the capital city of Romania, 78.7%, compared to 68.9% of students



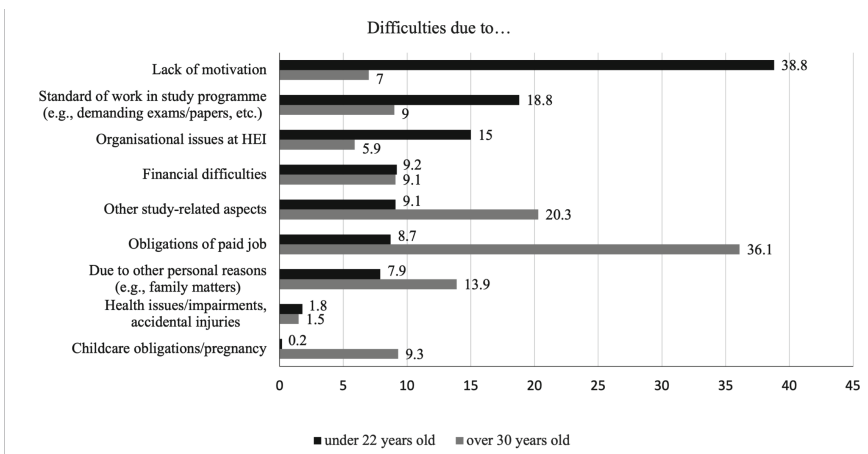
**Fig. 2** Distribution of higher educational attainment of parents for two age categories, under 22 years old and over 30 years old

aged 21 or younger. However, looking at the results from 2017, it seems that there has been a slight decrease in younger students studying in big university centres and a slight increase in mature students studying there. This tendency is more in line with other Eurostudent countries, where younger students tend to study in smaller university centres, while mature students favour larger ones.

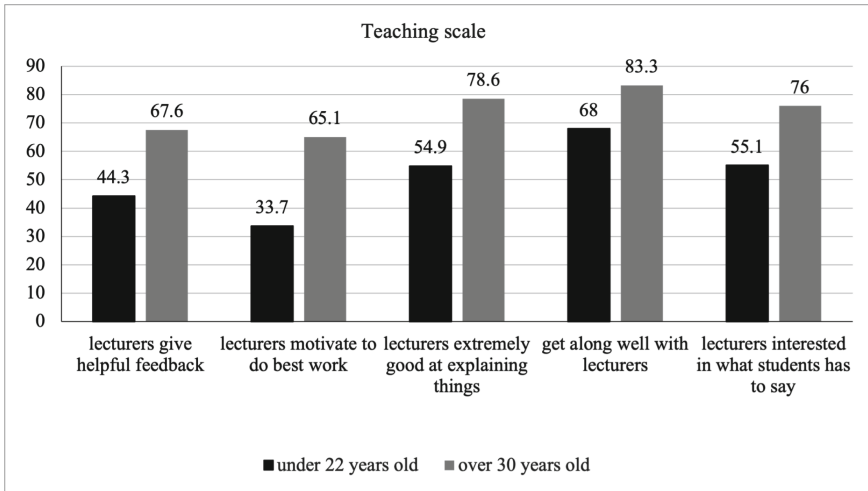
When looking at study programmes, 58% of mature students are enrolled for bachelor’s degrees, while 39.6% and 48.4% of students 22–24 years old, respectively 25–29 years old study for the same qualification. A percentage of 38.7% of mature students have entered higher education for the first time. Compared to 2017, there is a 10% increase, when the percentage of mature students that have entered higher education for the first time was around 28.

The duration of transition into higher education as well as between qualifications is clearly longer for mature students. Mature students transition to HE later in life, with 39.5% of them waiting more than two years before enrolling to university. At the same time, 59.7% of students aged 30 and over have delayed transition toward the master’s degree, compared to only 24.5% of those aged between 25 and 29 years old.

Regarding study difficulties, there are certain differences among age groups, as shown in Fig. 3. Mature students tend to experience difficulties due to having a job or childcare, while younger students have more difficulties pertaining to lack of motivation and/or other study-related matters. Mature students tend to have less self-declared study difficulties than other age categories, 42.1% of students aged 30 and over have not mentioned any difficulties concerning studying, while the percentages for the other age groups are lower—36.8% of students aged under 22 did not mention any difficulties, as well as 39% of students aged between 22 and 24 years old and 36.4% of students aged 25–29.



**Fig. 3** Distribution of study related difficulties for two age categories, under 22 years old and over 30 years old



**Fig. 4** Distribution of evaluation of lecturers for two age categories, under 22 years old and over 30 years old

When looking at how students evaluate their learning experience, there is also a significant difference between age groups. Younger students tend to rate their lecturers lower, as seen in the Fig. 4 below. Almost one third of them do not agree that their teachers give them helpful feedback, around 40% of them do not agree that their teachers motivate them to do their best work, and more than 15% of them do not agree that their lecturers are good at explaining things. Mature students, however, tend to appreciate their lecturers more.

As such, only 14% of them consider that their teachers do not give them helpful feedback, 17% do not agree that their lecturers motivate them to do their best work, and less than 8% do not agree that their lecturers are extremely good at explaining things. When looking at the teaching experience regarding the relationship of teachers and students, the same age differences apply. Mature students consider they get along with lecturers more than students in other age groups (83.3% vs. 69%) and feel that lecturers are more interested in what they have to say (76 vs. 57.2%).

Regarding relationships with their peers, all age groups seem to be getting along well with their colleagues. 62% of all students (the distribution is similar among all age groups) know a lot of fellow students to discuss subject-related questions, and 52% of all students (the distribution is similar among all age groups) have contact with many students enrolled in the same study programme.

Mature students seem to be more satisfied with their study settings and contents. Over 40% of students under 22 consider that “It is often hard to discover what is expected of them in their current study programme”, while only 24.5% of mature students feel the same way. About 70% of mature students would recommend their current study programme, and while the percentage of students in other age groups who would do the same is still high, it is lower by 12% by comparison. Although there

is an overall high sentiment of belonging in higher education, for mature students it tends to be higher.

Thoughts of changing the study programme or completely abandoning higher education are slightly higher among students between 22 and 30 years old – around 9.5% of them, while only 6.5% of younger (<22) and mature students (30<) consider that. Satisfaction with study conditions provided by the faculties also tends to be slightly higher among mature students, except for the provision of learning facilities where mature students tend to be a little more dissatisfied than younger students.

The same tendency is noticeable in regard to satisfaction in preparation for the labour market. Mature students are more satisfied with the support provided by the universities in preparation for future jobs and for the labour market, around 37% of them considering the support provided for a future job sufficient or entirely sufficient, with slightly smaller percentages for other age groups. About 53% of the mature students consider that their study programmes prepare them well and very well for the national labour market, while about 44% of younger students consider the same. The difference is maintained when speaking of the international labour market, around 35% of mature students believe that their study programmes prepare them well and very well for the international labour market, while only 25% of younger students believe the same.

Another important variation among students correlated with age concerns their living conditions. This has certain implications connected to living costs and other barriers to enrolment, like distance from the university, which might explain why mature students tend to favour smaller university centres closer to home. Younger students tend to live with their parents or in student accommodations, while older students live on their own or with their partner. When looking at the Eurostudent results from Romania, the difference is striking, especially considering the Covid-19 restriction, where most classes were organised online and living in student accommodation was restricted. While only 2.2% of mature students live in student accommodations, about 26.7% of younger students live there. Almost 72% of students below 22 are living with their parents, compared with 18% of students 30 and over, while 69% of mature students live with their partner/spouse, and only 13% of younger students do. Subsequently, 40.5% of mature students live with their own child(ren) or their partner's child(ren), while only less than 1% of younger students do. At the same time, the satisfaction with living accommodations tends to be higher as students age.

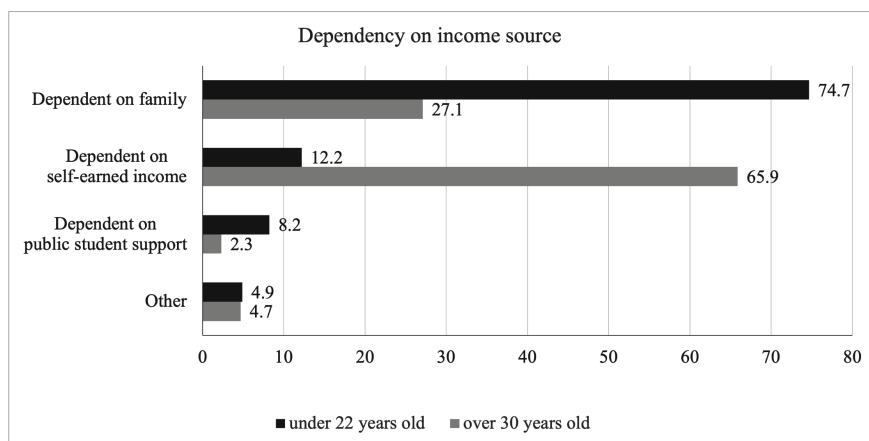
One of the most important differences among students regarding age is the relation with the labour market. Over 75% of students over 30 have had a job before becoming a student, compared with 38% of all students. And for a significant percentage of them, their jobs were connected with their current study programme: for 42.9% of them, their job was closely and very closely connected to their study programmes, while only for 20.1% of students below 22 this was the case. An important percentage of mature students have a job during the lecture period, with 80.3% having been working during the whole lecture period. For other age groups, the percentages are smaller: only 15.3% of students under 22, 41.2% of students between 22 and 25, and 62.3% of students between 25 and 30 are in the same situation.



Similarly, the motivation for working varies with the age of the students. More than 90% of mature students that have a job work to cover their living costs, almost 70% could not afford to be a student without a paid job, 72% work to support others, and 65% work to gain experience on the labour market, while only 61.4% of working students under 22 work to cover their living costs, only 31% could not afford to be a student without their paid job, only 15.5% work because they have to support others, and 64% of them work to gain experience on the labour market. Therefore, mature students, when assessing their time, would prefer to spend more time on taught classes and personal study time than on their paid jobs, while the lower percentage of younger students who are active on the labour market would prefer to spend more time on their paid jobs.

Given these differences, students' self-categorisation as students/workers varies significantly with age. The respondents under the age of 22 identify in higher degrees as students, close to three quarters of them, while only a quarter of the respondents over the age of 30 consider themselves primarily students (more than 80% of them identify as workers). And this tendency is obvious when looking at other age groups: 52.2% of students in the age category 22–24 consider themselves primarily students, while the percentage for those in the age category 25–29 the percentage decreases to 32.9%.

These differences regarding work life also have an impact on how students' income is composed. Younger students rely heavily on their families for financial support, as seen in Fig. 5.

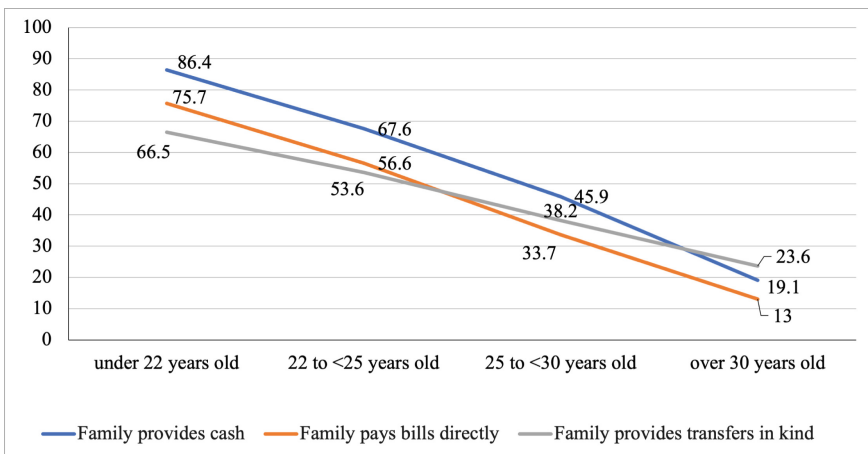


**Fig. 5** Distribution of dependency on income source for two age categories, under 22 years old and over 30 years old

Support declines with age, as depicted in Fig. 6 below. At the same time, support from their partner increases with age. While the transfers in kind per month from outside the family are lower for all age groups, they are slightly higher for younger students (15.3% of students below 22 receive transfer in kind from outside the family, while only 7.2% of students 30 and over do).

The average amount of money a younger student (<22) receives is 839 RON, while older students receive smaller amounts. A significant difference lies in the distribution of income received from their paid jobs. For mature students, the average is 2,478 RON, while for students between 25 and 29 years old is 1,686 RON, for students between 22 and 24 years is 1,013, and for students below 22 years old it is only 305 RON. Thus, the total average amount of students' income (from all sources: parents, partner, job, etc.) varies from 1,609 RON for younger students to 3,462 RON for mature students.

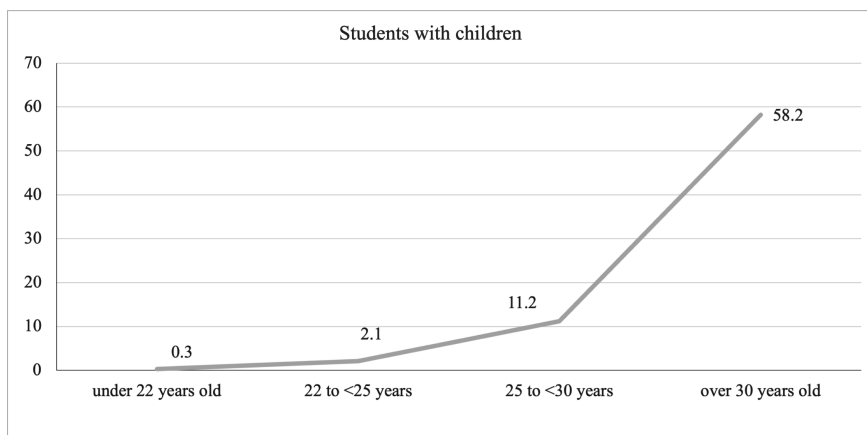
In general, regarding other types of support from sources outside the family and their jobs, about 16% of students receive this kind of income, and there are some age specific differences. Students between the ages of 25 and 29 are more likely to be financing monthly living and study-related costs through savings from previous jobs. About 30% of them afford this, compared with 13.8% of those under 22, 22.5% of those 30 and over, and 20.5% of those between 22 and 24 years old. Students under 22 are financing their studies using other sources of income to a greater degree, such as inheritance, gifts of money, capital income, sales, prize money, etc. (18.5% of students under the age of 22, as opposed to 7.6% of students over the age of 30). Another interesting finding is that students under 22 years old benefit in a greater degree from public scholarships than older students, 72.7% of them, while this is true only for 43.8% of students over the age of 30.



**Fig. 6** Distribution of family support across all age groups

Another pattern regarding age emerges regarding financial difficulties. The most financially burdened students are those between 25 and 29 years old. Almost 30% of them stated that they experienced “serious” (16.1%) and “very serious” (13.4%) financial difficulties, and 57.6% of them could not afford to pay for an unexpected, required expense of 1,200 RON. However, for 33.8% of them, someone else (parents, family, partner etc.) could pay for it. At the same time 22.5% (9.7% very serious and 12.8% serious) of mature students experienced financial difficulties, and 47.4% of them could not afford to pay for an unexpected, required expense (however, only for 25.9% of them someone else could pay for it). This situation could be explained by the fact that while younger students are still supported by their families, and older students support themselves through their jobs, students in between these age categories are more financially vulnerable, as they become independent and lose support from their families as well as transitioning towards the labour market and occupying entry-level lower paid positions.

Another significant, even if predictable, difference presented in the chart above is that they are more likely to have children, with about 58.2% of them being parents, while only 0.3% of students under the age of 22, 2.1% of students between 22 and 24 years old, and 11.2% of students between 25 and 29 years old have had this experience (Fig. 7). This significantly influences their time budget and economic possibilities, translating into further challenges on the road to educational attainment. All the particular characteristics of adult students presented in this section should be taken into account when designing a policy targeted at this particular group, with further research being needed in order to tailor academic experiences to regional needs and expectations.



**Fig. 7** Distribution of students with children across all age groups

## 5 Mature Student Inclusion—Public Policy Recommendations

When considering the need for better inclusion in higher education, as well as the current Romanian objectives, challenges, and demographics, mature students emerge as severely underappreciated targets for further policy. Given their particularities, outlined in the previous sections, and the current institutional priorities, we believe certain policy changes must be made to accommodate this demographic.

Firstly, flexibility and support should be key aspects in programs tailored for adult learners, especially concerning access to studies. Especially if the target is reducing inequalities generated by socio-economic background and exacerbated by previous levels of education (Toc 2018), adults should have opportunities for accreditation and certification of prior learning in order to open up progression opportunities. Currently, prior learning assessment and recognition, which would facilitate alternative routes to tertiary education enrolment, does not exist in Romania. Although there is some discussion surrounding relatively recent European initiatives concerning micro-credits (Iucu et al. 2021) and some commitments towards flexibility exist in the 2015–2020 National Strategy for Tertiary Education, these have yet to be translated into practice.

Bridging programs are one possible option in this direction, currently embraced by Australia, Ireland and Canada,<sup>15</sup> while both Norway and South Africa provide alternative entry routes for adults that recognise informal learning and credit competencies. But according to the report of the Education and Training 2020 Working Group on Adult Learning 2014–2015 (European Commission), adult learners often need additional support not only to start but also to complete their learning journey: “Universities should provide and promote clear opportunities for learners to progress to further learning. To encourage participation and persistence, programmes should offer practical support on matters such as course fees, travel costs, childcare, and time off work. Teaching and learning need to occur as close as possible to participants’ local communities. Adult learning providers should be proactive in supporting learner retention, e.g. by providing options for restarting after dropping out”.

However, even if adults interested in studying do not have problems getting admitted to universities, the main challenge remains reaching them with desirable offers. The outreach effort currently undertaken by universities comprises addressing high schools and high school students, as covered in section II of this paper, with none to very little attention devoted to potential students that could follow non-traditional pathways into admission. Recommended strategies for capturing this demographic

---

<sup>15</sup>See, for example, the University of Toronto Bridging Pathway (<https://www.utm.utoronto.ca/future-students/bridging>). The pathway requires applicants to enrol in and successfully complete two half credits over the Fall and Winter academic sessions. Upon completion of the first year, students with medium scores are permitted to proceed to part-time degree studies, while students that manage higher than average scores become eligible to proceed to full-time degree studies. This is an alternative to an entry exam that requires preparation and likely disfavours candidates that haven’t had contact with the educational system for several years.

group are the provision of information, advice and guidance to community organisations, and the systematic organisation of campus visits, outreach visits and taster days specifically targeted at adults in the community. Additionally, partnerships between higher education providers and employers can create pathways for mature students to enter universities, with a corresponding benefit to businesses in creating better-educated, more highly qualified staff. In its *Ambition 2020* report, the UK Commission for Employment and Skills (UKCES)<sup>16</sup> argues that addressing the skill gap in the workforce will require a focus on the adult workforce and the development of innovative and flexible provision which meets the needs of employers and their staff.

Opening higher education to adults within the wider perspective of lifelong learning is a complex process that needs to be approached at a national, regional and institutional level. Policy and legislation, as well as financial incentives and social programs might be designed at a national level, but attracting students must also have a regional dimension, as it requires cooperation with external stakeholders and a tailored response to labour market needs. The two dimensions are brought together at an institutional level, where universities should have sufficient leeway for initiative, but significant incentive for policy improvement.

Finally, although it has clearly been shown in the previous sections that the higher education attainment of rural, poor, and under-represented minorities is disproportionately lower than the attainment of urban, higher income students, targeting mature students is not an unconnected policy direction. On the contrary, consistent empirical results, including the ones outlined in the previous sections, show that mature students have a more disadvantaged socio-economic background. Treating mature students as represented only by the dimension of older age would be a mistake, as they usually have a higher chance of being so-called “first generation scholars”, the first in their families to get higher education, and usually come from families that are not well-off. As such, policies that target them and encourage more individuals with similar backgrounds to join their ranks are policies that, in most cases, enable social mobility. But precisely because mature students are at the intersection between lower qualifications, socio-economic disadvantage, and sometimes disadvantageous gender roles, social support policies are necessary. Otherwise, the barriers in access present in society will be replicated at a smaller scale within the group of adults that might, in theory, be eligible to become mature students.

## 6 Conclusions

Given the socio-economic demands to increase access to higher education, as well as general equity considerations, one of the most efficient and justifiable policy strategies for the Romanian case should be to focus on mature students. According to

---

<sup>16</sup>UK Commission for Employment and Skills, 2010, “Ambition 2020: World Class Skills and Jobs for the UK”, available at the following address: [https://dera.ioe.ac.uk/1310/1/A2020\\_web\\_final.pdf](https://dera.ioe.ac.uk/1310/1/A2020_web_final.pdf).

the socio-demographic data describing the student population in Romania, several demographic groups are underrepresented. At first sight, it becomes clear that students from rural areas, students from ethnic minorities and students with disabilities are the most underrepresented individuals in Romanian higher education. However, after analysing the national data regarding secondary and tertiary education, two complementary issues arise. Firstly, most of the barriers in access in the Romanian educational system appear before entering higher education. The most disadvantaged members of society have difficulties in finishing secondary education at a conventional pace. Secondly, a series of analyses accompanying the National Strategy for Tertiary Education show that addressing the issues regarding access to tertiary education for the three previously mentioned groups, while still a priority, will not suffice for reaching the current target of 26.7% higher education graduates among citizens aged 30 to 34. Furthermore, even if this target would be achieved, labour market demands in the European Union would still exceed it.

Moreover, by analysing the steps undertaken to close the gap in education, such as the Romanian Secondary Education Project and other specific measures, i.e., special places for rural graduates, scholarships, subsidies for accommodation and meals, partial subsidies for transport, it becomes clear that further actions are needed in order to address the issues of inequality in higher education. The same conclusion can be drawn by examining the wider policies that provide incentives for the inclusion of students, such as the institutional funding methodologies for public universities. While progress has been made, significant space for improvement still remains.

Furthermore, targeting mature students does not imply neglecting the other disadvantaged categories, quite the contrary. Our analysis has shown that mature students tend to have a more disadvantaged background when compared with other age categories, coming from households where parents have no tertiary education and facing more financial distress than their younger peers. They also tend to study closer to home, in smaller university centres from smaller cities, closer to rural areas. Most importantly, adult learners are combining a full-time paid job with studying for a degree, and a higher percentage are also taking care of children. They tend to be more satisfied with their study conditions and feel the need to spend more time on studying than on their paid jobs, while they also need their paid job as they have higher incomes and expenses.

The information gathered through the Eurostudent VI and VII studies was a useful starting point towards identifying the most important aspects that need to be taken into consideration when drafting policies aimed at mature students. It underlined the necessity for more flexibility as well as the need for financial support to address particular challenges. One important step forward towards inclusion, as well as towards satisfying labour market demands, should be introducing pathways for recognising acquired skills. At the same time, these actions need to be paired with appropriate measures in reaching them regionally and locally with desirable offers, as well as with partnerships between higher education providers and employers.

To conclude, although Romania has undertaken important actions in tackling the issues of inequality in education, adequately addressing the population without

higher education from older cohorts could provide a much-needed step towards a more equitable and sustainable future.

## References

- Alexe, D., Hâj, C. M., & Murgescu, B. (2015). Struggling with Social Polarization. Student Financial Support in Romania in the Framework of the Bologna Process. In A. Curaj, L. Matei, R. Pricopie, J. Salmi, & P. Scott (Eds.), *The European Higher Education Area* (pp. 501–519). Cham: Springer.
- Alexe, D., Hâj, C. M., Toderas, N., Stăvaru, A. M., Cismaru, D. M., & Gologan, D. (2015). *Politici publice privind echitatea în învățământul superior: Studii de impact [Public policies on equity in higher education: Impact studies]*. Bucharest: UEFISCDI.
- Augustine, J. M., Cavanagh, S. E., & Crosnoe, R. (2009). Maternal education, early child care and the reproduction of advantage. *Social Forces*, 88(1), 1–29.
- Baker, D. (2014). *The schooled society: The educational transformation of global culture*. Stanford, CA: Stanford University Press.
- Bauldry, S. (2014). Conditional health-related benefits of higher education: an assessment of compensatory versus accumulative mechanisms. *Social science & medicine*, 111, 94–100.
- Calarco, J. M. (2014). Coached for the Classroom: Parents' Cultural Transmission and Children's Reproduction of Educational Inequalities. *American Sociological Review*, 79(5), 1015–1037.
- Campbell, D. (2006). What Is Education's Impact on Civic and Social Engagement? In: *Measuring the Effects of Education on Health and Civic Engagement: Proceedings of the Copenhagen Symposium*, OECD, Paris, 25–126.
- Coady, D., & Dizioli, A. (2018). Income inequality and education revisited: Persistence, endogeneity and heterogeneity. *Applied Economics*, 50(25), 2747–2761.
- Curaj, A., Cismaru, D. M., Corbu, N., Fiț, R., Frunzaru, V., Gologan, D. et al. (2020). *Politici publice privind echitatea în învățământul superior: impactul burselor sociale și al locurilor speciale pentru absolvenții de licee din mediul rural [Public policies on equity in higher education: the impact of social scholarships and special places for high school graduates in rural areas]*. Bucharest: Comunicare.ro.
- Desjardins, R., & Schuller, T. (2006). *Measuring the effects of education on health and civic/social engagement*. Paris: OECD/CERI.
- European Commission. (2021). *Union of equality: Strategy for the rights of persons with disabilities 2021–2030*. Luxembourg: Publications Office of the European Union.
- Executive Unit for Financing Higher Education (UEFISCDI). (2015).  *Direcții strategice pentru dezvoltarea echității în învățământul superior [Strategic directions for the development of equity in higher education]*. Bucharest: UEFISCDI.
- German Centre for Higher Education Research and Science Studies (DZHW). (2018). *Social and economic conditions of student life in Europe: Eurostudent VI 2016–2018*. Synopsis of Indicators, Bielefeld: W Bertelsmann Verlag.
- Iucu, R., Ciolan, L., Nedelcu, A., & Carțiș, A. (2021). *De ce micro-creditele trebuie să devină „macro-politici” educaționale pentru definirea viitoarelor programe europene de studii*. Available at the following address: <https://unibuc.ro/wp-content/uploads/2021/02/Micro-creditele-in-sistemul-universitar-din-Romania-final-cu-coperta.pdf>.
- Kottmann, A., Vossensteyn, J. J., Kolster, R., Veidemane, A. Blasko, Zs., Biagi, F. et al. (2019). *Social Inclusion Policies in Higher Education: Evidence from the EU - Overview of major widening participation policies applied in the EU 28, EUR 29801 EN*. Luxembourg: Publications Office of the European Union.
- Ministerul Educației Naționale. (2018). *Strategia națională pentru învățământ terțiar 2015 – 2020 [National Strategy for Tertiary Education 2015 – 2020]*.

- Moldoveanu, R. (2015) Etnia rromă—câteva particularități ilustrate prin date statistice. *Romanian Statistical Review* și *Supplement*, 12, 26–31.
- National Council for the Financing of Higher Education (CNFIS). (2019). *Raport public CNFIS 2017-2018. Starea învățământului superior* [CNFIS public report 2017-2018. The state of higher education]. Bucharest: UEFISCDI-CNFIS.
- The European Ministers in charge of Higher Education. (2001). Towards the European Higher Education Area [Prague Ministerial Communiqué]. [http://www.ehea.info/media.ehea.info/file/2001\\_Prague/44/2/2001\\_Prague\\_Communique\\_English\\_553442.pdf](http://www.ehea.info/media.ehea.info/file/2001_Prague/44/2/2001_Prague_Communique_English_553442.pdf)
- The European Ministers in charge of Higher Education. (2020). Rome Ministerial Communiqué. <http://ehea.info/Upload/RomeMinisterialCommunique.pdf>
- Țoc, S. (2018). *Clasă și educație. Inegalitate și reproducere socială în învățământul românesc*. Editura Pro Universitaria. ISBN 978-606-26-0985-6
- Zajacova, A., & Lawrence, E. M. (2018). The relationship between education and health: Reducing disparities through a contextual approach. *Annual Review of Public Health*, 39, 273–289.

**Oana-Alexandra Dervis** works at UEFISCDI's 'Higher Education Funding' unit and is a Ph.D. Candidate in Political Science at the National University of Political and Administrative Studies, in Bucharest, Romania. Her research interests include equity and education, deliberative democracy, behavioral economics, and the evolution of moral norms.

**Elena Trifan** Ph.D. in Sociology, is a researcher (analyst) in the Eurostudent project implemented by UEFISCDI. She has more than seven years of research experience in the educational and social fields. She is an associate professor at SNSPA, where she teaches sociology and anthropology courses.

**Gabriela Jitaru** coordinates the Higher Education Department at UEFISCDI and is a Ph.D. Candidate in Political Science at the National School of Political and Administrative Studies, in Bucharest, Romania. She has more than 20 years of experience in the implementation and analysis of higher education funding policies in Romania and significant expertise in public policies for higher education

**Open Access** This chapter is licensed under the terms of the Creative Commons Attribution 4.0 International License (<http://creativecommons.org/licenses/by/4.0/>), which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.





# Defining and Measuring Dropout Phenomenon in Romanian Public Universities



Claudiu Herțeliu, Daniela Alexe-Coteț, Cezar Mihai Hâj,  
and Andrei T. Pârvan

**Abstract** Increasing the number of people who complete higher education is among the highest political priorities agreed upon within the European Higher Education Area. The measures to meet the objective can be addressed in secondary education or by reducing the dropout at higher education level. Even if the policy objective is reflected in multiple official documents, little has been done to assess the dropout rate at the national level. The accurate estimation of the dropout phenomenon within tertiary education is more complex than it seems at first glance. It must take into account the very diverse processes that can occur throughout the academic student path. These are defined, regulated, and especially registered differently from one university to another: temporary interruption of studies, transfer between or within universities, pursuing two study programs at the same time or delayed graduation. The current research presented in this article is based on the analysis of available data from the National Student Enrolment Registry (RMUR), and it is part of a larger strategic project carried on by the executive institution in charge (UEFISCDI) together with the Ministry of Education in Romania. In this context, this paper aims to provide a definition of the dropout rate in the Romanian context, envisages the

---

C. Herțeliu (✉) · A. T. Pârvan  
Bucharest University of Economic Studies, Bucharest, Romania  
e-mail: [hertz@csie.ase.ro](mailto:hertz@csie.ase.ro)

A. T. Pârvan  
e-mail: [andrei.parvan@csie.ase.ro](mailto:andrei.parvan@csie.ase.ro)

C. Herțeliu  
London South Bank University, London, UK

D. Alexe-Coteț · C. M. Hâj  
Executive Agency for Higher Education, Research, Development and Innovation Funding,  
Bucharest, Romania  
e-mail: [daniela.alex@uefiscdi.ro](mailto:daniela.alex@uefiscdi.ro)

C. M. Hâj  
e-mail: [cezar.haj@uefiscdi.ro](mailto:cezar.haj@uefiscdi.ro)

D. Alexe-Coteț  
National University of Political Studies and Public Administration, Bucharest, Romania

© The Author(s) 2022

A. Curaj et al. (eds.), *Higher Education in Romania: Overcoming Challenges and Embracing Opportunities*, [https://doi.org/10.1007/978-3-030-94496-4\\_6](https://doi.org/10.1007/978-3-030-94496-4_6)

whole range of international approaches analyses the dropout rate through different variables in order to better highlight equity problems that need to be addressed.

**Keywords** Student dropout · Dropout · Dropout prediction · Higher education

## 1 Assessing Dropout Is Not One Size Fits All: Policy Highlights

### 1.1 *The International Perspective*

In the context of the Bologna Process policy framework, the social dimension was an issue highlighted from the beginning of the process. Formally adopted by ministers responsible for higher education in 2007, it provided the well-known definition that the “student body entering, participating and completing higher education at all levels, should reflect the diversity of our population” (Bologna Process 2007). The work has been continued by the Bologna Process Follow-Up Group (BFUG) through the Working Groups on social dimension, and in 2020, in Rome, the ministers adopted the “Principles and guidelines to strengthen the social dimension of higher education in the EHEA” (Bologna Process 2020). The guidelines refer to concrete measures for EHEA member states such as setting clear targets for widening access to higher education, participation and graduation, making studies more flexible, collecting dropout data, improving student counselling services and adequate funding to support equity.

Although the mentioned definition is perfectible, it emphasises the challenge to remove social and economic barriers, barriers that prevent access and/or completion of university studies. Previous studies (Eurydice 2010; 2012) disclose that only some states focus on these issues in their higher education policies. A broad participation of individuals belonging to vulnerable/underrepresented groups (based on low socio-economic status, gender, disability or with a minority status, linked to their ethnic, linguistic, religious, cultural, or residence characteristics) represents one of the core elements in order to achieve this goal (Bologna Process 2007).

In the Commissions’ Communication “Supporting growth and jobs” (2011), reducing higher education dropout is mentioned as a key issue for several member states, especially in countries with demographic decline (such as Romania).

Dropout has been studied as a research topic since the 80s worldwide. At the international level, there are a multitude of terms used in this regard, such as “dropout”, “non-persistence”, “academic performance/success versus academic failure”, “withdrawal”, “retention versus attrition”, “disengagement”, “desertion” (Jones 2008).

In Romania, very little research has been done on this subject, including addressing it in national public policy documents. Given the lack of common practice, both at the international and national level, there is a variety of approaches to the phenomenon of university dropout.

**Table 1** International definitions of dropout

	(True cohort completion) Entered a bachelor's programme and completed any tertiary programme by ...		
	Theoretical duration of programmes	The theoretical duration of the programme in which they entered (%)	The theoretical duration of the programme in which they entered plus 3 years (%)
Austria	3	26	58
Flemish Comm. (Belgium)	3	33	67
Flemish Comm. (Belgium)	3-4	27	54
Estonia	3-4	34	59
Finland	4	43	73
France	3	41	67
Iceland	3-4	36	69
Ireland	3-6	63	81
Lithuania	3-4	61	65
Netherlands	3-4	28	70
Norway	3-4	44	72
Portugal	3	30	65
Slovenia	4	24	53
Sweden	3	42	56
Switzerland	3	39	81
United Kingdom	3-4	72	85

From a policy perspective, participation in higher education has been periodically analysed at the international level by the OECD through completion rates and Eurydice structural indicators for monitoring education systems that are also linked with the European Commission participation benchmark and policies. The definition of the indicator focuses on the percentage of students who complete the higher education programme they have started (Table 1).

After researching international approaches on defining the dropout phenomenon, two reports emerged: the NESET report from 2013 and the CHEPS report made in 2015 for the European Commission. Both explore the diversity of the national data collection systems and map different definitions given across countries. The NESET report shows how countries mostly use completion rates, to a large extent due to the commitment to report data to the OECD' (Quinn 2013). OECD defines completion rates as "the number of degrees awarded per 100 students enrolled/registered in a given year", while NESET report notes differences in national data collection methodologies and timeline.

The largest study on dropout and completion in higher education at the European level made for the European Commission (CHEPS 2015) managed to explore the indicators used across 36 European countries and note the top three most used:

**Table 2** International definitions of dropout

Variation of definitions		
Method used	True cohort (/+others)	Cross section
Levels of granulation	A system-level completion rate published	No general rate, rates on type of universities, type or duration of programmes and other variables
Use of indicators	For international reporting	Also used in national policies (quality assurance, funding, system assessment)
Student characteristics	Only national students	Including international students
	Only first-time students	
	Students who interrupted their studies are taken into account	Interruptions are neglected
	Only full-time students	All students
Study level	Only bachelor	Bachelor and master
Time from enrolment	After the normal duration of the programme (3–6 years)	Up to 10 years after enrolment

completion rate, retention rate and time-to-degree. While *completion rate* looks at the proportion of graduates among a cohort, *retention rate* represents the proportion of a cohort of beginners that continue their studies measured per semester or year, sometimes seen as the complement of the dropout rate. *Time-to-degree* represents the average number of years from registration to graduation.

Nevertheless, there is a multitude of variables that can be taken into account when calculating the indicators mentioned above at a system level, thus making the international comparability even harder (Table 2).

Besides the variations on the population that is being analysed, it is also important to take into account the various definitions and regulations that describe different dynamics of student life, involving *temporary interruption of studies*, *transfer between or within universities*, *pursuing two study programs at the same time* or *delayed graduation*.

## 1.2 The Case of Romania

The same conceptual diversity can be found in Romania, where there is no nationally agreed definition of university dropouts. The Ministry of Education publishes an annual report on the state of higher education. It also includes an indicator that presents the “school situation of students” referring to dropouts calculated as the percentage difference between the number of students (all students, regardless of the

cohort they belong to) from the beginning and those from the end of an academic year (including students with unfinished academic status). The values of the mentioned indicator vary between 8.5% in the academic year 2014–2015 and 9.6% in the academic year 2018–2019 (Ministry of Education 2019).

In many European countries, the completion rate is an indicator often used in higher education funding or quality assurance policies. In Romania, in addition to the basic university funding (based on student numbers), universities receive additional funds based on quality indicators. In the methodology for university public funding published in 2018, the indicator “graduation rate of bachelor programs” is proposed and defined as: “*the ratio between the total number of students who have obtained a bachelor’s degree in the last four completed academic years and the total number of students enrolled in the first year of the bachelor’s degree, in the year the study program at the bachelor cycle started*” (Ministry of Education 2018). In the following yearly methodologies, the proposal to introduce such an indicator was no longer found.

The assessment of the successful completion of studies is also missing from the external quality assurance process carried on by the Romanian Quality Assurance Agency (ARACIS). Although the structure and design of study programmes is a quality standard found in the quality assurance and accreditation methodology, there is no reference to the dropout, participation, or completion rates.

The monitoring of university dropouts is also largely missing from the main policy documents. The ongoing *Educated Romania* project developed by the Presidential Administration (2021) addresses equity in the education system in a cross-cutting approach and includes reducing the dropout at higher education level as a policy objective. Thus, a whole series of specific measures are proposed, such as better data collection for the development of equity policies, removal of financial barriers for access to higher education, especially for students from disadvantaged groups, rewarding inclusive universities, providing service packages in support for students at high risk of dropping out, introducing flexible access routes in higher education.

We analysed the dropout phenomenon at Romanian universities, using formal documents adopted in 39 public universities, documents that include a definition or monitoring procedures for dropout.<sup>1</sup> As a result, we can conclude that there is no strategic approach to this phenomenon in Romanian public universities. Apart from one case, no clear definition and monitoring procedures could be identified. In most of the analysed cases, the phenomenon of dropouts is briefly addressed within general regulations of students’ academic activities or specific projects implemented by the university.

One of the few definitions found in regulations explains: “school dropout means the complete absence of the student from teaching activities for at least two consecutive months, without the approval of the dean of the faculty for it” (George Emil

---

<sup>1</sup>In order to assess the extent to which public universities in Romania monitor the dropout phenomenon and students at risk of dropping out, internal regulations or procedures have been identified in 39 public universities that refer to this process. We mention that the research was carried out only from electronic, public sources, found on the websites of universities, without taking into account the internal procedures that are not public and that are found on the internal platforms of universities.

Palade University of Medicine, Pharmacy, Science and Technology in Târgu Mureș, 2020)

Among the university documents identified and related to our research topic, we noted a series of good practice examples:

1. The adoption of a strategy to reduce the risk of university dropout (Example of Babeș-Bolyai University);
2. The existence of formal monitoring procedures and calculating dropout risk based on data from student registers (Example of Babeș-Bolyai University);
3. Procedures regarding the prevention of dropout (Examples: University of Bucharest, “Aurel Vlaicu” University);
4. Analyses, articles and studies on dropout at the institutional level (Examples: Western University, Ovidius University);
5. Implementation of projects from public funding (Institutional Development Fund, ROSE Project or European funds) whose objectives include reducing dropout (Example of the Politehnica University of Bucharest).

As these initiatives target the dropout phenomenon explicitly, the focus of these strategic documents is still on using the same tools to reduce the risk of dropout, many of them being the mirror of the policies developed at the national level: social scholarships, student counselling, covering the student accommodation and food costs, and support for studies (tutoring program, distance study programs, access to libraries).

All these institutional practices show that there is a need for comparable data on the human capital that is lost during studies. It can be a good reflection of the quality of education, or the lack of equity, or the integration of specific groups of people, or it can show a mismatch between expectations and reality. All these can be addressed as long as the phenomenon is monitored and analysed.

## 2 Methods

### 2.1 Data and Variables

The data have been extracted from the *National Student Enrolment Registry (Registrul Matricol Unic al Universităților din România, RMUR)*. RMUR is a digital platform that ensures the integrated management of data on students of both public and private higher education institutions (HEIs) in Romania for all academic years and all study cycles. Personal data, student school data, student scholarships and accommodation services, respectively data on pre-university and previous university studies are recorded in RMU.

1. The selection of relevant data for the present analysis followed a 5-level approach: (a) public HEIs, (b) undergraduate (bachelor) study programmes, (c) 3-year study

programmes, (d) the cohort of students enrolled in the analysed study programme, in the 2015–2016 academic year for the first time ( $n = 60,510$  students), (e) the timeframe covered (2015–2016 through 2019–2020 academic years) creates an information line (one case) for each academic year, resulting 177,256 number of cases (students) in the database. International students were kept in the dataset used by current research.

2. We define for this paper the dropout rate as “*the percentage of the student population who failed to graduate within two years of the theoretical completion date for the study program*”. We consider as graduates the students having as status “*own graduate with a diploma – code 15*” or “*completing diploma date – code 75*” for the variable *sitScolaraId\_final\_an*.
3. We developed the *dropout* dependent variable (*abnd\_non\_absolvent*) as below:
  - a. Recoding the variable *sitScolaraId\_final\_an*: codes 15 and 75 become sequential 0 for the 2017–2018 year (31,197 graduates), 2018–2019 (2,392 graduates) and 2019–2020 (638 graduates)<sup>2</sup>: total graduates in all three academic years: 34,227.
  - b. A new database (graduates.sav) with a list of graduates identified in previous stage (3.a) could be used to populate the entire database (stage 1.e.) with information relative to graduates. Thus, duplicates (185 cases) were eliminated, as students who completed two study programmes within the time horizon analysed. The *personId* identifier was used, and a sample volume without duplicates was used: 34,042.
  - c. Using the stage 3.b stage information in the database, the *abnd\_non\_absolvent* variable has been entered into the database in stage 1.e.
  - d. The dropout rate was calculated comparing the *abnd\_non\_absolvent* variable to the students registered in the initial cohort (in the 2015–2016 academic year). The university dropout rate of the 3-year undergraduate programs (cohort of individuals registered in the 2015–2016 academic year for their first study programme and academic year ever) is 43.8% (statistical details for each field of study are available in Annex).

## 2.2 Model Specifications

Considering the dichotomous nature of the dependent variable (*dropout*), with its associated probability ( $p_i$ ), a Logit model has been built using the following factors: students’ personal motivation, previous educational outcomes, and factors related to the integration in the students’ life.

---

<sup>2</sup>For example, for the 2017–2018 academic year, the recoding sequence was DO IF (anCalendaristicId=13).RECODE sitScolaraId\_final\_an (15 = 0) (75 = 0) INTO abnd\_non\_absolvent.END IF.

$$\ln\left(\frac{P_i}{1-P_i}\right) = \alpha_0 + \alpha_1 BAC\_ATTEMPTS_i + \alpha_2 SAME\_TOWN_i + \alpha_3 BAC\_AVERAGE_i + \alpha_4 FIRST\_YEAR_i + \alpha_5 TUITION\_PAYER_i + \varepsilon_i \quad (1)$$

As a proxy measure for motivation, two variables were kept. The first one is *BAC\_ATTEMPTS* (number of participations at the Baccalaureate exam before passing the exam) since a higher number of attempts can indicate a more powerful personal desire to be enrolled in higher education. The second one is *SAME\_TOWN* (a dummy variable to highlight if the student's home is located in the same town as the university). This variable was introduced to test the hypothesis that students being located outside big cities (where usually the most important universities are located) tend to be better motivated to finish their educational program in time to benefit from specific support measures (e.g., student dormitories, scholarships) and, as an ultimate goal, to use their degree as a social elevator.

The second type of factors describing previous educational outcomes consists of the one variable *BAC\_AVERAGE* (the average grade obtained at the Baccalaureate exam).

The third category of factors measuring the integration in the students' life includes two variables: *FIRST\_YEAR* (if the student is registered as a freshman in the first year of a study programme) and *TUITION\_PAYER* (if the student was supporting the tuition fees within the first semester/year of study).

We estimate the Eq. (1) above as the general model. Furthermore, the following control socio-demographic characteristics are included in the model (M2—Eq. 2) *AGE*, *GENDER* and *SOCIO-ECON\_INDEX* (an index developed by Pană, 2020 to measure the locality's level of development from socio-economic point of view) for the locality where the student's home is located:

$$\ln\left(\frac{P_i}{1-P_i}\right) = \beta_0 + \beta_1 AGE_i + \beta_2 GENDER_i + \beta_3 SOCIO - ECON\_INDEX_i + \varepsilon_i \quad (2)$$

In a third stage, the control variables are inserted in the model (M3):

$$\ln\left(\frac{P_i}{1-P_i}\right) = \gamma_0 + \gamma_1 BAC\_ATTEMPTS_i + \gamma_2 SAME\_TOWN_i + \gamma_3 BAC\_AVERAGE_i + \gamma_4 FIRST\_YEAR_i + \gamma_5 TUITION\_PAYER_i + \gamma_6 AGE_i + \gamma_7 GENDER_i + \gamma_8 SOCIO - ECON\_INDEX_i + \varepsilon_i \quad (3)$$

In all models (M1), (M2) and (M3),  $P_i$  is the probability to dropout the university (DROPOUT), and  $\varepsilon_i$  is the residual variable. The regression parameters ( $\alpha_i$ ,  $\beta_i$  and  $\gamma_i$ ) are estimated via SPSS 16.0. The outcomes of regression coefficients, as well as



their pseudo- $R^2$ , are presented in the Annex. The significance for each regression coefficient is tested with the Wald test, and the level of statistical  $p$  value is included. To keep a balanced outcome for predicted *Yes* and *No* points for the dependent variable, the cut value was set to 0.37.

### 3 Results

*43.8% of students enrolled in the first year of a 3-year bachelor programme dropped out from the university within 5 years.* The chi-square test was applied to examine the relationship between the dropout and the year of study variables:  $X^2 (n = 177256) = 3.17 \cdot 10^3, p < 0.001$ .

#### 3.1 Dropout by Students' Field of Study

To analyse the dropout rate in Romanian universities, calculations were made filtering those in their first year of study during the 2015–2016 academic. The dropout rates computed for the various fields of studies (with 3-year bachelor programs) revealed sensitive domains such as Philosophy, European studies and International relations, Cultural studies, Political sciences, and Geology, where all the rates are above the national average (43.7%). On the opposite side, significantly lower rates were found in Military sciences, intelligence, public order (4.6%), and in Health and Healthcare or Arts.

Regarding the hierarchy presented in Table 3, a difference that stands out between the fields of study with the highest dropout rates and those with the lowest rates can be explained by the typology of admission processes. In Romania, admission within specific fields of study is decided at the faculty/university level based on national general regulations. In this sense, universities can choose to base their admission system mainly on the baccalaureate exam or to organise other institutional admission exams. As the data shows, most of the study programs from the study fields rated as having the highest dropout rate also have among least selective admission processes, while the study programs with low dropout rates have institutional admission exams. This conclusion is also supported by Orr et al. (2017), showing that last selective admission systems are linked with lower graduation rates, while double selection systems are more efficient in terms of graduation rates.

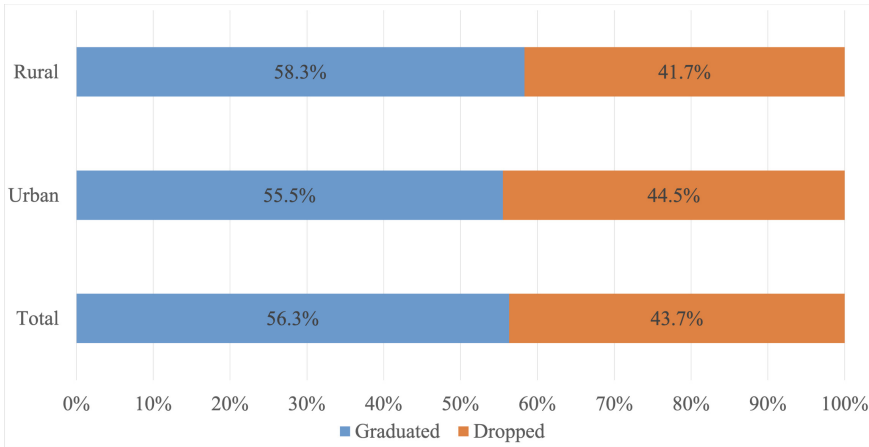
**Table 3** Dropout rate per field of study (selection)

Field of study	Dropout rate (%)
Philosophy	64.1
European studies and international relations	59.1
Cultural studies	59.0
Political sciences	56.4
Geology	55.8
National average	43.8
Sciences of Education	37.8
Cybernetics, statistics and economical informatics	37.1
Urbanism	33.3
Economy	30.9
Arts	
Visual Arts	29.1
Cinema	28.6
Theatre	23.4
Health & Healthcare (3-year programs)	
Physical therapy	26.1
Pharmacy	24.3
Medicine	14.3
Dental Medicine	14.3
Military sciences, intelligence, public order	4.6

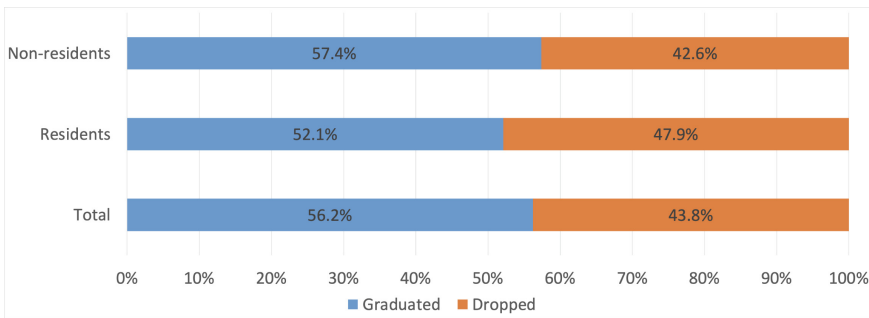
### 3.2 Dropout by Student Home

Looking at the student's origin domicile by urban-rural distribution, the analysis shows that *students from urban areas are more likely to drop out* (see Fig. 1). A chi-square test of independence was performed to examine the relationship between the student dwelling place by urban-rural distribution and university dropout variables. The relation was significant:  $X^2 (n = 53653) = 35.98, p < 0.001$ .

This can be explained, as Haj and Tuca (2021) present, by the fact that the selection process towards higher education does not favour students with a rural background. Also, students who manage to enter higher education are already the most resilient students coming from rural areas. This conclusion is also complemented by the analysis regarding the relationship between the dropout rate and the *before to be student* home (if the university is in the city where they live). Figure 2 shows 5% more students living close to the university (*residents*) susceptible to quit the first year than commuting students, benefiting from student housing or renting spaces in a different place than home, town or home village (*non-residents*). As numerous studies during the last 50 years have shown, living on campus or close to the university leads to



**Fig. 1** Dropout rates by students' domicile (n = 53653)

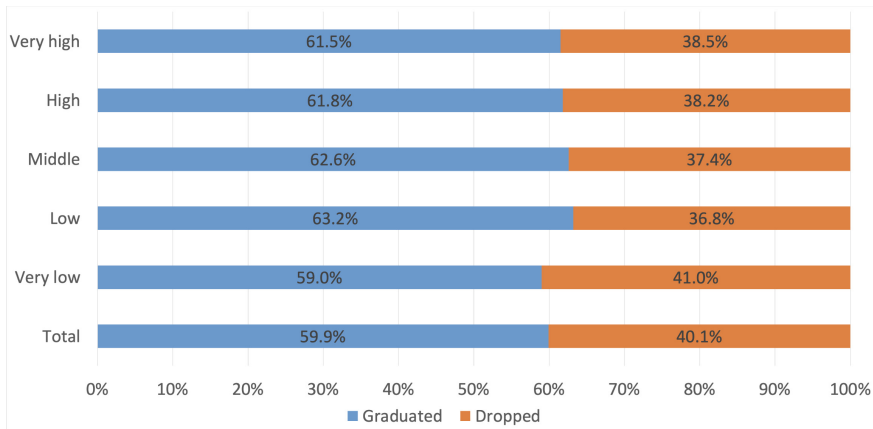


**Fig. 2** Dropout rates by students' domicile—living or not in the same city with the university (n = 60510)

better academic and social integration and, finally, to a better chance for graduation. From the chi-test it resulted:  $X^2 (n = 60510) = 1.215 * 10^2, p < 0.001$ .

In terms of geographical accessibility, perceiving university as being too familiar (living in the same community with the university one attends) increases the probability to dropout. Those who are supposed to be commuters or those who had to move out homeplace experience or have a perception of extra costs they must pay living in the city. It is also known that most of them have a very strong perception about what quitting education (and returning to their origin community) supposes in the short or medium term.

In terms of mobility the distance students have to cover, and the real costs for commuting, accommodation and other living expenses may help to understand the relevance of such variables to discuss dropping out higher education or to enforce the motivation to succeed.



**Fig. 3** Dropout rates by student home area local development (quintiles) ( $n = 144017$ )

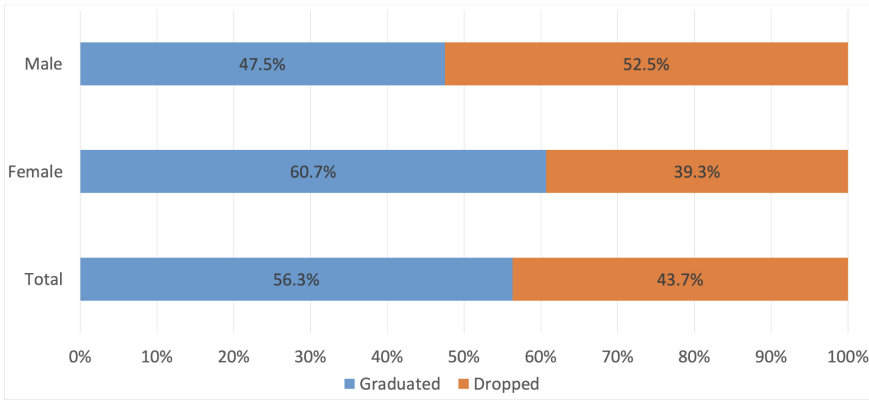
### Dropout by Student Home Area Local Development

Figure 3 shows that related to community development (Pana 2020), *only “very low” development level of the origin community is a relevant factor for a student to drop education*. This is relevant as low levels of development are mostly correlated with rural areas. Chi-test was used for the relationship between students’ home community local development level and students’ performance (in terms of graduation or dropout). This case is a relation that involves the number of all programme graduates and a 5 levels scale:  $X^2 (n = 144017) = 1.521 * 10^2, p < 0.001$ .

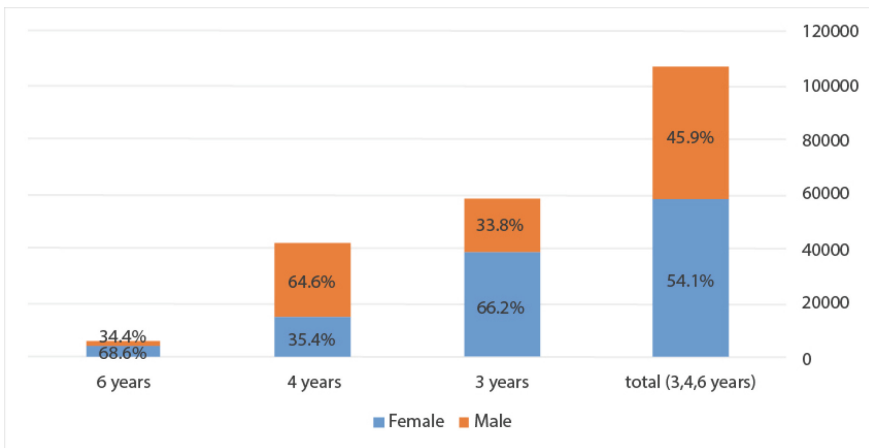
### 3.3 Dropout by Student’s Gender

In terms of equal opportunities, gender has always been an issue and a challenge. Our data prove that male students have a much higher propensity to drop courses than females. A chi-square test of independence was performed to examine the relationship between the gender and university dropout variables. The relation is  $X^2 (n = 58600) = 9.28, p < 0.001$ , as can be seen in the figure (Fig. 4).

These results can be explained by the fact that dropout rates were calculated for 3-year bachelor programs that include female-dominated fields of study. When looking at our general data from the 2015–2016 student cohort (all programs, no matter the duration), the gender distribution of the total student population is rather balanced. If we break it down by type of study programmes, one can see the over-representation of males in 4-year programs (the vast majority being engineering programs), while we notice a greater women presence in 3 and 6-year programmes (the vast majority being humanities and medical science) (Fig. 5).



**Fig. 4** Dropout rates by the gender of the students (n = 58600)

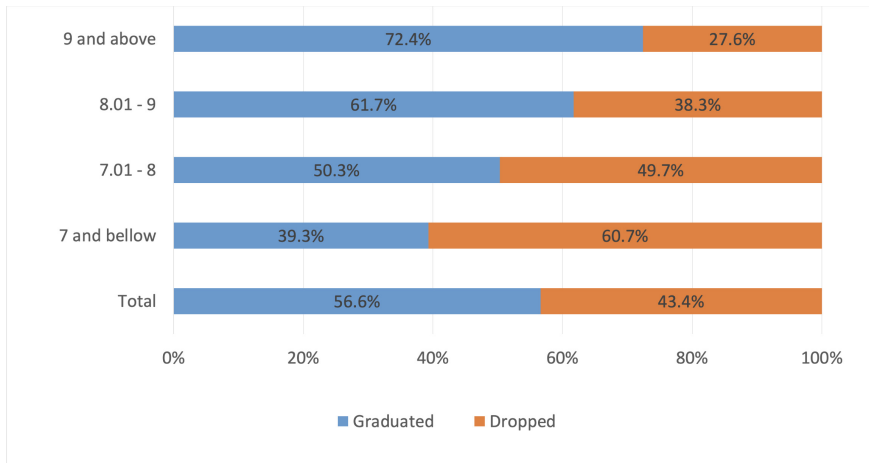


**Fig. 5** Number of students by gender and length of study programs

With regards to the analysis on the 3-year programs, men are less represented in the student cohort (33.8%) and have dropout rates 13% higher than women (52.5% vs. 39.3%). At the end, the percentage of men in the “graduates” population decreases from 33.8% to 28.6%.

### 3.4 Dropout by Baccalaureate Exams

Prior to entering higher education, students have to pass the high school final exam (Baccalaureate). Inequities in higher education are a continuation of the unresolved inequities in secondary education, and the results of the baccalaureate exam fully



**Fig. 6** Dropout rates by baccalaureate grades interval ( $n = 54507$ ). Note: the dropout rates are calculated on a sub-population of students as data for students that passed the baccalaureate exam prior to 2004 was not available

reflect these equity issues. For instance, success rates are significantly higher in urban areas for students from theoretical high schools (62.9%) than they are in rural areas for students from technological fields (37.1%) (Ministry of Education 2021). In many cases, high school students from technological fields come from low-income families or families with low educational background.

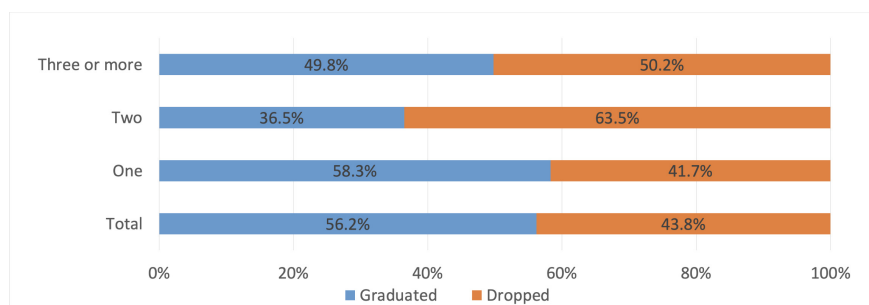
### Individual Score at the Baccalaureate Exam

*The best predictor of academic success is the result of the baccalaureate exam.* As can also be seen in Fig. 6, the higher the Baccalaureate score, the lower the number of dropouts. We used the chi-test for the relationship between the individual score of the Baccalaureate exam (arithmetical average of grades for each Subject, from 6.00 to 10.00) and the ratio of students who drop HE studies within the first year:  $X^2 (n = 54507) = 2.906 * 10^3, p < 0.001$ .

The results can be explained by the fact that most 3-year programs use the baccalaureate exam results as the main criteria in the admission process. This means that the most resilient students in upper secondary education (who have good grades) will have more chances of accessing study programs that are their first choice, that are subsidised by the state, with scholarships.

### Number of Attempts to Pass the Baccalaureate Exam

*The dropout rate is much higher for students that did not pass the baccalaureate exam from the first time.* This can be correlated with the previous finding as the average grade for students who do not pass from the first attempts is usually much lower. Nevertheless, an important particularity is that the statistical analysis shows a lower dropout rate for students who tried three or more times to pass the final



**Fig. 7** Dropout rates by number of attempts to pass the Bacalaureate exam ( $n = 60510$ )

exam, 25% more than those who tried twice and closer to those who passed the exam from the first try. This can be explained by the high level of motivation a student needs to participate in the bacalaureate exam after more than two attempts.<sup>3</sup> The relation  $X^2 (n = 60510) = 6.339 * 10^3$ ,  $p < 0.001$ , shows a higher probability for someone to pursue the studies (Fig. 7).

### 3.5 Dropout by the Type of Study place in the First Year of Study

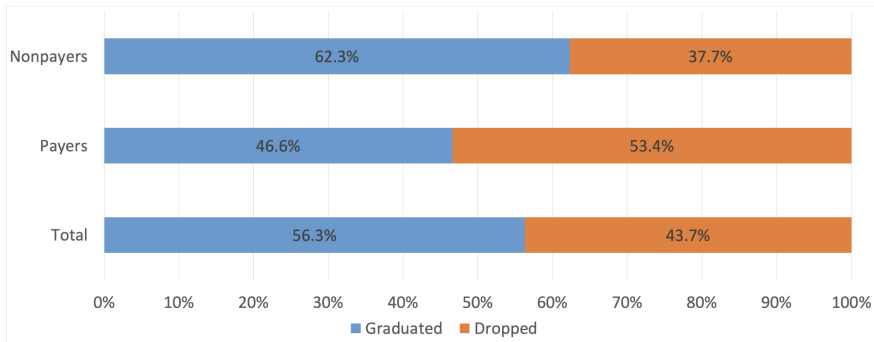
The Romanian Higher Education system includes within public universities subsidised study places (no tuition fees, public funded) and paid study places (with tuition). The allocation of these two categories is mainly<sup>4</sup> based on merit (admission results for the first year and academic results for the rest of the program). *Paid study places can be a strong challenge more than an incentive to successfully finish the studies.* As Fig. 8 shows, students who pay tuition fees (themselves or the family) for various reasons at the beginning of their first year of studies have much higher dropout rates than students benefiting of public funded study places (whether they maintained this status until the end of programme or not).

The chi-test applied to those students who pay for their education (themselves or by family) shows the relation with the unsuccessful ending for the first year of university studies:  $X^2 (n = 60063) = 1.421 * 10^3$ ,  $p < 0.001$ .

This conclusion can be correlated with the previous finding regarding the grade at the bacalaureate exam. As the allocation on the two types of study places is based on the admission process results (which in turn, for the 3-year programs are mostly based on the final bacalaureate grade), we can also conclude that students with lower

<sup>3</sup> As the system is organized, there are only two regular sessions per year.

<sup>4</sup> There are some exceptions for equity groups but the number of students benefiting is very low, thus with limited to no impact on the model.



**Fig. 8** Dropout rates nonpaid Study places and paid Study places students (n = 60063)

baccalaureate results have also low access to public funding and higher chances for dropout.

### 3.6 Logistic Regression Analysis of the Factors Influencing University Dropout

In the following, the result of the logistic regression analysis of the factors influencing university dropout is presented. As detailed in Table 4, we considered the below-mentioned variables to explain and describe the student motivation, previous

**Table 4** Logit regression coefficients to measure the dropout propensity (DROPOUT)

Variables	M1	M2	M3
CONSTANT	2.144****	-0.88****	-0.378****
BAC_ATTEMPTS	-0.019*		-0.131****
SAME_TOWN	0.121****		0.156****
BAC_AVERAGE	-0.402****		-0.365****
FIRST_YEAR	0.684****		0.824****
TUITION_PAYER	0.667****		0.58****
AGE		0.17****	0.109****
GENDER		0.548****	0.399****
SOCIO-ECON_INDEX		-0.393****	-0.28****
n (sample size)	143,826	143,285	120,488
Cox & Snell R Square	0.098	0.019	0.117
Nagelkerke R Square	0.133	0.026	0.159

Note \*p-value is less than 0.1, \*\*p-value is less than 0.05, \*\*\*p-value is less than 0.01, \*\*\*\*p-value is less than 0.001



educational outcomes, and integration into the students' life. All coefficients are significant at 0.001.

Based on the pseudo  $R^2$  values, the explained variation in the dependent variable in our three models ranges from 9.8% to 13.37% in M1, from 1.9% to 2.6% in M2, and from 11.7% to 15.9% in M3, differences being induced by the methods of measurement (Cox & Snell  $R^2$  or Nagelkerke  $R^2$ ). The effect of tuition payments across M and M2 specifications is positive and significant ( $p < 0.001$ ). Similarly, the effect of the first-year variable was found to be positive and significant across M1 and M2 ( $p < 0.001$ ).

## 4 Conclusions

As part of the European Higher Education Area, Romania committed itself to implementing policies towards improving the social dimension of education. Even though the social dimension is part of the public debate and subsequently of the policy documents, the issue surrounding the effectiveness of the higher education system is still not high on the agenda. As at the international level, no clear definition is given, and the practices vary between states, no clear model has been proposed to measure the dropout. Moreover, until recently, the needed data was lacking in order to develop cohort analysis.

As much diversity can be found at the international level in measuring the “success” or “failure” of the student's academic path, even more diversity can be found at the national level. In line with the university autonomy granted by the Romanian constitution and a general legal framework regarding student's progress within a study program or university, the analysis revealed a heterogeneous system of student management that represents a challenge to any analysis of student's progression. That is why the most accurate way to monitor students' progression is by analysing and using administrative data at an individual level. We used the evolution of the number of students between enrolment in the first year of study and two years after the end of the program (normal duration).

In relation to international practices, one of the results of our article is the proposed definition of the dropout phenomenon and the calculation methodology. The proposed definition “*percentage of the student population who failed to graduate within two years of the theoretical completion date for the study program*” and the method of calculating student dropout can be used in the monitoring process both at the national and, more importantly, at the institutional level. As the data from the national student registry (RMU) starts from 2015/2016, by 2024, decision-makers will be able to monitor the dropout rate for all programs (3–6 years) in the entire Romanian higher education system. The model is in line with the international practice and takes into account Romanian specificities regarding the administrative and data collection processes as it can be replicated yearly. At the same time, there are limits generated by the data collection process that can be improved in order to better use the proposed indicator. This is the case of the socio-characteristics of the stu-

dent population, as current data does not provide sufficient information regarding minority status, student medical conditions (i.e. disability), level of income or parent education. These issues can be mitigated by using representative samples from the EUROSTUDENT/Student Satisfaction Survey that include some of these characteristics.

### **What Do Dropout Rates Show?**

In terms of what our analysis of dropout rate shows, there are several relevant findings for the debate on equity.

From a quantitative point of view, 43.8% of the students enrolled in the first year of a 3-year bachelor programme dropped out from the university (within 5 years). Even if this is more or less in line with many European states, the issue of who is failing is an important equity discussion. As some results can be perceived as counterintuitive, it is important to highlight that, as Haj and Tuca (2021) showed, many of the losses of human capital are happening before the enrolment in higher education (at the point of transition). With that in mind, looking at the dropout data, *students coming outside the town where universities are located (including rural areas) are more resilient as they have lower dropout rates (+5.2% residents over non-residents and +3.2% urban over rural areas)*.

For the 3-years study programmes, there are relevant discrepancies regarding student dropout by study domain. The rates start from 4.6% in Military sciences, intelligence, public order and go to 64.1% for *Philosophy* and 59.2% for *European studies and international relations*. Given these results, the analysis of admission systems in higher education in correlation with graduation rates may be a further research topic, especially its impact on equity.

When looking at the student location, cultural and social student integration is a great resilient factor as living on campus brings better academic results.

Even though our analysis included dropout rates calculated for 3-year bachelor programs with female-dominated fields of study, the difference between female dropout and male dropout is significant.

We have also shown that inequalities in secondary education are also continued in higher education and reflect the failure of current equity policy instruments. Students with a low individual score at the baccalaureate exam also have high dropout risk. From previous studies, we know that they are likely to be part of disadvantaged groups and have one or multiple deprivation factors (income, health, or disability, living environment, gaps in prior education/skills, so on), but more in-depth analysis should be made on the social characteristics of dropout students.

Finally, we have demonstrated that (high) costs paid by students also bring a higher risk for dropping, this phenomenon being inflamed by the fact that access to resources is almost exclusively merit-based.

### **Policy Implications**

The indicator on student dropout can represent a valuable indicator supporting equity policies as the provided information can support:

- The adoption of institutional and national strategies to reduce the risk of university dropout as there is enough information in order for decision-makers to set clear targets for widening access to higher education, participation and graduation;
- Institutional reforms, as when we take into account how the public higher education system is funded, high dropout rates can lead to financial losses for universities;
- Improving the student support services for first-year students;
- The implementation of equity agreements with universities in order to tackle this specific issue (including through the use of the Institutional Development Fund);
- The monitoring of the Romanian Higher Education System through the yearly report developed by the Ministry of Education.

### Annex: University Dropout Rate of 3-Year Undergraduate Programs (cohort Enrolled/registered in the Academic Year 2015–2016)

See Table 5.

**Table 5** University program field of study \* Dropout—non-graduate with Crosstabulation certification

			Dropout—non-graduate with certification		Total
			No	Yes	
University program field of study	Mathematics	Count	565	424	989
		% within university program field of study	57.1%	42.9%	100.0%
Physics		Count	182	205	387
		% within university program field of study	47.0%	53.0%	100.0%
Chemistry		Count	265	263	528
		% within university program field of study	50.2%	49.8%	100.0%

(continued)

**Table 5** (continued)

			Dropout—non-graduate with certification		Total
			No	Yes	
Informatics	Count		1,770	1,412	3,182
	% within university program field of study		55.6%	44.4%	100.0%
Biology	Count		483	340	823
	% within university program field of study		58.7%	41.3%	100.0%
Geography	Count		1,252	809	2,061
	% within university program field of study		60.7%	39.3%	100.0%
Geology	Count		42	53	95
	% within university program field of study		44.2%	55.8%	100.0%
Environment Sciences	Count		280	288	568
	% within university program field of study		49.3%	50.7%	100.0%
Philosophy	Count		102	182	284
	% within university program field of study		35.9%	64.1%	100.0%
Romanian language and literature	Count		2,433	2,247	4,680
	% within university program field of study		52.0%	48.0%	100.0%
Applied modern languages	Count		646	481	1,127
	% within university program field of study		57.3%	42.7%	100.0%
History	Count		460	505	965
	% within university program field of study		47.7%	52.3%	100.0%

(continued)

**Table 5** (continued)

			Dropout—non-graduate with certification		Total
			No	Yes	
Cultural studies	Count		139	200	339
	% within university program field of study		41.0%	59.0%	100.0%
Theology	Count		239	198	437
	% within university program field of study		54.7%	45.3%	100.0%
Sociology	Count		721	571	1,292
	% within university program field of study		55.8%	44.2%	100.0%
Social work	Count		704	525	1,229
	% within university program field of study		57.3%	42.7%	100.0%
Political sciences	Count		318	412	730
	% within university program field of study		43.6%	56.4%	100.0%
International relations and European studies	Count		543	786	1,329
	% within university program field of study		40.9%	59.1%	100.0%
Administrative sciences	Count		1,498	1,356	2,854
	% within university program field of study		52.5%	47.5%	100.0%
Sciences of communication	Count		1,524	1,307	2,831
	% within university program field of study		53.8%	46.2%	100.0%
Sciences of education	Count		2,251	1,374	3,625
	% within university program field of study		62.1%	37.9%	100.0%

(continued)

**Table 5** (continued)

			Dropout—non-graduate with certification		Total
			No	Yes	
Psychology	Count		1,115	1,297	2,412
	% within university program field of study		46.2%	53.8%	100.0%
Economy	Count		531	237	768
	% within university program field of study		69.1%	30.9%	100.0%
Finances	Count		1,427	1,151	2,578
	% within university program field of study		55.4%	44.6%	100.0%
Business administration	Count		2,249	2,053	4,302
	% within university program field of study		52.3%	47.7%	100.0%
Accountability	Count		1,864	1,492	3,356
	% within university program field of study		55.5%	44.5%	100.0%
Cybernetics, Statistics and Economic Informatics	Count		1,134	668	1,802
	% within university program field of study		62.9%	37.1%	100.0%
Economy and international affairs	Count		840	502	1,342
	% within university program field of study		62.6%	37.4%	100.0%
Management	Count		1,580	1,750	3,330
	% within university program field of study		47.4%	52.6%	100.0%
Marketing	Count		995	844	1,839
	% within university program field of study		54.1%	45.9%	100.0%

(continued)

**Table 5** (continued)

			Dropout—non-graduate with certification		Total
			No	Yes	
Theatre and show arts	Count		281	86	367
	% within university program field of study		76.6%	23.4%	100.0%
Cinema and media	Count		90	36	126
	% within university program field of study		71.4%	28.6%	100.0%
Music	Count		186	205	391
	% within university program field of study		47.6%	52.4%	100.0%
Visual arts	Count		943	387	1,330
	% within university program field of study		70.9%	29.1%	100.0%
Architecture	Count		28	29	57
	% within university program field of study		49.1%	50.9%	100.0%
Urbanism	Count		4	2	6
	% within university program field of study		66.7%	33.3%	100.0%
Physical education and sport	Count		1,179	960	2,139
	% within university program field of study		55.1%	44.9%	100.0%
Military sciences, intelligence and public order	Count		831	40	871
	% within university program field of study		95.4%	4.6%	100.0%

(continued)

**Table 5** (continued)

			Dropout—non-graduate with certification		Total
			No	Yes	
Biology (Biochemistry)	Count		100	116	216
	% within university program field of study		46.3%	53.7%	100.0%
Physiotherapy	Count		904	319	1,223
	% within university program field of study		73.9%	26.1%	100.0%
Health (Medicine— general regulation)	Count		699	161	860
	% within university program field of study		81.3%	18.7%	100.0%
Health (Dental Medicine— general regulation)	Count		373	62	435
	% within university program field of study		85.7%	14.3%	100.0%
Health (Pharmacy— general regulation)	Count		81	26	107
	% within university program field of study		75.7%	24.3%	100.0%
Security studies	Count		177	121	298
	% within university program field of study		59.4%	40.6%	100.0%
<b>Total</b>	<b>Count</b>		<b>34,028</b>	<b>26,482</b>	<b>60,510</b>
	<b>% within university program field of study</b>		<b>56.2%</b>	<b>43.8%</b>	<b>100.0%</b>



## References

- Bologna Process. (2007). London Communiqué. Retrieved June 09, 2021, from [http://ehea.info/Upload/document/ministerial\\_declarations/2007\\_London\\_Communique\\_English\\_58869.pdf](http://ehea.info/Upload/document/ministerial_declarations/2007_London_Communique_English_58869.pdf)
- Bologna Process. (2020). Annex II to the Rome Ministerial Communiqué: Principles and Guidelines to Strengthen the Social Dimension of Higher Education in the EHEA.
- CHEPS. (2015). Dropout and completion in higher education in Europe. <https://doi.org/10.2766/826962>
- European Commission. (2011). Supporting growth and jobs - An agenda for the modernisation of Europe's higher education systems: communication from the commission to the European parliament, the council, the European economic and social committee and the committee of the regions. <https://doi.org/10.2766/17689>
- Eurydice. (2010). *Focus on Higher Education in Europe*. Brussels: The Impact of the Bologna Process. <https://doi.org/10.2797/38158>
- Eurydice. (2012). The European higher education area in 2012- Bologna Process implementation report. <https://doi.org/10.2797/81203>
- George Emil Palade University of Medicine, Pharmacy, Science and Technology in Târgu Mureș. (2020). Academic and professional activity regulations for bachelor and master's students. Retrieved from [https://www.umfst.ro/fileadmin/documente\\_oficiale/regulamente/UMFST-R](https://www.umfst.ro/fileadmin/documente_oficiale/regulamente/UMFST-R)
- Haj, C. M., & Tuca, P. L. (2021). *Access to Higher Education: Losing Precious Human Resources Before the Start Line* -Manuscript submitted for publication.
- Jones, R. (2008). *Student retention and success: A synthesis of research*. York: Higher Education Academy.
- Ministry of Education. (2018). Methodologies for budgetary allocation of public funds for the basic and additional financing of the public higher education institutions in Romania approved through the Ministerial Order no. 3047/2018. Retrieved from <http://www.cnfis.ro/wp-content/uploads/2019/03/OM-FInstit-3047-2018.pdf>
- Ministry of Education. (2020). Report on the state of higher education in Romania 2018–2019.
- Ministry of Education. (2021). Report regarding the Bacalaureate final results.
- OECD. (2019). *Education at a glance 2019: OECD indicators*. Paris: OECD Publishing.
- Orr, D., Haj, C., Usher, A., Geanta, I., & Atherton, G. (2017). *Study on the impact of admission systems on higher education outcomes*. <https://doi.org/10.2766/943076>
- Pana, A. (2020). Inequities of access of the population to health services in Romania.
- Presidential Administration. (2021). Educated Romania project website. Retrieved from <http://www.romaniaeducata.eu/>
- Quinn, J. (2013). *Drop-out and completion in higher education in Europe among students from under-represented groups. An independent report authored for the European Commission*. NESET: European Commission.

**Claudiu Herțeliu** holds a Ph.D. granted in 2007 by the University of Economic Studies, Bucharest, Romania. He started teaching in 2002 as a teaching assistant. Currently, he is a full professor at the Statistics and Econometrics Department from the same university. Since December 2019, he is part-time professor within the School of Business, London South Bank University. He worked with quantitative methods in the Education and Research Ministry (2001-2008) and the National Institute of Statistics (2008-2011). He had managerial responsibilities as The Dissemination of Romanian Statistical Information Activity or vice-dean of the Faculty of Economic Cybernetics, Statistics and Informatics (2012 - present) and member of University Senate (2012 - present).

**Daniela Alexe-Coteț** is a policy expert at the Executive Agency for Higher Education, Research, Development and Innovation Funding (UEFISCDI) and at the Center for Educational Policy - Bucharest (CPEdu), working for more than ten years in the field. Her expertise refers to higher education policy with a focus on social dimension and equity. She was involved in several strategic projects at national level in the field of education policy.

**Cezar Mihai Hâj** holds a Ph.D. in Political Science from the National University of Political Studies and Public Administration (SNSPA) in Bucharest. His experience as a policy expert includes coordinating a number of studies on internationalization, equity, university management, internal quality assurance, and data collection. He has written articles in Springer and Central European University publications and recently co-authored the “Study on the impact of admission systems on higher education outcomes” commissioned by the DG-EAC. He is a member of the Bologna Follow-Up Group and Social Dimension Advisory Group. He is currently coordinating an extensive national project focused on delivering evidence-based policy recommendations.

**Andrei T. Pârvan** is currently designing and managing teaching and learning experiences at the University POLITEHNICA of Bucharest. For more than 24 years, he has created, developed, and assessed civic education projects, social RDI, capacity building in organizations and communities within various contexts in Romania and abroad. His academic topics focus on human capital, student success and Higher Education.

**Open Access** This chapter is licensed under the terms of the Creative Commons Attribution 4.0 International License (<http://creativecommons.org/licenses/by/4.0/>), which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter’s Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter’s Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.



**Enhancing Quality in Higher Education.  
Employability and the Future of Work  
(Coordinated by Ligia Deca)**

# Doctoral Studies in Romania: Thriving or Surviving?



Simona Iftimescu, Mihaela Stîngu, and Delia Lupescu (Gologan)

**Abstract** This paper explores the specificities of doctoral studies, focusing on students' well-being. It is part of an ongoing research project analysing doctoral studies in Romania, focusing on three main themes: access, participation and completion. The multiple facets of the doctoral studies within the Bologna Process—seen at a crossroad between EHEA and ERA, and as a cornerstone of the 'knowledge-based society'—reflect onto the various roles assigned to doctoral candidates: students, emerging researchers, teaching and research assistants. While the doctoral cycle tends to prioritise the development of research and academic skills, it appears to be lacking appropriate support mechanisms for students. In order to better understand these mechanisms, the paper is structured on three levels: current context, practices and the students' perspective. This latter level explores internal and external factors of success—among others: motivation, personal/professional development, academic identity, doctoral supervision, research guidance, financial support, career counselling, and societal role. To do so, the paper draws upon a mixed methodology, using data collected from workshops with relevant stakeholders and a questionnaire addressed to Ph.D. students. By superimposing these layers, our paper aims to provide an overview of the current state of doctoral studies in Romania, with a focus on the well-being of doctoral students. Finally, it attempts to shape several proposals for improving both the practices and the policy framework of doctoral studies in Romania while taking into account the future of higher education and research in Europe, as well as European good-practice examples.

**Keywords** Higher education · Bologna process · Doctoral studies · Students' well-being

---

S. Iftimescu (✉) · M. Stîngu  
University of Bucharest, Bucharest, Romania  
e-mail: [simona.iftimescu@fpse.unibuc.ro](mailto:simona.iftimescu@fpse.unibuc.ro)

M. Stîngu  
e-mail: [mihaela.stingu@fpse.unibuc.ro](mailto:mihaela.stingu@fpse.unibuc.ro)

D. Lupescu (Gologan)  
Center for Educational Policies, Bucharest, Romania  
e-mail: [delia.gologan@gmail.com](mailto:delia.gologan@gmail.com)

© The Author(s) 2022

A. Curaj et al. (eds.), *Higher Education in Romania: Overcoming Challenges and Embracing Opportunities*, [https://doi.org/10.1007/978-3-030-94496-4\\_7](https://doi.org/10.1007/978-3-030-94496-4_7)

## 1 A General Overview of Doctoral Studies in the Context of the Bologna Process

The paper refers to doctoral studies in the context of the Bologna Process as the third cycle in higher education and, at the same time, as the first step in the career of an emerging researcher. Advancing knowledge through original research is the main component of this cycle and the main differentiator compared to the bachelor and the master's degrees. The particular role of doctoral studies at the crossroad between the European Higher Education Area (EHEA) and the European Research Area (ERA) offers them a special status, accentuating their role both in higher education as well as in research (EURODOC 2020, p. 5). Following the themes of access, participation and completion, the paper will first focus on a brief overview of these three aspects.

In terms of **access**, according to EUROSTAT, in 2018, in Europe, there were 17.5 million students. Out of the total, 6.8% were enrolled in short-term courses, 59.9% were enrolled at bachelor level, 29.5% at master's level, while 3.8% were pursuing a doctoral degree. In the European Union, there was a 60% increase in the number of Ph.D. holders in ten years—from 72.000 in 2000, to 188.000 in 2011 (Castello et al. 2017, p. 2). An OECD study (2019) indicates that 1.1% of all 25–64-year-old adults hold a doctorate (in OECD member countries). The increase in the number of doctoral graduates at the international level contributes, on the one hand, to the development of knowledge-based economies (an idea promoted by the European Union, the OECD and the World Bank), but, on the other hand, generates criticism regarding the capacity to absorb highly qualified graduates into the labour market in roles outside the academic environment. This leads to increased competition in research and higher education institutions (HEIs)—the preferred option for most candidates, with strong effects on the health of Ph.D. students and graduates, including on their well-being (Hancock 2020).

When it comes to **participation**, an analysis carried out by the European University Association (EUA) on the European Union practices at the doctoral level underlined a tendency towards developing structured doctoral programs and doctoral schools, which add to the individual training component. Among the strategic priorities for the universities/organisers of doctoral studies identified by the same study, there are topics such as financing of doctoral studies, research ethics and internationalisation, as well as career development, gender equality, open access to resources and doctoral students' well-being. A similar list of priorities was put forward by the European Council of Doctoral Candidates and Junior Researchers (EURODOC), which argues that the role of doctoral studies within the European Higher Education Area (EHEA) context should be re-evaluated in order to be better aligned to the general tendencies in higher education and educational policies. The organisation outlined areas considered important for such an alignment, namely research evaluation, open science, research ethics, mental health, career development and graduate tracking while pointing out the significant differences between the first two cycles (bachelor and master) and the doctoral cycle (EURODOC 2020, p. 1).

Several **aspects influence participation and completion** of doctoral studies. One such aspect refers to the financial support component, which has a direct effect on the process. Public resources are the dominant source of financing in Europe,

followed by employment by universities, grants and scholarships. Another important aspect is the coordination of the doctoral student. The support and guidance of young researchers is organised at several institutional levels. The cases where doctoral students carry out their work without any form of institutional supervision are rare, as the advisor continues to play a central role. EURODOC draws attention to the relationship between doctoral students and advisors, exploring options for improvement, such as organising training courses for advisors, conducting doctorates in joint supervision (e.g. dyad/group supervision), implementing structured and confidential feedback mechanisms, or providing greater support from the organising institution (EURODOC 2020, p. 3). The results of the EUA study (2019) indicate a low number of institutional rules and regulations that are in place regarding the training of doctoral advisors, which exist in only 17% of the participating European universities.

Regarding the **completion** of doctoral studies, EUA (2019) indicates that 78% of respondent universities consider that doctoral studies largely prepare the next generation of university professors, while 53% stressed the importance of training highly qualified workers. Only 52% of respondents believe that their doctoral programs prepare graduates for research positions outside academia, while only 29% believe they prepare them for leadership and leadership positions.

Another study conducted under the coordination of the European Science Foundation in 2016/2017 (nine participating organisations, including a university in Romania - University of Bucharest), which aims to monitor the careers of graduates of doctoral programs (2046 respondents), indicates a number of interesting perspectives for the doctoral candidates. Among these, the study indicates that universities and academia are the main destinations for graduates and that the doctorate is more relevant for roles in academia and less for other sectors (where the qualification is generally covered by Master studies). However, there is a need for additional training in transferable skills (e.g. communication, project management, and networking) and more support and career guidance (Boman 2017). EUA (2019) emphasises the importance of monitoring the career of doctoral students as a central element in the development of evidence-based educational policies and the future improvement of the career development component of a doctoral student. In 2019, only 45% of respondents monitored the career of a majority of graduates of doctoral programs. In this regard, the European Commission reiterated its commitment to launching a European graduate monitoring initiative. At the same time, the relative advantage for the insertion on the labour market of doctoral graduates compared to master's graduates varies in OECD countries from 10% in Finland, Hungary and Italy, to only 1% in Iceland and Sweden (OECD 2019), indicating the need for a better contextualisation of the graduates' path according to the national context, as well as for increased international mobility among the young researchers/graduates of doctoral studies.

## 2 Methodology

Following this theoretical framework and the stages defined as entry, integration and completion, the paper explores the specificities of doctoral studies in Romania, focusing on students' well-being. It does so by drawing upon a mixed methodol-

ogy, using qualitative data collected from workshops with relevant stakeholders and quantitative data drawn from a questionnaire addressed to Ph.D. students.

The three workshops took place in March 2021 and gathered approximately 100 representatives from public institutions, higher education institutions, quality assurance bodies, academia and student representatives, as well as other interested parties. Their contributions were recorded, transcribed and later included into relevant categories, informed by the existing literature in the field. At a later stage, the initial results were validated with several experts in the field of education and representatives of different stakeholders (academia, students and policy-makers).

The National Students' Survey was developed by UEFISCDI during the second term of the 2019/2020 academic year, and it included 277 responses from doctoral students with regards to their satisfaction towards services provided by the university and the quality of their doctoral program. The questionnaire comprises three sections, one concerning the educational process in the context of the Covid-19 pandemic, the second section is dedicated to students' satisfaction with services offered by their university, and the third section refers to students' satisfaction with the quality of their academic program. For this current analysis, only questionnaires filled in by doctoral students were taken into account, particularly focusing on items falling under these categories: well-being, students' experience and support mechanisms. Out of the 277 respondents enrolled in a doctoral program (115 male and 162 female), 43 reported belonging to a particular social context (disadvantaged background), and 38 reported belonging to another ethnicity. The majority of respondents (109) are first year students, while the rest are registered in other years of study (second year—66, third year—95 and fourth year—7). Out of the total, 20 students have extended their studies, while 13 have postponed the final thesis presentation, and 10 students currently benefit from a grace period.

The methodological limitations of this study derive from two main aspects. First, it should be noted that the particular context in which the questionnaire was administered, namely after the transition to online teaching, learning and research during the Covid-19 pandemic, could have influenced the students' responses and the survey outcomes. Second, the sample is not statistically relevant for the entire Romanian Ph.D. students' body, but it provides one of the few existing opportunities for such an analysis, as it offers the perspective of a group of doctoral students regarding their first-hand experience in the doctoral program.

### **3 Current State of Affairs—Doctoral Studies in Romania**

In Romania, doctoral programs are regulated by the National Education Law no. 1/2011, as well as by Decision no. 681/2011 regarding the approval of the Code of doctoral university studies. According to the National Education Law (art. 159/1), doctoral programs are carried out in doctoral schools under the coordination of a doctoral advisor. They include a training component based on advanced university studies and an individual program of scientific research or creation. Doctorates can

be scientific if their purpose is original scientific knowledge, or professional, in the fields of arts or sports. Doctorates are usually organised in the form of full-time education, but there is also an option for part-time programs.

According to the Romanian Agency for Quality Assurance in Higher Education (ARACIS), in 2018, there were 57 institutions organising doctoral studies (IOSUDs) in Romania (52 state higher education institutions, 4 private and the Romanian Academy) with 210 doctoral schools—respectively 434 doctoral fields (401 doctoral degree subjects). According to the Executive Unit for Financing Higher Education, Research, Development and Innovation (UEFISCDI), data from research carried out at the level of 40 universities in Romania indicates that the number of doctoral students increased by 23% between 2015/2016 and 2019/2020 (a higher increase than that recorded by the number of undergraduate or master's level students) (UEFISCDI, 2021, p. 5).

In terms of **access** to doctoral studies, in 2018 there were 4,541 places available for doctoral admission, of which 1,328 for fee-paying places (including in private HEIs) and 3,213 for budgeted places (1,559 with scholarship and 1,654 without scholarship), the distribution being made by the Ministry of Education (ARACIS 2018). In 2021, compared to the 2015/2016 academic year, in 46 of the Romanian universities where doctoral studies are organised, there was a decrease in the number of budgeted places with scholarship (by 27.21%), an increase in budgeted places without scholarship (by 82.07%) and for fee-paying students (by 37.95%) (UEFISCDI 2009, p. 9). According to UEFISCDI, the recruitment pool for doctoral students is usually the universities' own graduates, which makes 'doctoral admission often formal, based on previous discussions between the advisor and the student so that the advisors already know whom they want to work with before the admission process' (UEFISCDI 2009, p. 5). This is just another proof of the spread of academic inbreeding—that starts from the beginning of an academic career—which is not just a local or national problem but also a global phenomenon (Altbach et al. 2015).

Thus, in terms of **participation**, one of the main factors influencing the process appears to be the relation between the Ph.D. coordinator/advisor and the doctoral student. The coordination of the doctoral student can be unique—by an appointed advisor from the higher education institution or co-supervised, when the doctoral student carries out their activity under the simultaneous guidance of two coordinators—one from Romania and another from another doctoral school/IOSUD/country. In 2018, in Romania, there were 4,388 doctoral advisors (of which 34 in private institutions) out of a total of 23,412 professors who would meet the *habilitation* conditions (ARACIS 2018).

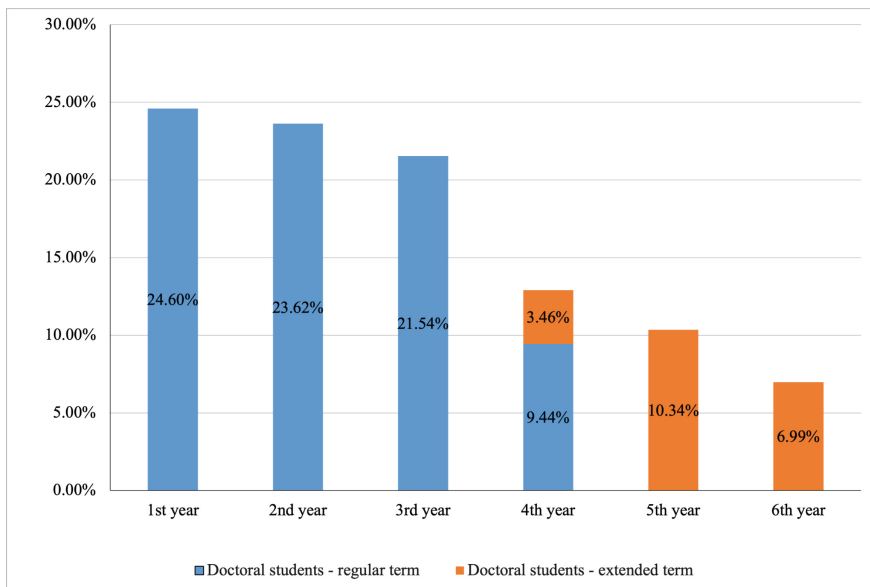
In Romania, the doctoral student has a dual status: as a student (from enrolment to taking the final exam or to termination) and as an emerging researcher, by carrying out research activities in relation to the doctoral thesis (generally formalised by monthly activity reports). There is also the option of being employed as a research assistant or university assistant for a limited timeframe. However, 'due to the ambiguous status within the team, the doctoral student is often subordinated to several people and thus ends up doing more administrative work than research' (UEFISCDI 2009, p. 7). This dual status—as student and university employee—has an impact on both the



rights and responsibilities of the doctoral student (which include teaching courses, involvement in research and administrative activities of the department, etc.).

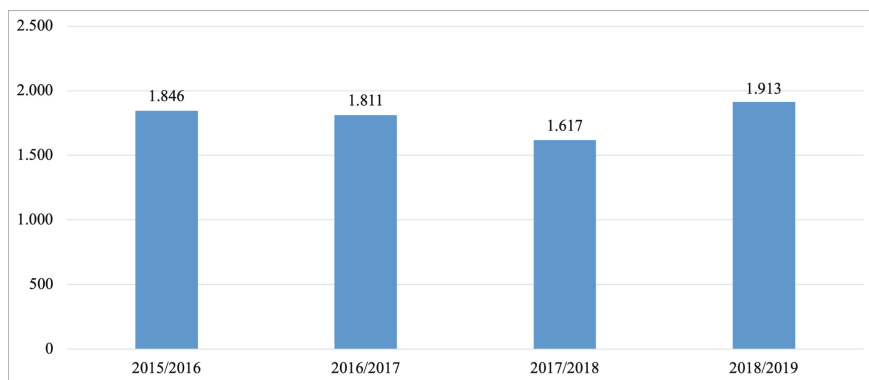
According to the law, the timeframe of doctoral studies is three years, with the possibility of extension for a maximum of two years. One can also obtain a grace period (lasting two years), which leads to the possibility of formally extending the period of doctoral studies from three years to seven years, without including interruption periods. Such interruptions may not exceed, in general, two years; an exception is made in cases of raising/caring for a child, when the interruption may add up to three years but can only be requested once during the doctoral program. These provisions vary depending on the regulations of the doctoral school.

The distribution of students per year of study in the academic year 2019/2020 indicates that 69.77% of doctoral students are in their first three years of study, 3.46% are in the 4th ‘legal’<sup>1</sup> year (in the case of 4-year doctorates), while 26.77% benefit of an extension (year 4, 5 or 6)—the latter percentage registering an increasing trend in recent years (3.33% more students than in 2015/2016 continue their studies in year 4, 5 and 6 according to data reported for the 2019/2020 academic year) (Fig. 1). In the first years following the Bologna Process implementation, the three years allocated to these studies were considered ‘totally insufficient, even if the doctoral students would only deal with their own research’ (UEFISCDI 2009, p. 7). Therefore, a more



**Fig. 1** Distribution of doctoral students on years of study for the 2019/2020 academic year. *Source* UEFISCDI, 2021

<sup>1</sup>According to provisions of Art. 39, alin. (2)/HG. no. 681/29 June 2011 regarding the approval of the Code for doctoral studies.



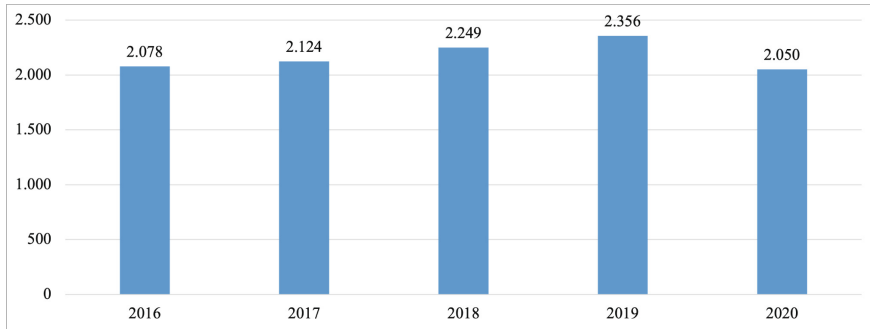
**Fig. 2** The evolution of the no of Ph.D. graduates from 2015/2016 to 2018/2019. *Source* UEFISCDI, 2021 (p. 22)

optimal period of 4–5 years could be considered for doctoral studies, in the future, with variations depending on the field of study.

In terms of **completion**, according to the UEFISCDI<sup>2</sup> data, the number of doctoral graduates has been slightly increasing in Romania (for the period 2015/2016 to 2018/2019) (Fig. 2). There is a need for better monitoring process not only after graduation but also during the doctoral studies, for a better understanding of key moments in the doctoral course and the factors that influence the success/failure of Ph.D. candidates. Also, beyond the quantitative indicators, the definition of success/failure of doctoral studies can be further explored (for example, finishing in the allotted three years’ timeframe, publication of articles in co-authorship with the doctoral advisor, participation in conferences, impact of research on field/practice, involvement in teaching, etc.).

The Ministerial Decree (OMEN no. 5110/2018) details the minimum national standards for granting the doctoral degree, which contains a set of standards specific to doctoral fields. Specialised committees of the National Council for Attestation of University Degrees, Diplomas and Certificates evaluate each doctoral thesis against these standards before a doctoral degree is granted, but after the doctoral candidate has successfully defended his/her thesis publicly (in front of a commission assigned by the institution where they are enrolled in). For most committees, the standards include the compulsory publishing of articles in internationally recognised journals, with a minimum of articles for which the doctoral student has the status of first author, the relevance of published articles in relation to the topic of the doctoral thesis, writing a minimum of articles in collaboration with the Ph.D. advisor, publication of book chapters, participation in national and international conferences, etc. In addition to these standards, other specific standards can be adopted by higher education institutions and the Romanian Academy.

<sup>2</sup>The analysis is based on data provided by 40 of the total number of universities in Romania.



**Fig. 3** Number of Ph.D. holders from 2016 to 2020. *Source* UEFISCDI, 2021 (p. 24)

In recent years (2016–2020), a relatively constant number of Ph.D. titles/year has been granted, totalling 10,857, with a slight fluctuation between 2019 and 2020 (an increase, followed by a decrease of approximately 13%) (UEFISCDI, 2021, p. 24).<sup>3</sup> A better understanding of the mechanisms of the graduation process could also be provided by the analysis of the procedures and the institutional calendar (including the time interval between completion of the doctoral thesis and its public defence). This would be relevant particularly when it comes to the differences which appear in reporting doctoral students enrolled each year compared to the number of doctoral degrees granted at the end of a three-year cycle. For example, for doctoral students completing their thesis at the end of an academic year, the public defence could be scheduled at the beginning of the next academic year while the official validation from the Ministry of Education could be issued months later (Fig. 3).

Beyond fulfilling the criteria for Ph.D. graduation, it is important to consider the whole process of Ph.D. entry, completion and the transition to the academic, professional or research environment, also taking into account the challenges encountered by Ph.D. candidates on a personal level. According to a study on mental health in academia/research, Ph.D. students face similar challenges to researchers and teachers in higher education. One such challenge stands out—depression, also caused by the imbalance between academic, professional and personal life, low predictability of their career path, reduced support from the advisor, or exclusion from the decision-making process. Studies indicate that the relevance of the doctoral activity for the career and confidence in one’s own research skills can reduce the associated stress (Guthrie et al. 2017). Thus, in order to ensure the most favourable course, as well as to support the graduation of doctoral students and their employability, the reconfiguration of the doctoral cycle must go beyond administrative, institutional or funding aspects and consider redefining the role of the doctoral student and the graduate.

<sup>3</sup>The analysis is based on data provided by 40 of the total number of universities in Romania.

## 4 A Perspective on Doctoral Students' Well-Being

Even though at an international and European level the appeal of doctoral programs appears to be on the rise, there are still many factors influencing doctoral students to drop out of their programs. However, most current studies reflect more on the institutional factors and less on the personal ones, which appear to have a greater impact on the decision. Not only that, but it seems that the risk of dropping out is higher for young, female and part-time students (Castello et al. 2017), particularly for students in humanities and social sciences, belonging to a minority group, not benefitting from sufficient funding and who are less integrated in the academic community (Gardner 2009).

Despite most countries reporting on enrolment rates and number of Ph.D. holders, there is still little data on dropout rates. Internationally, the average percentage appears to be around 50% (Castello et al. 2017), varying depending on the discipline and access to funding (Ali and Kohun 2006). Other authors have identified different factors which could be seen as predictors of dropout, such as the relationship with the advisor, institutional factors—departmental structure and efforts to create a community (Stubb et al. 2011), or motivation and mental health (Gardner 2009). As most of the literature in the field points out, some of the main factors related to dropping out of a doctoral program refer to ‘personal, institutional and doctoral programs characteristics or research-related work conditions’ (Castello et al. 2017, p. 3).

Following a review by Castello et al. (2017), some of the main reasons leading to students dropping out of their doctoral programs refer to them experiencing a feeling of *isolation*, built on several aspects, such as the lack of knowledge regarding what a Ph.D. program would entail, taking on a new role, lack of progress in their work and unfamiliarity with the completion process. A second reason refers to ‘inadequate socialisation’ (Castello et al. 2017, p. 3), influenced by low integration in the academic community, particularly in their departments. Important factors influencing the decision to drop out are connected to the actual research and writing process, which can cause anxiety, as well as to the decision on the thesis format (where there is such an option), with students writing monographs instead of a collection of published articles being more likely to drop out. Finally, the feeling of isolation is also influenced by the relationship with the advisor. Other studies focus on difficulties in balancing personal life and academic requirements, not only when choosing to pursue other alternatives, but also when there appears to be a mismatch between personal values and departmental/university values (Allan and Dory 2001; Smith et al. 2006; Gardner 2009; Manathunga 2005). The lack of resources also represents an important factor affecting doctoral students’ decision to pursue and complete their studies, mainly when it comes to time and funding.

It is also important for the universities to limit as much as possible, or eliminate altogether, the ‘culture of institutional neglect’ (Castello et al. 2017 apud. McAlpine et al. 2012) by developing networks and supporting academic integration. This also entails more engagement with the doctorate by creating team projects, ensuring more

contact with students' peers and developing their identity as researchers. It is also considered that extensive research training and early appointment of supervisory teams (Tinto 1993) contribute to a better experience for doctoral students.

Another factor that needs consideration when discussing participation and completion of doctoral studies is the type of interest manifested by doctoral students (research interest, instrumental motives, developmental interest, intrinsic/extrinsic motives, etc.). Interest could be manifested from the stage of deciding to enrol in a doctoral program and choosing the research topic, to their resilience in the process and, finally, to the completion of their doctoral program (Pyhältö et al. 2019).

The concept of well-being in the context of doctoral studies has caught traction in the past years. However, Romania appears to be lagging behind, as no research has targeted this component of the doctoral experience. From an international perspective, the topic has been covered by several authors, leading to findings underlining the burnout risk of doctoral students, manifested through either exhaustion or cynicism (Pyhältö et al. 2019). Burnout is strongly connected, on the one hand, to a decrease in research productivity and engagement, while on the other hand, with an increased risk of dropping out or prolonging their studies indefinitely (Pyhältö et al. 2019; Ali and Kohun 2007). In order to better understand the perspective of doctoral students' well-being, this paper considers the definition proposed by Juniper et al. (2012), seen through a lens consisting of several factors, such as happiness, health and success.

As shown in several research studies, factors influencing doctoral students' decision to drop out, as well as their mental state and well-being, can be identified at several stages in the Ph.D. process. Thus, following Gardner's model (2009), the analysis attempts to follow these particular stages in order to generate a more in-depth perspective of the different points of intervention and support mechanisms. The stages identified by Gardner are entry, integration and candidacy, with several challenges arising from each: the initial transition, coursework, transition to different expectations (entry); coursework, examinations, changing role (integration); transition to candidacy, the dissertation experience, job search, and transition to a new professional role (candidacy). Moreover, each stage also identifies several support factors, such as orientation, initial relationship with peers and faculty (entry); peer and advisor relationship (integration); the dissertation advisor (candidacy) (Gardner 2009).

## 5 Results

Drawing from the qualitative data collected through the three workshops where a number of relevant stakeholders participated, several themes stood out, that fall into one of the three stages proposed by Gardner (2009).

Therefore, the themes raised for the *entry stage* are:

- Low degree of attractiveness of doctoral studies, particularly for international students;

- Difficulties in reconciling the status duality of the doctoral student, which can lead to work overload, burnout situations or even advisors' abusing their position of power.
- This duality is also associated with cognitive and socio-emotional ambiguities, as well as with difficulties in transitioning from students' conformity to the independence, autonomy and creativity required by an emerging researcher's role;
- Difficulties in organising doctorates in joint supervision and joint degrees and few opportunities for international mobility.

When it comes to the *integration stage*, the main issues raised by the stakeholders refer to:

- Poor relationship between the Ph.D. advisor and the doctoral student. Currently, the advisor is not seen as a facilitator or mentor, but rather as an institutional representative, overseeing the doctoral students' work;
- Insufficient resources for the doctoral students;
- Lack of transparency in the way in which doctoral grants are spent/ used by HEIs;
- Insufficient time for completing doctoral studies.

Finally, the stakeholders' perspective on the *candidacy phase* reflect the following priorities:

- Uncertainty and difficulties regarding the insertion on the labour market (within and outside the academia);
- Few opportunities and unpredictability for post-doctoral studies.

Attempting to better understand the students' perspective, several items were underlined following the analysis of the students' questionnaire, particularly those connected with well-being and support mechanisms. Therefore, the paper focuses on five main questions, aiming to shape some general trends that could be then used as the starting point for a more in-depth analysis.

When it comes to the doctoral students' feeling of belonging to a community (as defined by the institution they are affiliated to and by the other students), the majority of the respondents expressed complete agreement (43%) and agreement (27%), with 30% reporting disagreement or uncertainty (Fig. 4).

Doctoral students participating in the study report being satisfied with the way in which they were supported to interact with their peers in the learning process, with 34% being in complete agreement with the statement, while a similar percentage reported agreement (34%). Only 4% are in complete disagreement, 7% reported disagreement, while 21% fall in the 'neither agree nor disagree' bracket (Fig. 5).

Moreover, the majority of the doctoral students participating in the survey (44%) are in complete agreement with the statement 'I experienced openness from my professors when I faced challenges', with 37% simply agreeing. Only a small percentage of respondents have expressed complete disagreement (2%) or disagreement (4%) with this statement (Fig. 6).

Similarly, a majority of the respondents consider the university offers them the necessary conditions and a favourable atmosphere for their personal development,

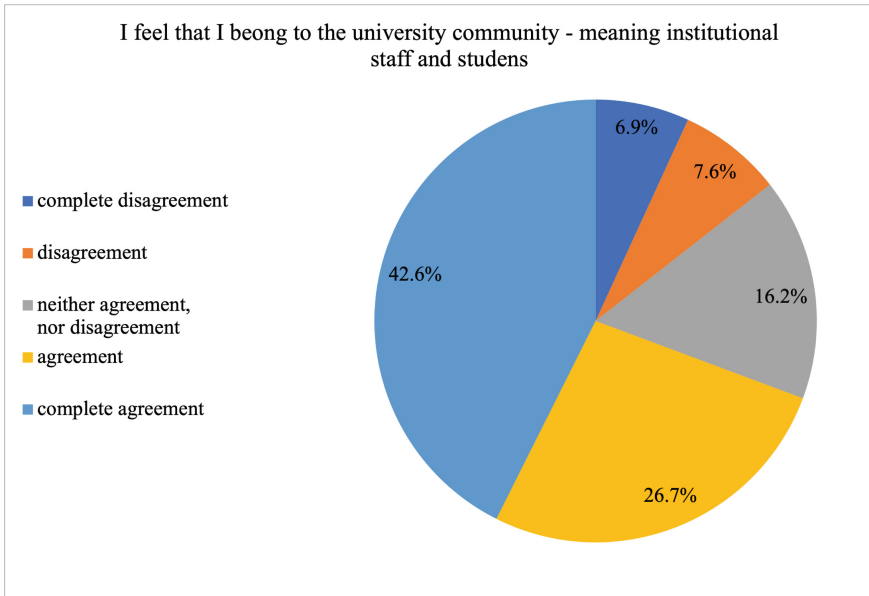


Fig. 4 Feeling of belonging to the university community (Q1.4)

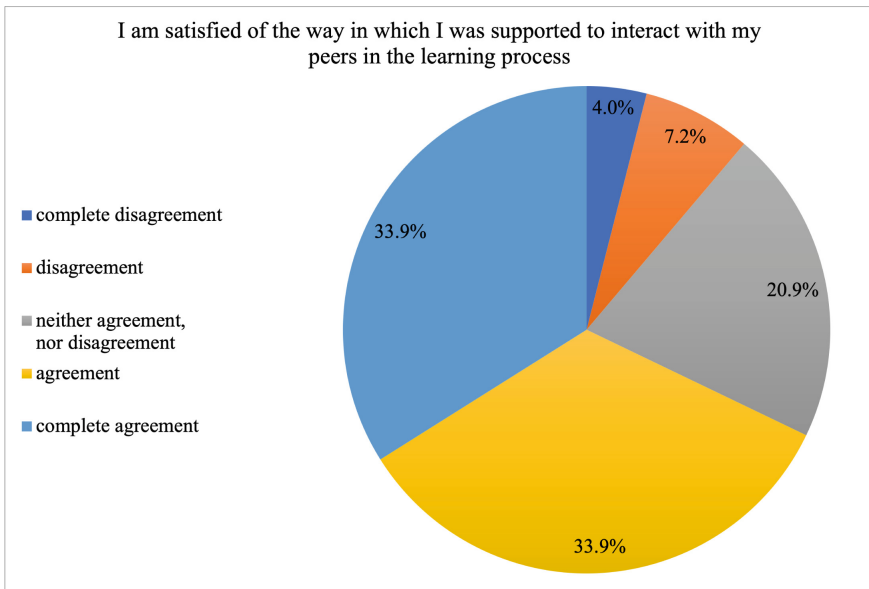


Fig. 5 Satisfaction with support received in interacting with peers in the learning process (Q8.6)

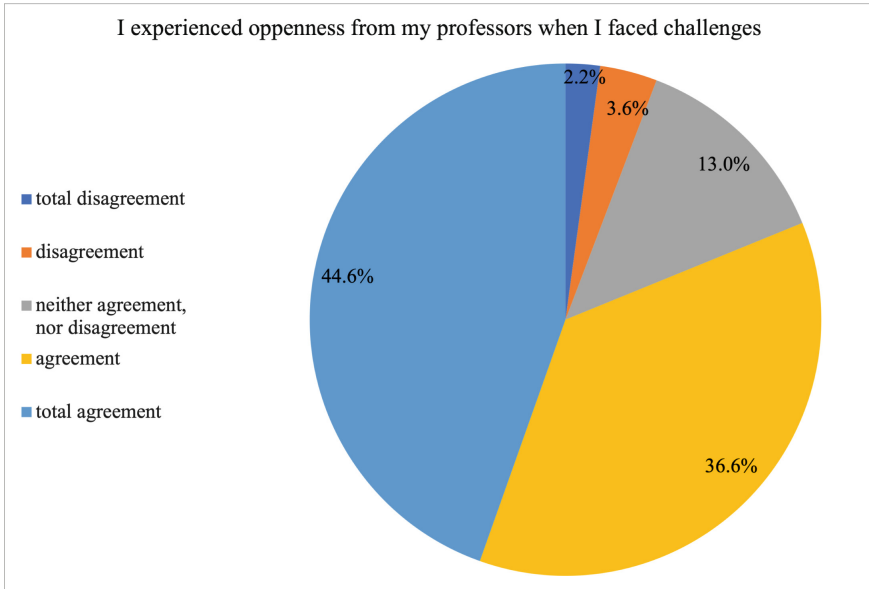


Fig. 6 Openness from professors when facing challenges (Q10.1)

with 40% strongly agreeing to this statement and 31% expressing agreement, while only 13% are in complete disagreement and disagreement (Fig. 7).

In what concerns career and counselling services offered by the university, there is a different perspective than on previously discussed factors, as the percentage of those completely disagreeing (16%) and disagreeing (7%), as well as those falling in the ‘neither agree nor disagree’ category (38%) indicate increased dissatisfaction with these services (Fig. 8).

Out of these particular items, the highest average (4.16) is reported for Q10.1 (*experiencing openness from professors when facing challenges*), while the lowest average (3.21) is recorded for Q5.5 (*satisfaction with services offered by the Career Counselling and Orientation Centre*). Overall, there does not seem to be a significantly different perspective between different types of respondents, as the averages follow similar tendencies. For example, there does not appear to be a significant difference between **male (M) and female (F)** respondents, even though the latter appears to report a greater level of satisfaction in relation to the items analysed here. The only exception appears in connection to Q1.2 (*favourable atmosphere for my personal development*), for which male students register a slightly higher average (M = 3.96, F = 3.86). Similarly, there are no significant differences with regard to self-reported **socioeconomic status** as those pertaining to a disadvantaged group<sup>4</sup> registered only slightly lower averages than the general ones, especially for Q1.4

<sup>4</sup>For the purpose of the analysis, all respondents reporting other situations, undeclared, orphaned and belonging to a disadvantaged group were included.



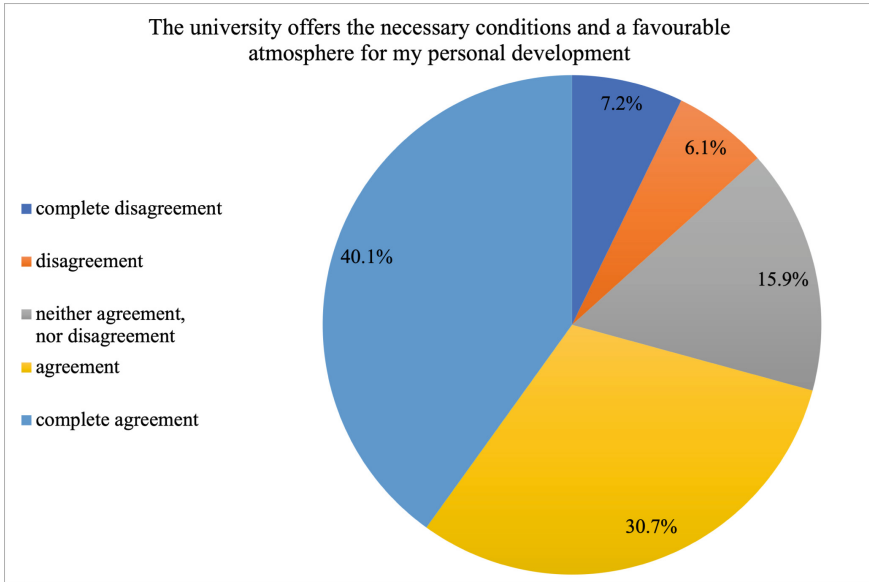


Fig. 7 University conditions and atmosphere (Q1.2)

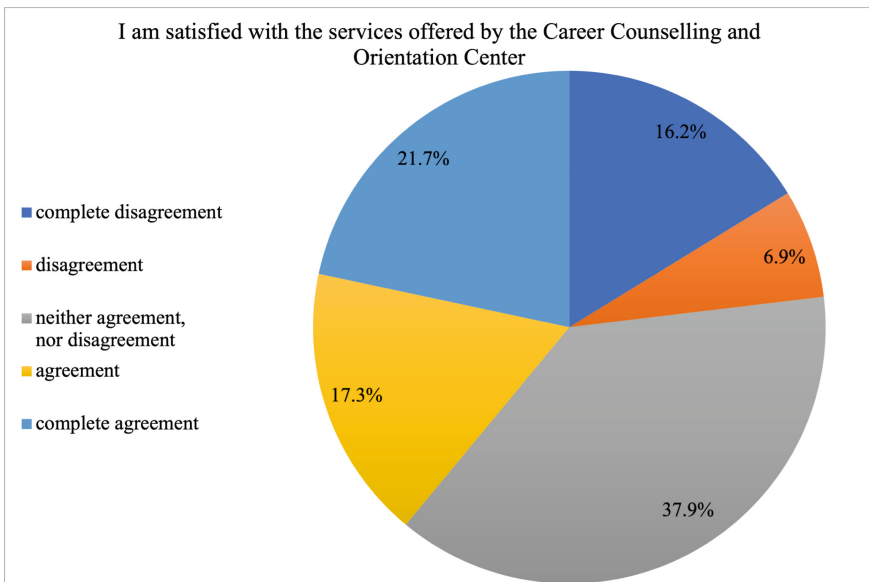


Fig. 8 Satisfaction with the career centre services (Q5.5)

(feeling of belonging to the university community; the average was 3.19 compared to 3.91). However, a higher average was registered for Q10.1 (experiencing openness from professors when facing challenges; 4.25 compared to 4.16). In terms of financ-

ing, doctoral students paying a fee (self-funded Ph.D.) appear to report, on average (4.25), a higher degree of satisfaction as reflected by the analysed items, followed by doctoral students receiving a scholarship (4.12). In what concerns the type of doctoral programs, students participating in full-time programs report slightly higher levels of satisfaction (with an average of 3.85) than their part-time peers (with an average of 3.74), with a greater difference for Q10.1 (4.20 compared to 4.02). Finally, for each of the five items analysed, the averages were higher for doctoral students born before 1990 (3.93) compared to those born after 1990 (3.77)—which might indicate a different perception of institutional culture between generations, even though the difference is not statistically relevant.

## 6 Implications for Policy and Practice

While the international context and best practices in the field of doctoral studies are relevant, it is also important to contextualise potential solutions to the particularities of a specific country, especially when it comes to students' interest with regard to doctoral studies (Pyhältö et al. 2019). Starting from this premise, we will focus on the implications that the literature review, the stakeholders' priorities and the students' perspective have on the different levels of intervention in the Romanian context, starting from the students' experience to institutional and policy changes.

In terms of **students' experience**, research and specialised studies indicate that a decreased risk of burnout and increased potential for students' well-being can be achieved by promoting students' 'sense of belonging, competence and autonomy [...], engagement in research teams, [creating] a more individualised support system' (Pyhältö et al. 2019, p. 13). Therefore, it is important for the students to experience integration into the scientific community and for the institutions to support the development of students' capacity to act as 'active relational agents' (Pyhältö and Keskinen 2012) by being proactive in their academic communities.

Even more so, at the **institutional level**, the universities should further develop scientific writing, communication of scientific results (Castello et al. 2013), integrate doctoral students in research teams (Castello et al. 2017), create a positive atmosphere and offer constructive advice (Pyhältö et al. 2019). An integrated institutional plan for approaching doctoral students who manifest their intention to drop out (discussion with the advisor, revision of research plan and timeline, etc.) could be useful for addressing the completion of doctoral studies, while implementing a new position for an academic and well-being advisor per group of doctoral students could also have beneficial results. Furthermore, several instruments would be valuable for addressing potential conflictual situations, such as mediation or counselling. Stakeholders also consider creating a framework that would increase the percentage of trans-disciplinary subjects, encouraging participation of doctoral students in academic life by organising lectures connected to their Ph.D. topics in order to facilitate the validation of their emerging researchers' status, as well as involving doctoral students in at least one research project at departmental level.

At the **policy level**, several measures could be explored in order to improve the doctoral students' experience and address the needs of a variety of non-traditional Ph.D. students. One such measure could be regulating and redesigning part-time study for a better work-life balance. Similarly, it could prove useful to introduce a 1-year program of pre-doctoral studies in order for the doctoral student to better understand the workload and expectations of pursuing a Ph.D. degree. If the student decides to continue, the 1-year could count towards their degree, whereas if the student decides to pursue other opportunities, there could be an option for an exam leading to a short-term post-graduate certification. Such an exam could potentially allow the graduate to teach at the university level in an associate role, equivalent to an assistant position, particularly for vocational specialisations—arts, theatre, cinematography, music, sports etc. Also, in what concerns improving the relationship between the advisor and the doctoral student, stakeholders recommend developing and implementing training programs for advisors (i.e. during their preparation for *habilitation*). Most changes that appear to have influenced higher participation rates in Ph.D. programs relate to reducing the time needed to complete a Ph.D. program, integrating training on topics such as scientific productivity, focusing on interdisciplinary approaches and promoting international mobility (Castello et al. 2017, p. 2).

When it comes to funding, several options have been suggested by relevant stakeholders: implementing a grant system for research projects, private scholarships/privately funded Ph.D.s, as well as instruments for increasing transparency and traceability in the way the Ph.D. grants are spent. Following the United Kingdom model, a possibility would be to offer doctoral students the opportunity to be financially supported by businesses or charities/NGOs working in their specific research area. The proposals also refer to differentiating between academic and professional Ph.D.s, doubled by flexible routes that would allow doctoral students alternatives in pursuing their studies, which also entails restructuring the doctoral curriculum and offering more autonomy to the student. Following several international examples, another useful measure could prove to be developing and introducing a research career model. This could potentially be based on the Finnish example, namely a four-stage researcher career model, comprising the doctoral degree, post-doctoral fellowship (two-five years), and, finally, professorships and research directorships, including a tenure-track system between stage three and four (Pyhälä et al. 2019, apud. The Academy of Finland, 2010).

## 7 Conclusions

The main claim of this paper refers to placing the doctoral student in the centre of the doctoral program, thus ensuring a healthy, productive and successful experience, and it only addresses some of the existing challenges and opportunities that could be further addressed in transforming doctoral studies in Romania.

Future research could tackle a wide range of topics concerning doctoral studies, aiming to improve the provision of courses, training, supervision and the doctoral students' transition to the labour market. In the Romanian case, there is no available

public data on past or current dropout rates, partly because of the possibility to extend the duration of the Ph.D. program by using provisions such as the ‘grace period’, interrupting the Ph.D. program or extending it with the advisor’s approval. There is no available data clarifying what percentage of those who extend their program actually end up completing it after the extension. Secondly, when doctoral students decide to drop out, while some do not even inform the university and choose to be expelled at a later date, others fill out a request that has to follow a long institutional process of approval, with the decision being communicated in some cases after more than a year. Moreover, there has been no specific research dedicated to doctoral students’ well-being in Romania, nor has there been a comparative study between perceptions or the experience of students who have successfully completed their Ph.D. studies and those who have dropped out or whose contracts have been terminated by the university. These make it more difficult to assess the most efficient intervention in order to better institutional or national practices and policies. Future research could also focus on identifying a better balance between the autonomy and support required by the doctoral students and by understanding the doctoral process at a more granular level by specifically addressing topics such as counselling, publishing or supervision in order to find more targeted solutions.

Therefore, bridging this gap in research and in data collection allows for several directions for future research in the field, which could help shape a better context for improving doctoral studies in Romania, ensuring students and emerging researchers are thriving, and allowing for a better integration within European and international trends in academia and research.

**Acknowledgements** The paper derives from a project co-financed by the European Social Fund through the Human Capital Operational Program 2014–2020 (‘Quality in Higher Education: internationalization and databases for the development of Romanian education [POCU INTL]’), implemented by the Executive Unit for Financing Higher Education, Research, Development and Innovation (UEFISCDI)/ Centre for Public Policies in Higher Education, Science, Innovation and Entrepreneurship, project code: POCU/472/6/8/126766/21.11.2018

## References

- Agencia Națională de Asigurare a Calității în Învățământul Superior—ARACIS. (2018). *Oferta și Cererea de programe de studii de Doctorat din România în anul universitar 2017–2018*. (En: The National Agency for Quality Assurance in Higher Education—ARACIS (2018). The offer and request for doctoral programs in Romania in the academic year 2017–2018).
- Allan, P. & Dory, J. (2001). *Understanding doctoral program attrition: An empirical study* (Paper 17). Faculty Working Papers. [http://digitalcommons.pace.edu/lubinfaculty\\_workingpapers/17](http://digitalcommons.pace.edu/lubinfaculty_workingpapers/17). Accessed in April 2021.
- Ali, A., & Kohun, F. (2006). Dealing with isolation feelings in IS doctoral programs. *International Journal of Doctoral Studies*, 1(1), 21–34.
- Ali, A., & Kohun, F. G. (2007). Dealing with social isolation to minimize doctoral attrition—A four stage framework. In *International Journal of Doctoral Studies*, 2, 33–49. <https://doi.org/10.28945/56>.

- Altbach, P.G., Yudkevich, M. & Rumbley, L.E. (2015). Academic inbreeding: Local challenge, global problem in *Asia Pacific Education Review* (16), 317–330. <https://doi.org/10.1007/s12564-015-9391-8>.
- Bologna Follow-Up Group—BFUG. (2005). General report to the bologna follow-up group to the conference of European ministers responsible for higher education—Bergen 19/20 May 2005
- Boman, J., & (coord.). (2017). *Career tracking survey of doctorate holders*. European Science Foundation—ESF: Project Report.
- Castelló, M., Iñesta, A. & Corcelles, M. (2013). Ph.D. students' transitions between academic and scientific writing identity: Learning to write a research article. *Research in the Teaching of English*, 47(4), 442–478.
- Castelló, M., Pardo, M., Sala-Bubaré, A., & Suñe-Soler, N. (2017). Why do students consider dropping out of doctoral degrees? Institutional and personal factors. *Higher Education*, 74(6), 1053–1068. <https://doi.org/10.1007/s10734-016-0106-9>.
- European Commission. (2016). *She Figures 2015*. Publications Office of the European Union, Luxembourg. <https://doi.org/10.2777/064694>.
- European Council of Doctoral Candidates and Junior Researchers—EURODOC. (2020). Eurodoc policy input for European higher education area: Focus on doctoral training and doctoral candidates. *Press release* Brussels. Retrieved November 17, 2020.
- European University Association—EUA. (2019). *Doctoral education in Europe today: Approaches and institutional structures*. EUA: Council for Doctoral Studies.
- EUROSTAT. (2021). EUROSTAT database. <https://ec.europa.eu/eurostat> (online data code: educ\_uae\_enrt0). Accessed in March 2021.
- Gardner, S. K. (2009). The development of doctoral students: Phases of challenge and support. *ASHE Higher Education Report*, 34(6), 1–14.
- Guthrie, S., Lichten, C. A., van Belle, J., Ball, S., Knack, A. & Hofman, J. (2017). Understanding Mental Health in the *Research Environment*. Published by the RAND Corporation, Santa Monica, Calif, and Cambridge, UK.
- Hancock, S. (2020). *The employment of Ph.D. graduates in the UK: What do we know?* Higher Education Policy Institute. <https://www.hepi.ac.uk/2020/02/17/the-employment-of-phd-graduates-in-the-uk-what-do-we-know/> Accessed in April 2021.
- HG nr. 681/29 iunie 2011 privind aprobarea Codului studiilor universitare de doctorat. *En: Government Decision no. 681/29<sup>th</sup> June 2011 regarding the approval of the Code of Doctoral Studies*.
- Juniper, B., Walsh, E., Richardson, A., & Morley, B. (2012). A new approach to evaluating the well-being of Ph.D. research students. *Assessment and Evaluation in Higher Education*, 37(5), 563–576. <https://doi.org/10.1080/02602938.2011.555816>.
- Lovitts, B. E. (2001). *Leaving the ivory tower: The causes and consequences of departure from doctoral study*. New York: Rowman & Littlefield.
- Lovitts, B. E., & Nelson, C. (2000). The hidden crisis in graduate education: Attrition from Ph.D. programs. *Academe*, 86(6), 44–50.
- Manathunga, C. (2005). Early warning signs in postgraduate research education: A different approach to ensuring timely completions. *Teaching in Higher Education*, 10(2), 219–233.
- McAlpine, L., Paulson, J., Gonsalves, A. & Jazvac-Martek, M. (2012). 'Untold' doctoral stories: can we move beyond cultural narratives of neglect? *Higher Education Research and Development*, 31(4), 511–523. <https://doi.org/10.1080/07294360.2011.559199>.
- OECD. (2019). *Education at a Glance: OECD Indicators* (Indicator B7. What are the characteristics and outcomes of doctoral graduates?)
- Olah, R. & Háj, C.M. (2021). *Policy brief - Doctoranzi în România. Analiza datelor statistice privind doctoranzii și absolvenții studiilor universitare de doctorat din România—evoluții 2015/2016–2019/2020, UEFISCDI, Centrul de Politici Publice, nr. 2/2021* (En: Policy Brief—Doctoral students in Romania. An analysis of statistical data regarding doctoral students and graduates in Romania—development from 2015/2016–2019/2020)
- OMEN nr. 5110/2018 privind aprobarea standardelor naționale minime pentru acordarea titlului de doctor (En: Minister of Education Order no. 5110/2018 regarding the approval of minimum national standards for granting the Ph.D. title)

- Pyhältö, K., & Keskinen, J. (2012). Doctoral students' sense of relational agency in their scholarly communities. *International Journal of Higher Education, 1*(2), 136–149. <https://doi.org/10.5430/ijhe.v1n2p136>
- Pyhältö, K., Peltonen, J., Castelló, M., & McAlpine, L. (2019). What sustains doctoral students' interest? Comparison of Finnish, UK and Spanish doctoral students' perceptions. *Compare: A Journal of Comparative and International Education, 50*(5), 726–741. <https://doi.org/10.1080/03057925.2019.1585229>.
- Smith, R. L., Maroney, K., Nelson, K. W., Abel, A. L., & Abel, H. S. (2006). Doctoral programs: Changing high rates of attrition. *The Journal of Humanistic Counseling, Education and Development, 45*(1), 17–31.
- Stubb, J., Pyhältö, K., & Lonka, K. (2011). Balancing between inspiration and exhaustion: Ph.D. students' experienced socio-psychological well-being. *Studies in Continuing Education, 33*(1), 33–50. <https://doi.org/10.1080/0158037X.2010.515572>
- Tinto, V. (1993). *Leaving college: Rethinking the causes and cures of student attrition research* (2nd ed.). Chicago: University of Chicago.
- Unitatea Executivă pentru Finanțarea Învățământului Superior, Cercetării, Dezvoltării și Inovării—EFISCDI. (2009). *Raport "Definirea modelului de școală doctorală. Diagnoza privind studiile doctorale din România: Rezultatele Cercetării Calitative"* (En. The Executive Unit for Financing Higher Education, Research, Development and Innovation—UEFISCDI (2009). Report: 'Defining the doctoral school model. A diagnosis regarding doctoral schools in Romania: the results of a qualitative research').

**Simona Iftimescu** is an education professional, researcher, and lecturer at the Faculty of Psychology and Educational Sciences, University of Bucharest, and Secretary General of the Romanian Educational Research Association. Simona has a Master's degree in Comparative and International Education from the University of Oxford and a Ph.D. in Education, the University of Bucharest. Her professional experience comprises collaborations with NGOs, companies, and public institutions. Simona's research interests are policy analysis and development, higher education—particularly the Bologna Process implementation, graduate employability, as well as teacher training.

**Mihaela Stîngu** is a researcher and lecturer at the Faculty of Psychology and Educational Sciences, University of Bucharest. She has a PhD in teacher induction and, in 2019, has won a research scholarship from the Archimedes Foundation in Estonia. Mihaela has worked in research and development projects at a national level in collaboration with the Education 2000+ Center, UNICEF, the Ministry of National Education, UEFISCDI, and internationally in Erasmus+ and consultancy projects. Her particular research interests are teacher professional development and higher education.

**Delia Lupescu (Gologan)** is an educational policy expert who has collaborated with the Executive Unit for Financing Higher Education, Research, Development and Innovation (UEFISCDI) and is now working in the Education and Research Department of the Romanian Presidential Administration. She is a programme and project evaluator within the National Agency for Community Programmes in the Field of Education and Vocational Training (ANPCDEFP) and external evaluator for higher education institutions and study programmes for the Quality Assurance Agencies from Kosovo, Turkey, Bosnia, and Herzegovina. She was a Councillor within the team of the Secretary of State responsible for quality assurance in education (September–December 2016) and Vice President of the National Alliance of Students Organisations in Romania (2011–2013). Delia's main fields of expertise are in equity policies and policy for quality assurance of education—areas in which she has facilitated trainings and workshops for the NGOs and institutions she collaborated with.

**Open Access** This chapter is licensed under the terms of the Creative Commons Attribution 4.0 International License (<http://creativecommons.org/licenses/by/4.0/>), which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.



# Measuring Students' Perception of COVID-19 Impact on Higher Education Through the National Student Survey in Romania



Stefan-Marius Deaconu and Roland Olah

**Abstract** The article presents the first National Student Survey (NSS-RO) results. The questionnaire was opened to all Romanian students between November 2020 and January 2021 and involved 23,796 respondents from 76 higher education institutions. Initially designed to be a tool to improve the quality of higher education, given the epidemiological context created with the Covid-19 pandemic, it expanded with one section to measure students' perception of its impact on higher education. This work intends to establish a correlation between student dropout intention during the Covid-19 pandemic and the direct support received from higher education institutions regarding material resources, such as tablets, laptops, or other similar tools. Secondly, it analyses the students' perception of the transition into emergency remote education. We measured in this sense their opinion on how easily they accessed mainly online educational resources, the information received, and the teachers' performance during classes. These results provide one of the first steps towards understanding the impact of the Covid-19 pandemic on the Romanian higher education system. The massive interference provoked a giant leap in digitalisation and significantly changed how universities apply Student-Centred Learning (SCL) practices. Also, this study contributes to the area of national student surveys.

**Keywords** National student survey · Romania · Higher education · Student dropout · Online learning

---

S.-M. Deaconu (✉)  
University of Bucharest, Bucharest, Romania  
e-mail: [marius.deaconu@gmail.com](mailto:marius.deaconu@gmail.com)

R. Olah  
University of Oradea, Oradea, Romania

© The Author(s) 2022  
A. Curaj et al. (eds.), *Higher Education in Romania: Overcoming Challenges and Embracing Opportunities*, [https://doi.org/10.1007/978-3-030-94496-4\\_8](https://doi.org/10.1007/978-3-030-94496-4_8)



## 1 Introduction

### 1.1 ‘Normal Led to This’: COVID-19 Pandemic Impact on Education

Several months after the guidelines towards a ‘new normality’ emerged (Tesar 2020) in a world still severely haunted by the Covid-19 pandemic, Ed Yong, a British scientific journalist for *The Atlantic*, wrote a profound analysis on how the United States failed to contain the propagation of this deadly virus. One of his conclusions was that ‘Normal led to this [crisis]. Normal was a world ever more prone to a pandemic but ever less ready for one. To avert another catastrophe, the U.S. needs to grapple with all the ways normal failed us’ (Young 2020). Returning to normal is not an option anymore.

A study of the International Association of Universities (IAU) found that in March 2020, one-third of higher education institutions in countries surveyed could not move teaching online (Maroni et al. 2020). Compared with the last great pandemic that had a significant effect globally (Mackowiak 2021)—the 1918–1920 Influenza pandemic—countries are widely interconnected now. As a result, the Covid-19 spread was instant with significant effects on societies. Public authorities had to offer prompt responses to complex challenges, most of them in the premiere. Higher education systems were not an exception (Bergan et al. 2020).

Although it is too early to draw the curtain on Covid-19 pandemic development at its onset, we have indeed reached a point where we can primarily look at how it impacted our educational systems. The impact was significant, starting from a deterioration of the fundamental values within HEIs or the challenges that arose by the continuously growing gap between different social categories that affect certain students’ access to higher education. (Harkavy et al. 2020). To address these challenges, we must understand what is happening with our educational systems. It is vital to reassess the national contingencies plans for the education sector and quickly update public authorities’ strategies.

Overlooked topics earlier prevailed, as, for instance, depression and anxiety symptoms, such as sleep disturbance, became increasingly frequent among higher education students in this period. The increase varies from a country to another, but Deng et al. (2021) appreciate that approximately a 30% increase in the student population displayed such symptoms. Usually, students with lower socioeconomic status or originating from more underdeveloped regions tend to be somewhat more affected. Also, female students do have a higher frequency of depression and anxiety episodes. Even before the Covid-19 pandemic erupted, the prevalence of depression for students (30.6%) was at a higher rate than the general population (12.9%).

## ***1.2 A Succinct Analysis of How Romanian Higher Education System Addressed the Challenges of the COVID-19 Pandemic***

Countries across Europe were affected by a sharp increase of Covid-19 cases in Europe, starting with the first outbreaks in Italy in early February 2020. This fact is crucial for Romania as it has a sizeable diaspora community in this southern European country. Hâncean et al. (2020) have analysed the early transmission of Covid-19 in Romania starting from the first case registered on 25 February 2020. It was a matter of weeks until the Romanian Government suspended the educational process (on 10 March), as the country prepared to emerge into a state of emergency, declared by the President of Romania on 16 March. Deca et al. (2021) recounted how Romanian higher education institutions faced the first wave of the Covid-19 pandemic.

Romanian universities were compelled in the COVID-19 pandemic to shift from a traditional “face-to-face” teaching system to online learning. The needed suspension of the on-site activities became a challenge for decision-makers that had to revise the legislative framework in order to facilitate this transition. The first set of Government decisions regulated how Romanian higher education would move to online delivery. Students could complete online their final exams for Bachelor, Master or Doctoral degrees. Also, online admission activities became fully legal. Those measures were to apply until the end of the academic year 2019/2020, but their effects were prolonged later on.<sup>1</sup>

Romanian public authorities have strictly regulated distance learning, as it was an important source of “diploma mills” in the first two decades after the fall of the Communist regime (Deca et al. 2021). Nevertheless, online education was largely perceived as a backup educational system. There was no arrangement within the Romanian universities for a situation where all educational and administrative activities move online. Challenges arose as higher education institutions had to quickly come up with contingency plans and build institutional capacity to cope with the new reality (Roman and Plopeanu 2021). Depending on the field of study, the universities had to adapt the curriculum. For instance, medical and artistic education programmes were significantly disrupted, as they are based on experiential education. In the first weeks of online education, university leadership endeavoured to set up proper communication systems between teachers and students. In terms of quality assurance, there were significant difficulties to maintain a suitable standard for courses and other educational activities (Schnakovszky et al. 2020).

---

<sup>1</sup>By Emergency Ordinance No. 58 of 23 April 2020 on taking measures for the proper functioning of the education system, the measures were foreseen until the end of the academic year 2019/2020 (RO: <https://www.edu.ro/sites/default/files/fisiere%20articol%20OUG%2058%20-%202020.pdf>). By Emergency Ordinance No. 141 of 19 August 2020, on the establishment of measures for the proper functioning of the education system and the modification and completion of the National Law of Education No 1/2011, the measures were extended until the end of the academic year 2020/2021 (RO: [https://edu.ro/sites/default/files/\\_fi%C8%99iere/Legislatie/2020/oug%20141-2020.pdf](https://edu.ro/sites/default/files/_fi%C8%99iere/Legislatie/2020/oug%20141-2020.pdf)).

As the state of emergency ended, plans on how to start the new academic year emerged. The national exams for undergraduate students (8 and 12th grade) held in the summer of 2020 were successful in terms of epidemiological safety, as there were no Covid-19 cases linked to examinations. Also, higher education institutions managed to conduct online admissions for the first time in their history, with some noteworthy exceptions—several medical and arts universities (Deca et al. 2021).

A working group arose to prepare the scenarios for the academic year of 2020/2021.<sup>2</sup> Public authorities (e.g. Presidential Administration, Ministry of Education and Research, Ministry of Health) and stakeholders (e.g. trade unions, student unions) worked together, and in mid-August, some changes were approved to the National Education Law 1/2011. The Ministry of Education established three scenarios with the Ministry of Health, based on the Covid-19 cumulative incidence, which meant that the education system functioning was largely relying on the administrative capacity for testing and reporting COVID-19 cases. Higher education institutions were given more leeway than schools, as they were allowed to decide, via deliberations of the University Senate, which scenario to adopt. The difference in treatment was grounded on the Constitutional provision for university autonomy. Even in this context, the university has to comply with specific epidemiological safety measures that are subject to the decision of the County Public Health Directorate or Prefecture, based on the incidence rate of the Covid-19 cases.

It is worth mentioning that several HEIs, such as the “Babes-Bolyai” University of Cluj-Napoca or the University of Bucharest, already set such scenarios before a national legal framework was approved (UBB 2020, UniBuc 2021). Nevertheless, most academic activities continued to be held online during the rest of 2020 and 2021. Once again, a notable exception was medical and art universities. For instance, Baczek et al. (2021) show that the lack of interaction with patients was the most significant problem among Polish medical students during the first months of interruption.

An increasingly shared responsibility among Rector, vice-rector, deans and their teams, and the Senate resulted from the growth of institutional autonomy. Academic leadership was under test during those months as values such as trust or adaptability became more valuable (Dumulescu and Mutiu 2021). One of the most challenging tests that universities confronted was to reopen their gates towards students and their staff. As there is now clear that such a reopening can significantly increase the Covid-19 cases in the county or partially the increase in hospitalisation or Intensive Care Unit number of patients (Andersen et al. 2021), HEIs management had very few options.

Such a decision had significant implications also for the local community as the potential risks were assessed. In cities such as Cluj-Napoca, where there is a big student ratio per capita, the losses were immense for the local economy. Some

---

<sup>2</sup>Order No. 4742/1334/2020, approving the setting-up of the inter-ministerial working group to establish the rules /measures for the beginning of the school year /the academic year 2020–2021(RO: [https://www.edu.ro/sites/default/files/\\_fi%C8%99iere/Legislatie/2020/OMEC-OMS%204742.pdf](https://www.edu.ro/sites/default/files/_fi%C8%99iere/Legislatie/2020/OMEC-OMS%204742.pdf)).

researchers estimate that the city lost 33.4 million euros per month (Chirică and Lazăr 2021) due to courses moving online in pandemic months. It led to the expectance of students' coming back at least for some categories that directly benefited from students' presence.

## 2 Romanian National Student Survey and Its Transition into the COVID-19 Era

The National Sociological Research about Students' Satisfaction in Romania, known as *Chestionarul Național Studențesc* or National Student Survey (NSS-RO), was in the final drafting and testing stage when the Covid-19 pandemic erupted (Deaconu et al. 2020). A decision to postpone the survey arose naturally. The research team observed the situation development and started collecting data about the transition to online education. Furthermore, the IT support improved, and preparations started for a new testing process. In June 2020, five webinars took place with students from different student organisations to gather feedback, which was taken into account in the following months.

As it became clear that the impact of the COVID-19 pandemic would affect the higher education system for several years to come, it was also increasingly obvious that it would affect students' experience and, thus, their perceptions. They began to confront social and economic constraints, one of the most unaddressed issues in this period being mental health. Also, in order to transition to online education, many students had problems with Internet connectivity or the lack of proper IT devices. A fundamental question then arose within the research team: How to look into the impact of the last period on earlier agreed questions from NSS-RO without causing notable variations and still seize the representation of how students perceived the first months of solely online education?

The agreed solution was to introduce an additional section dedicated to the educational process evolution during the last semester of the 2019/2020 academic year. For the main sections, participants were reminded to reflect on their experience during the semester and then provide answers to the questions comprised in the Covid-19 section of the questionnaire. The additional section had ten questions (Table 1), designed in the same framework as previous ones.<sup>3</sup> The newly introduced questions maintained similar Likert-type scale responses as in previously developed sections.<sup>4</sup>

---

<sup>3</sup>The answers to question no. 4 could not be stored due to some technical problems.

<sup>4</sup>NSS-RO used a five-grade scale (definitely agree, mostly agree, neither agree nor disagree, mostly disagree and definitely disagree) and the not applicable option.

**Table 1** Educational process development in the circumstances of the distortion caused by the COVID-19 pandemic' section from NSS-RO

Code	Question	Item name
Q.1.	The context generated by the COVID-19 pandemic determined me to consider dropping out of university	university_dropout
Q.2.	I encountered challenges in the educational process due to impoverishment (e.g. lack of a tablet, laptop, poor Internet connection)	impoverished_students
Q.3.	I received support from the higher education institution to participate in online teaching activities (e.g. tablets, laptops)	HEI_support
Q.5.	I am satisfied with the way the university has transferred the educational process to the online environment	online_transition
Q.6.	I benefited from online educational resources necessary for teaching (e.g. work platforms, access to institutional email addresses, access to dedicated online communication platforms)	online_resources
Q.7.	There was constant information from the university regarding the development of the educational process and possible changes	HEI_information
Q.8.	Teachers determined me to participate in courses, seminars, and laboratories actively	involved_teachers
Q.9.	Teachers agreed on the evaluation criteria with students and these were accurate, explicit and transparently published	evaluation_agreement
Q.10.	University considered students' opinions when scheduling academic activities	students_opinion

### 3 Methodology

#### 3.1 Research Questions

Our goal was to understand how students perceived the transition into online education as the Covid-19 pandemic emerged. For this reason, we settled on two main topics. Firstly, we want to learn if we can associate students' dropout intention with the direct support received from the HEI during the pandemic crisis. Secondly, we wanted to understand how universities have fully switched to remote education in a broader view. For those matters, we used both qualitative and quantitative methods to answer the following research questions:

1. What was the students' perception of the HEI transition into emergency remote teaching generated by the Covid-19 pandemic?
  - a. Did the universities manage to prepare proper Information and Communication Technologies (ICT)<sup>5</sup> for the transfer into online education?
  - b. Were teachers able to tailor academic activities considering students' opinions and feedback?
2. What is the relationship between students' dropout intention and the direct support received from their higher education institution during the first months of the Covid-19 pandemic?

We understand emergency remote teaching as a 'temporary shift of instructional delivery to an alternate delivery mode due to crisis circumstances'. It substitutes the 'traditional' on-site and blended courses. Also, it usually takes place online. Nevertheless, there are several differences between 'online learning' and 'emergency remote teaching' as the latter can also be introduced through other methods (Hodges et al. 2020). Mainly, all Romanian universities opted for the transition into online education (Deca et al. 2021).

The first part of NSS-RO was designed to shed light on student concerns regarding the transition to online education. Those answers will be pivotal to respond to the first research question. Also, by the time the National Student Survey was launched, several scientific papers were already published covering this issue. Furthermore, different state representatives from various countries commented on future development within national higher education systems. As a crisis can represent an opportunity to consider some bold measures, the European Commission launched in September 2020 a communication on achieving the European Education Area by 2025. Several policy objectives were underlined, including inclusion and gender equality or green and digital transition (EC 2020). Part of the questionnaire analysis reflects the status quo in Romania concerning those subjects.

A review of the scientific literature concerning the impact of the COVID-19 pandemic in higher education was also an important research instrument that we used. A significant number of papers used surveys to acquire data about both students and academics concerning this issue. We investigated both Romanian study cases, as well as information from other countries.

---

<sup>5</sup>A broad definition of ICT is available from UNESCO Institute for Statistics: "Diverse set of technological tools and resources used to transmit, store, create, share or exchange information. These technological tools and resources include computers, the Internet (websites, blogs and emails), live broadcasting technologies (radio, television and webcasting), recorded broadcasting technologies (podcasting, audio and video players and storage devices) and telephony (fixed or mobile, satellite, visio/video-conferencing, etc.)", <http://uis.unesco.org/en/glossary-term/information-and-communication-technologies-ict>.

### 3.2 Data Collection

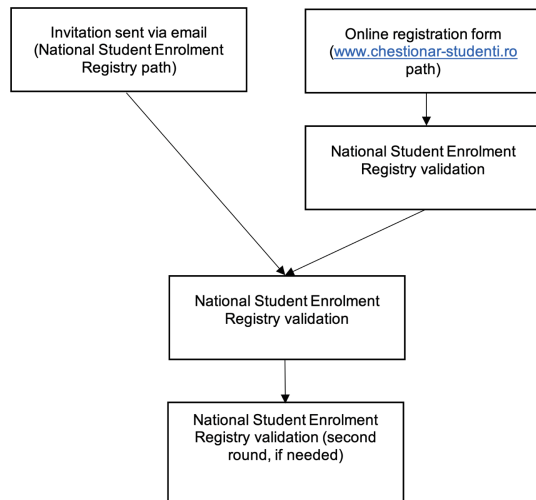
UEFISCDI and the Ministry of Education implemented NSS-RO between 24 November 2020 and 18 January 2021. There were two main routes to complete the survey. Firstly, all students with a registered email in the National Student Enrolment Registry (RMU) received an online invitation in their inbox. Secondly, the participants could opt to take the survey starting from the NSS-RO website. If their Personal Identity Code (CNP) was found in RMU, they were automatically validated and could take the survey. In the opposite situation, the participants had to introduce their data and afterwards, they received an email invitation to take the survey.

The initial number of respondents stopped at 24,280. 12,982 (53.46%) completed the survey through the NSS-RO website,<sup>6</sup> while the rest of 11,487 (46.53%) through the automatic invitation received on their email. Following the period of NSS-RO completion ended, the research team finalised the second round of RMU validation for students that were not identified through this mechanism in the first phase (Fig. 1). After experts finalised the database cleaning process, 23,796 students from 76 higher education institutions who participated in the survey were validated. 97.27% of them were found through the National Student Enrolment Registry (RMU).

Almost two-thirds of the respondents were women (64.64%). 26.61% of Bachelor degree respondents were in the first year of study, 28.60% were in the second, and 25.61% in the third. The vast majority of the respondents were conducting full-time studies (94.75%), as shown in Table 2.

We applied then post-stratification weights in terms of gender and study cycle, as well as the number of respondents from a university, in order to minimise the sampling error or the possible non-response inclination. A total number of 207 responses

**Fig. 1** A concise form of the logical scheme for NSS-RO



<sup>6</sup>[www.chestionar-studenti.ro](http://www.chestionar-studenti.ro).

**Table 2** Descriptive statistics about NSS-RO respondents

				Count	Column N (%)
Gender	F			14,959	64.64
	M			8,182	35.36
study_cycle	Bachelor degree	study_year	First year	5,248	26.61
			Second year	5,642	28.60
			Third year	5,051	25.61
			Fourth year	2,854	14.47
			Fifth year	512	2.60
			Sixth year	418	2.12
	Master degree	study_year	First year	1,966	51.85
			Second year	1,821	48.02
			Third year	1	0.03
			Fourth year	0	0.00
			Fifth year	1	0.03
			Sixth year	3	0.08
	Ph.D.	study_year	First year	109	39.35
			Second year	66	23.83
			Third year	95	34.30
			Fourth year	7	2.53
			Fifth year	0	0.00
			Sixth year	0	0.00
study_form	Full-time			22,382	94.75
	Part-time			671	2.84
	Distance learning			568	2.40

emerged from the total number of respondents (23,796). We selected eight important indicators concerning some of the most notable social and educational characteristics of NSS-RO respondents, such as financial support status, form of study (frequency), gender, scholarship status, special social status, student housing status, study cycle or year of study as presented below (Table 3).

### 3.3 Methods of Analysis

As we stated earlier, to answer the research questions, we used both quantitative and qualitative methods. After cleaning the data and applying post-stratification weights, we designated a value for each option from the 5-point rating scale to compare the responses: 'definitely disagree'—1, 'mostly disagree'—2, 'neither agree nor disagree'—3, 'mostly agree'—4, 'definitely agree'—5. We opted to calculate the means as there is a statistical measure of the medium value of the distribution of the results. Also, it considers all the values and is a robust instrument to certificate students' selections at a comprehensive overview. The 'not applicable' option was



**Table 3** Critical data indicators collected through national student enrolment registry and national student survey—RO from the respondents

No.	Indicator	Definition	Variables	Item name
I.1.	Study cycle	Romania is part of the European Higher Education Area and adopted a three-cycle system. Additionally, a preparatory year was introduced for international students	Preparatory year, Bachelor's degree, Master's degree, Doctoral degree	study_cycle
I.2.	Gender	National student enrolment registry (RMU) and NSS-RO collect data about students' gender	male, female	Gender
I.3.	Special social status	RMU and NSS-RO collect data about students' special social status, such as single or both parents' orphanages, single-parent families, disadvantaged families, or foster care provenance	yes, no	special_social_status
I.4.	Year of study	RMU and NSS-RO collect data about the form of studies	First year, second year, third year, fourth year, fifth year, sixth year	study_year
I.5.	Form of study (frequency)	RMU and NSS-RO collect data about the form of studies	Full-time, part-time, distance learning	study_form
I.6.	Financial support status	RMU and NSS-RO collect data about the form of studies in terms of financial statuses, such as a state-based grant, tax-paying students (RON or foreign currency), Romanian Government scholarship or other financing sources	With financial support, Without financial support, Romanian Government scholarship	financial_form
I.7.	Scholarship status	RMU and NSS-RO collect data about the scholarship status of students, both on academic and social criteria. Also, there are plenty of situations in which students combine previous criteria to obtain multiple scholarships, as social-based ones can be mixed with those based on academic virtues. Nevertheless, data is also collected on scholarships designated to international students, such as those awarded by the Romanian Government	No scholarship, Romanian Government scholarship (BSR), academic-based criteria scholarship, social-based criteria scholarship, other types	scholarship
I.8.	Student housing status	RMU and NSS-RO collect data about student housing status. For instance, data is retrieved for different categories of beneficiaries of free student housing, such as teachers' children or students with a foster care provenance	No student housing, With student housing	housing

not taken into consideration when calculating means.<sup>7</sup> We took into consideration all valid answers for each question. After this, the answers for each question were analysed starting from the selected indicators in Table 3. For instance, the link between the study cycle and participants' answers for each question is reflected in Table 4.

Also, the relationship between the scholarship status and the mean result of a question is explained in Table 5.

All indicators were analysed for all study cycles, if not mentioned otherwise, with a notable exception. When comparing results to study year, we considered only Bachelor degree respondents as there is a significant difference between a first-year undergraduate and a MA or Ph.D. first-year student. 9.50% of total answers are from this category of students, with 6.40% from MA and 0.10% from Ph.D. The results can be seen in Table 6 and Appendix.

**Table 4** Mean results of NSS-RO thematic section dedicated to the impact of COVID-19 pandemic on higher education in Romania (from 1 to 5 scale. Non-responses were excluded)

	Mean (BA)	Mean (MA)	Mean (Ph.D.)	Mean (all cycles)
<i>definitely disagree</i>	1	1	1	1
HEI_support (Q.3)	1.58	1.66	2.05	1.59
<i>mostly disagree</i>	2	2	2	2
university_dropout (Q.1)	2.04	1.83	1.75	2.03
impoverished_students (Q.2)	2.38	2.15	2.03	2.36
students_opinion (Q.10)	2.63	3.13	3.41	2.67
<i>neither agree nor disagree</i>	3	3	3	3
involved_teachers (Q.8)	3.05	3.44	3.59	3.08
online_transition (Q.5)	3.23	3.61	3.64	3.26
evaluation_agreement (Q.9)	3.32	3.72	3.74	3.34
HEI_information (Q.7)	3.58	3.83	3.80	3.60
<i>mostly agree</i>	4	4	4	4
online_resources (Q.6)	4.14	4.23	3.90	4.14
<i>definitely agree</i>	5	5	5	5

<sup>7</sup>We took into consideration students from the first year (BA, MA or Ph.D.) that did not check 'not applicable' as we assumed that they were enrolled in a higher education study programme in the academic year 2019/2020 after we highlighted that Covid-19 section of NSS-RO is designed for the second part of that year.

**Table 5** Mean results of NSS-RO thematic section dedicated to the impact of COVID-19 pandemic on higher education in Romania, considering the study cycle and the form of scholarship (from 1 to 5 scale. Non-responses were excluded)

	Scholarship														
	No scholarship			Romanian Government scholarship			Academic-based criteria scholarship			Social-based criteria scholarship			Multiple criteria scholarship		
	BA	MA	PhD	BA	MA	Ph.D.	BA	MA	Ph.D.	BA	MA	Ph.D.	BA	MA	Ph.D.
university_dropout	1.98	1.97	1.20	2.10	1.69	.	1.62	1.93	1.27	1.87	2.22	.	1.78	1.82	.
impovertished_students	2.27	2.02	1.20	2.42	1.96	.	1.99	2.45	1.88	2.54	1.57	.	2.59	1.78	.
HEI_support	1.50	1.77	1.41	1.73	1.53	.	1.66	2.43	2.99	1.61	1.40	.	1.77	1.75	.
online_transition	3.38	4.17	5.00	3.51	3.53	.	3.28	4.11	3.52	3.30	3.43	.	3.68	3.97	.
online_resources	4.13	4.47	4.87	4.05	4.45	.	4.15	4.24	3.08	4.19	3.10	.	4.31	4.00	.
HEI_information	3.66	4.10	5.00	3.62	4.31	.	3.67	4.06	3.93	3.84	4.63	.	3.73	3.25	.
involved_teachers	3.29	4.24	5.00	3.62	3.47	.	3.24	4.00	3.80	3.12	3.26	.	3.53	3.94	.
evaluation_agreement	3.45	3.96	5.00	3.70	3.73	.	3.58	3.90	3.93	3.45	3.40	.	3.68	3.94	.
students_opinion	2.84	3.70	4.87	3.18	3.42	.	2.92	3.66	3.68	3.00	3.06	.	3.26	1.78	.

**Table 6** Mean results of NSS-RO thematic section dedicated to the impact of COVID-19 pandemic on higher education in Romania, considering the study year only for Bachelor degree participants (from 1 to 5 scale. Non-responses were excluded)

	study_year					
	First year	Second year	Third year	Fourth year	Fifth year	Sixth year
university_dropout	2.07	2.11	2.02	1.86	1.77	1.45
impoverished_students	2.45	2.38	2.33	2.27	2.31	2.08
HEI_support	1.64	1.57	1.58	1.62	1.33	1.31
online_transition	3.49	3.17	3.22	3.27	2.68	2.81
online_resources	4.30	4.12	4.09	4.14	3.80	3.82
HEI_information	3.81	3.56	3.55	3.57	2.99	3.14
involved_teachers	3.37	2.99	3.00	3.09	2.55	2.60
evaluation_agreement	3.60	3.28	3.31	3.29	2.69	2.93
students_opinion	2.89	2.58	2.59	2.79	2.22	2.27

## 4 Romanian Higher Education Transition into Online Education During the COVID-19 Pandemic

### 4.1 Did Universities Manage to Tackle Student Dropouts?

#### 4.1.1 Dropout Intention (Q.1)

As emergency remote teaching started right after the Covid-19 pandemic began, the difficulties of applying a distance learning system model became general. Some studies indicate that this type of educational model can be associated with a higher rate of dropout and a lower learning motivation or engagement coming from the student (Lee et al. 2021, Sweet, 1986, Kim et al. 2017). Dropout intention among NSS-RO was low as a significant number of participants disagreed or strongly disagreed that they had such plans. Q.1. mean answer was 2.03 out of 5, as the dropout intention among students was more significant at BA rather than MA or Ph.D. Nevertheless, many respondents expressed little concern in this direction.

As few studies analyse dropout intention in Romanian universities, it is essential to underline that the intention is the cumulative result of several factors, including variables such as social status (Mălăescu et al. 2018). BA respondents from sixth and fifth year strongly disagreed that they intend to abandon higher education studies, unlike those from the first and second year, who indicated a slightly higher option for a potential option to drop out. Usually, such students study Medicine and Architecture – study programs usually populated with students of higher socioeconomic statuses. MA students receiving social-based criteria scholarships, BA students that receive Romanian Government support were those who indicated a higher rate of potential

dropout, while Ph.D. students with or without financial support declared almost no intention to give up on their studies.

Romanian Government scholarship (BSR) students such as MA social scholarship receivers are likely to have had a job as their financial situation makes them eligible for this type of support or the scholarship is low (85 euros per month for BSR). Their perception of dropout intention could be linked to online transition (and return to hometown, if different) or job loss. The Romanian Government scholarship earners are international students, and they confronted a problematic situation as the borders were closed, and Romania endured a harsh lockdown.

We can conclude that dropout intention among NSS-RO participants decreases in a superior study cycle or study year. Also, students that do not receive a scholarship or have social-based criteria aid are more exposed to abandon their studies.

#### **4.1.2 Challenges in Educational Accessibility Due to Impoverishment (Q.2)**

It is now well known that challenges like poor and seldom access to Internet connection lead to vitiated educational experience after the break out of the Covid-19 pandemic (Hasan and Bao 2020). Nevertheless, NSS-RO participants from all study cycles expressed rather that they had not confronted difficulties in the educational process due to impoverishment (2.36 out of 5). From this point of view, lack of electronic devices suitable for learning or poor Internet connection was among the obstacles faced by many of the respondents. Once again, BA students were rather affected by this situation compared to MA or Ph.D.

The most affected BA students were in the first and second year, while students from the fifth and sixth year confronted fewer challenges from this point of view. BA respondents with multiple criteria (2.59 out of 5) or social-based scholarships (2.54 out of 5) were among the most affected from the transition into online education. MA students with academic-based merit support (2.45) were also somewhat affected compared to other categories.

Part of the responsibility also resides in the failure of the governmental policy of the 'EURO 200' program. It was developed in 2004 to help students from primary, secondary and tertiary education to acquire a new personal computer. Between 2004 and 2019, the program's number of higher education students dropped from 4,496 to 28, with only three beneficiaries in 2018. 'EURO 200' program was not updated to the necessities of nowadays as it also implies a high amount of bureaucracy (ANOSR 2020).

The percentage of students in all three study cycles analysed who agree or strongly agree that they encountered obstacles to further continuing their higher education studies (Q.2) is larger than the one that assesses the dropout intention (Q.1). For this matter, additional barriers produced by the transition into online education are a consistent part of the students' intention to drop out, but not a definitory one. Still, the results can indicate which student categories should receive prior support to stop their possible intention dropout.

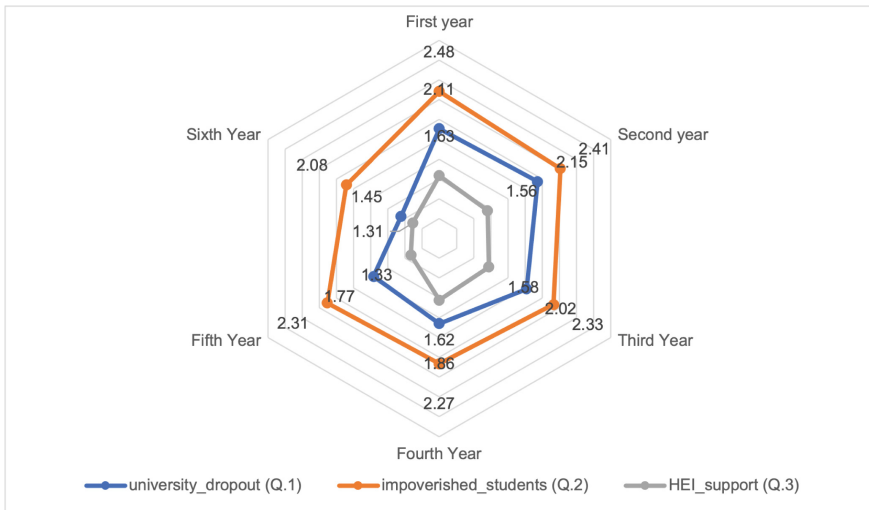
### 4.1.3 Support Received from HEIs (Q.3)

NSS-RO respondents largely disagreed that their higher education institution offered them support to participate in online teaching activities. The mean answer for all study cycles was 1.59 out of 5, whereas students from BA were much more critical than MA or Ph.D. BA respondents were more critical to HEIs, but as one out of two BA respondents was in the first or second year of study, we acknowledge that the HEI's lack of support relates to the answers from the previous two questions (Fig. 2).

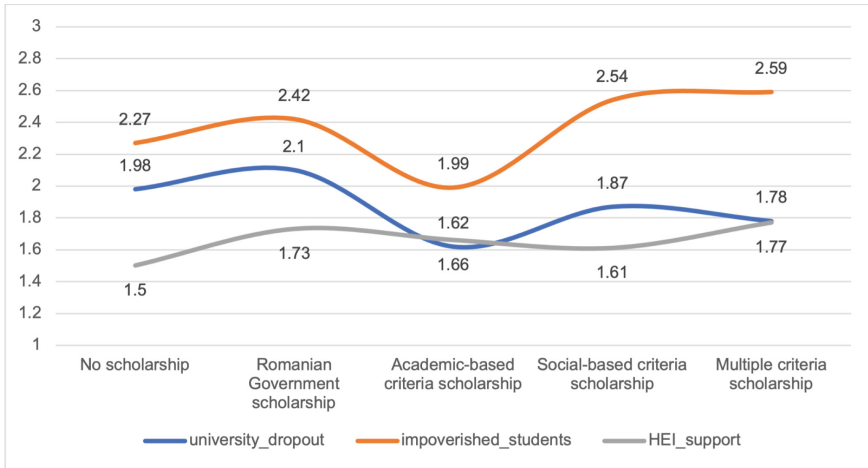
As shown in the figure above, especially for the first years in the Bachelor degree, the mean between university dropout intention, difficulties in attaining courses due to impoverishment and support received from the HEI is proportional. The lower dropout rate from the fourth, fifth and sixth year can be explained through financial efforts and academic labour maintained for a more extended period. Also, only a limited number of study programmes, such as medical ones, adapted on more than three years for Bachelor degree.

Also, it is worth mentioning that for BA students receiving academic-based criteria or multiple criteria scholarship, the perception about the support received from the university and the intention to drop out tend to correspond, as they are almost equal. This indicates that an important part of the students that academically perform and intend to abandon studies rely on the support received from the university (Fig. 3).

Other categories hindered by the absence of support measures from the university are BA students without a scholarship, MA international students benefiting from the Romanian Government support, and MA students who receive a social-based criteria scholarship. The latter category has the smallest mean from all student categories



**Fig. 2** Mean answer for the first three questions in NSS-RO, only BA respondents, compared with study year. Null values and 'No answer' options were excluded



**Fig. 3** Mean answer for the first three questions in NSS-RO, only BA respondents, compared with scholarship status. Null values and ‘No answer’ options were excluded

survey (1.4 out of 5), as they were confronting significant issues to attain higher education.

## 4.2 Was There a Proper Transition Towards an Emergency Remote Teaching Process?

### 4.2.1 Online Transition of the Educational Process (Q.5)

Several studies showed that students reclaimed the impact of the transition to online education. As their study efficacy dropped, some developed a negative attitude towards it (Aguilera-Hermida 2020). Nevertheless, NSS-RO participants from all study cycles agree that HEIs efforts to carry out the educational process in an online environment were relatively successful, with a mean answer of 3.26 out of 5.

Once again, students from BA were less satisfied than their colleagues from MA and Ph.D. For instance, Ph.D. students mean answer was 5 out of 5. BA participants from the fifth and the sixth year were also less satisfied than their colleagues from the first study years. Students receiving either academic or social-based scholarships were the most disappointed about the HEI approach towards online transition. We can explain this through the case that students who are more invested in educational processes are more demanding in terms of the support offered by HEIs.

Students from MA without a scholarship and those with academic or multiple criteria scholarships were among the most satisfied students questioned about the transition into online. On the other hand, the similar categories from BA were much

less keen on this process. From this point of view, the answer could be highly influenced by the social context, as a larger percentage of MA students has a job or established a family. This situation is highly possible when speaking of Ph.D. students, as all 277 respondents gave the same positive answer.

#### **4.2.2 Access to Necessary Educational Resources (Q.6)**

NSS-RO respondents mostly agreed that they benefited from online educational resources necessary for teaching, as it was the most considerable mean value among the analysed questions (4.14 out of 5). This time though, BA students were similarly satisfied as their colleagues from MA, but more than Ph.D. students, as it unveils that the institutional focus was on the first study years.

Bachelor degree students from the first years were happier with the resources received as students from the fifth or sixth year usually have technical or practical stages that could not be replaced. Multiple criteria scholarship receivers were the most satisfied NSS-RO respondents as international students receiving support from the Romanian Government were less fulfilled.

Even though it is clear now that students' digital education level increased as they turned entirely online (Aguilera-Hermida 2020), some studies reflect that students generally understand online platforms such as Facebook, Messenger or WhatsApp as platforms that are suitable for education (Roman and Plopeanu 2021). In this respect, there is an essential chance that some respondents could not comprehend what a dedicated educational resource means and what type of platforms are suitable for higher education activities.

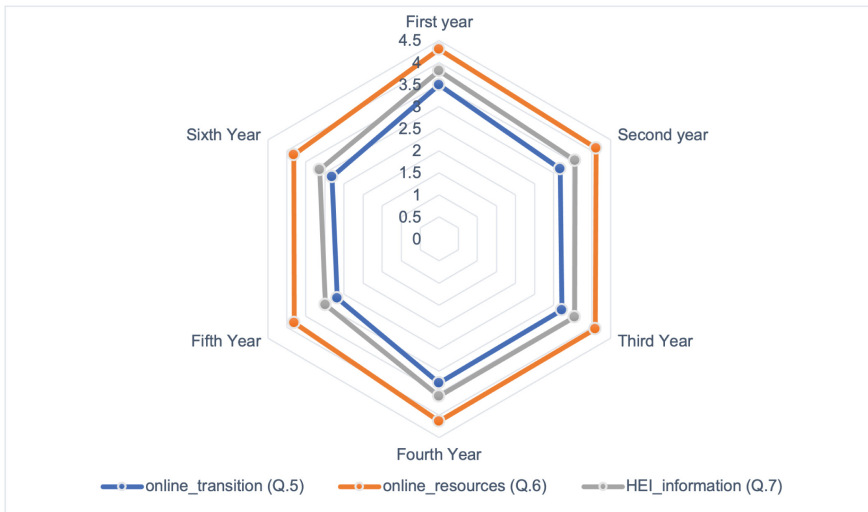
#### **4.2.3 Communication with HEIs (Q.7)**

Hasan and Bao (2020) show that students perceive a psychological extenuation because of ineffective e-Learning systems and fear of losing their academic year. Social distancing from teachers and other colleagues contributes to the prolongation of this situation. Constant communication between universities and students represents one of the solutions to contend a considerable number of doubts and improve their mental health situation.

NSS-RO respondents agreed that universities kept constant information on the development of the educational process and possible further changes as the average answer was 3.6 out of 5. Ph.D. students mostly welcomed how HEIs maintain contact in comparison with MA or BA students (Fig.4).

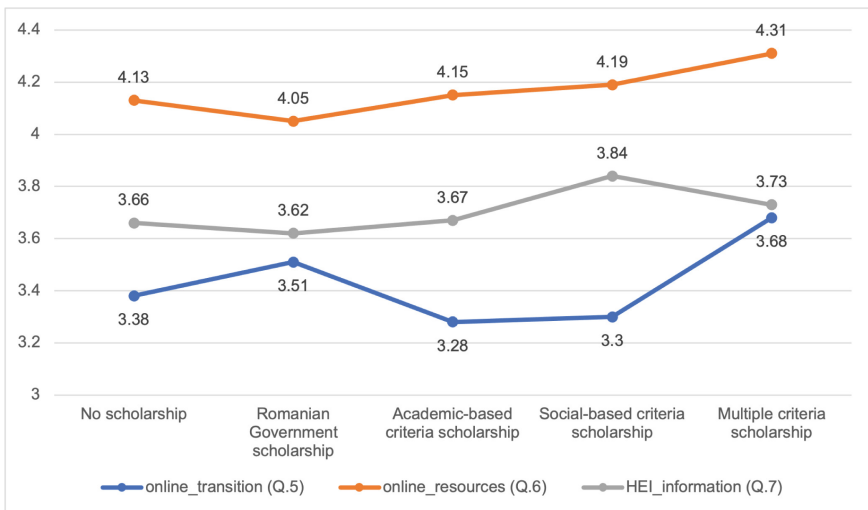
Students from the first two years were somewhat happy with the amount of information received, as their colleagues from superior years faced either their final exams either experimental stages that were postponed or cancelled. As the figure above shows, there is a directly proportional link between NSS-RO respondents' perception of online transition, access to resources and how universities communicated with them after the Covid-19 pandemic emerged.





**Fig. 4** Mean answer for Q.5, Q.6 and Q.7 in NSS-RO, only BA respondents, compared with study year. Null values and ‘No answer’ options were excluded

Also, international students receiving the Romanian Government scholarship and those with multiple criteria scholarships tend to offer the same mean answer for their perception of HEI online transition and how it maintained the communicational flux (Fig. 5).



**Fig. 5** Mean answer for Q.5, Q.6 and Q.7 in NSS-RO, only BA respondents, compared with scholarship status. Null values and ‘No answer’ options were excluded

Above all, answers from Q.5, Q.6 and Q.7 demonstrate that NSS-RO respondents perceive positively the way HEI facilitated students' access to different educational or dedicated online platforms as part of their response to emergency remote teaching situations that emerged at the beginning of March 2020. The shift could not have been done in the absence of ICT infrastructure. Nonetheless, the answers do not recollect if it was a complex process for the universities or applying proper and innovative technologies to foster online learning. Starting from the data collected through NSS-RO, we can recount that most higher education institutions in Romania managed to have a proper transfer into online education.

### ***4.3 How Important Were the Teachers?***

#### **4.3.1 Teachers' Involvement in Courses, Seminars and Laboratories (Q.8)**

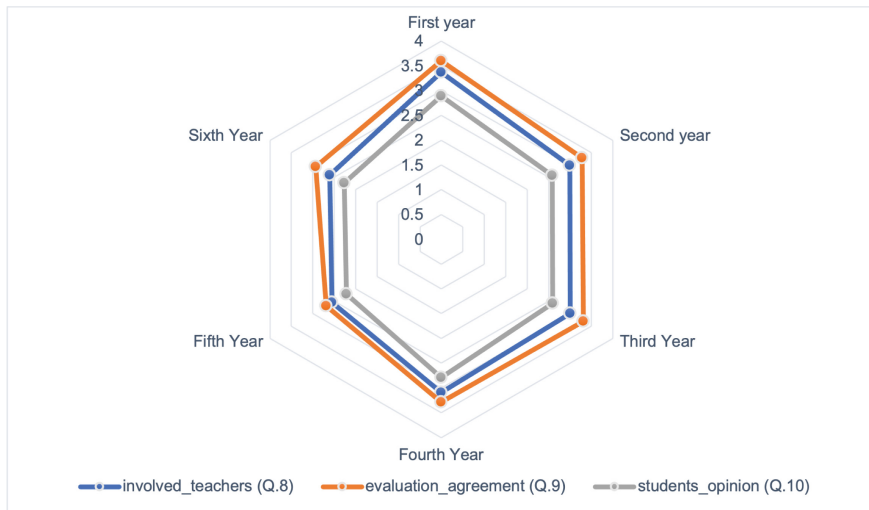
Several studies show students had a dull experience while staying home, allocating a notable amount of time for watching TV or PC gaming while using the mobile phone to connect to online courses (Pan 2020). Therefore, teachers' role became more important to keep students connected. Also, some of the students were concerned about their academic path (Pigaiani et al. 2020). Teachers also played a significant role in counselling, giving support to students in such cases.

NSS-RO respondents neither agree nor disagree that teachers actively determined them to participate in courses, seminars, and laboratories. The results underline how the added value of the teacher is not significant compared to the course contents. The mean answer was 3.08 out of 5. BA students were slightly more disappointed than MA or Ph.D. students. BA students from the two last study years were more unsatisfied with the teachers' involvement, keeping a pace maintained from previous questions. Also, MA students with multiple criteria or no scholarship (4.24 out of 5) were among the most enthusiastic about the teachers' involvement. Ph.D. students offered a mean of 5.

#### **4.3.2 Agreement on Evaluation Criteria (Q.9) and Considering Students' Options in Organising Academic Activities (Q.10)**

NSS-RO participants instead agreed that professors considered students' opinions on the evaluation criteria and accurate, explicit, and transparently published. The mean answer was 3.34 out of 5, with BA students being the most unsatisfied category on this subject. Students from the fifth and sixth years were largely unsatisfied in comparison with their colleagues and BA students without scholarship or either with academic or social-based criteria scholarship.

Respondents slightly disagreed that universities took into attention their opinion when scheduling academic activities (2.67 out of 5). BA students expressed their



**Fig. 6** Mean answer for Q.8, Q.9 and Q.10 in NSS-RO, only BA respondents, compared with study year. Null values and ‘No answer’ options were excluded

dissatisfaction more than their colleagues from MA or Ph.D. In terms of respondents’ perception of teachers engagement, participants were relatively neutral as, once again, BA students had a critical view on the issue rather than MA or Ph.D. students (Fig. 6).

The mean answers for the last three NSS-RO questions are also directly proportional to the BA study year. It is noteworthy that there is a clear difference between BA and MA or Ph.D. students perception of how teachers were able to organise the academic activities considering students’ opinions and feedback. The latter categories embrace a more adaptative schedule and maybe, if it is the case, a modular approach, for instance, to gain flexibility. From this point of view, we cannot express a firm point on how teachers managed to take into account student opinions and feedback.

## 5 Conclusions

With 23,706 respondents from 76 higher education institutions and 97.27% students identified in National Student Enrolment Registry, the National Student Survey in Romania represents one of the most extensive student surveys applied after the Covid-19 pandemic erupted. A dedicated section to this subject collected relevant data about students’ perception of how higher education transformed starting with March 2020.

Even though one-third of higher education institutions worldwide could not transfer their educational process online when the Covid-19 pandemic emerged, the Romanian Higher Education System was among those that represent a positive case.

Initially, the framework for the online transition of universities was documented in the national legal framework. Afterwards, the legislation moved the decision regarding how to conduct academic activities to the HEIs, cooperating with the County Public Health Directorate (DSP – in Romanian) and the local Prefecture. This measure was an essential step in consolidating institutional autonomy. We can conclude that:

- This measure was an essential step in consolidating institutional autonomy;
- The legislator paradigm concerning remote educational activities shifted from a discouraging perspective (after the 'diploma mills' cases) to a supportive one.

In terms of the institutional autonomy solidification, we can add that:

- The decision-making process involved the University Senate (legislative branch) rather than the management section (Rectors, Vice-rectors, Deans), as the legislator considered that public responsibility of the university has to be assumed through the most important forum of the HEI;
- It was also a test of public responsibility and engagement with the local community, as the institution cares responsibility for the health of natives, among university staff, students and their families;
- The HEIs are partially responsible for how students that took primarily online courses (more than a year at this moment) will be perceived after they graduate in the Romanian society and how they will emerge in the labour market.

Nonetheless, our study revealed that this shift to institutional autonomy was not entirely successful in several fundamental actions. Tackling student dropout intention is accentuated by the Covid-19 pandemic as students' reconsidered their opinion on how their educational process should proceed.

Firstly, it is essential to highlight that there are no significant variations among different student categories mean answers when speaking about gender, student housing status, study frequency or financial support status.

Romanian higher education system had a transition towards an emergency remote teaching process mainly in the online environment. The abrupt transfer caused many difficulties for a large number of students and professors, as well as university staff. The transition to online education was not a smooth one in most cases. The most important reason is that HEIs perceived online educational platforms mainly as a backup solution rather than one applied daily. Also, there were no contingency plans for such situations.

One of our main research questions addressed the HEIs preparation on suitable ICT for the online education transfer. NSS-RO results show that students have a favourable opinion on this subject largely. Some of the explanations could be:

- Universities acquired, developed or expanded the use of ICT in the online learning process.
- Both MA and Ph.D. students possibly received a more significant amount of flexibility in organising their schedule, as the probability of having personal and professional constraints is more prominent than in BA students cases.
- Students that had difficulties sustaining themselves in university centres could take a break and return to their hometown. Still, there was a particular low percentage in the case of Romanian Government scholarship (BSR) students or academic-based criteria scholarship receivers.
- The respondents perceive social media platforms such as Facebook, Facebook Messenger or WhatsApp as suitable platforms for higher education activities.
- Students from superior study years expressed their dissatisfaction mainly on how academic activities developed.
- As there were several months of intense uncertainty and fluid legislation, the final exams calendar changed frequently or it was announced late. This cannot be taken into account as part of the HEIs' responsibility. Also, for example, the medical students from the last study years could not realise their practical training.

Online resources' accessibility, variety, and quality have increased, as both NSS-RO respondents and many studies revealed.

The overall intention of respondents to drop out from their university is relatively lower, but students from disadvantaged social and economic backgrounds have revealed this intention more often. We can ascertain that:

- Dedicated students tend to have more demands from an HEI in terms of support offered.
- Students that academically perform and intend to abandon studies rely upon the support received from the university.
- As the Romanian Government failed to support the most vulnerable student categories throughout programs such as 'EURO 200' to purchase proper online learning devices, the acquisition passed on the HEIs. The central authorities focused on supporting primary and secondary school students.
- As the rate of negative answers decreases proportionally with the study year, we can assume that universities have targeted their efforts to prevent students' dropout from the first study years, those who are statistically the most vulnerable.
- The Romanian Government scholarship beneficiaries and social-based criteria scholarship earners are among the most unsatisfied students regarding the support received from their HEI.
- As one of the most vulnerable categories starting from their social background, it should have been essential to receive further help.

- The dropout intention is strongly related to the support received from the HEI in the case of academic and multiple based scholarship earners.
- Nevertheless, the lack of support from HEIs to acquire proper electronic devices was a crucial but not determining factor in the dropout intention.

Although the dropout intention is relatively low among NSS-RO respondents, there is a strong perception that both the Romanian Government and the higher education institutions failed to support different student categories that needed proper equipment to access online education.

Teachers' importance was revealed more than usual in this period as they were the virtual connection between students and universities. The quality of the teachers is crucial for developing and conducting a Student-Centred Learning educational process. The study concludes that:

- There is a robust linear relationship between the teachers' degree of involvement during online classes and how the latter perceived the transition in online education.
- Only one-third of Bachelor degree students expressed their satisfaction toward teachers' involvement, which means HEIs must improve their teachers' skills and digital competencies.
- Part of the unsatisfactory student feedback can be linked to the misuse of digital platforms.
- Respondents also tend to correlate teachers involved with the evaluation criteria and how universities considered students opinions when scheduling academic activities as the academic staff was the only interface between them and the university for a significant degree of students.
- Overall, NSS-RO respondents' perception emphasises how the added value of the professor is not essential when compared to the content of the class. Despite both teachers and HEIs efforts, NSS-RO respondents tend rather to disagree that academic activities were tailored considering their opinion and feedback.

In the authors' view, the Covid-19 section of the Romanian National Student Survey provides essential information about the students' perception of some critical issues. The dropout intention, online transition or integration of students' opinions into academic activities are vital points to understand changes in Romanian higher education. These results will be correlated with other sections of NSS-RO in further studies in order to provide a broader view.

## Appendix

		study_cycle		
		Bachelor degree (%)	Master degree (%)	Ph.D. (%)
university_dropout	No answer/Not my case	10.17	9.30	7.99
	Strongly disagree	46.89	54.19	58.76
	Disagree	11.56	11.66	12.23
	Undecided	17.29	14.83	9.84
	Agree	8.92	6.50	7.26
	Strongly agree	5.17	3.52	3.91
impoverished_students	No answer/Not my case	8.82	7.79	9.43
	Strongly disagree	36.03	43.97	46.17
	Disagree	16.95	16.87	17.27
	Undecided	14.62	12.18	11.37
	Agree	15.11	12.15	9.75
	Strongly agree	8.47	7.03	6.01
HEI_support	No answer/Not my case	11.45	10.09	8.73
	Strongly disagree	62.74	60.90	48.93
	Disagree	10.45	10.66	12.18
	Undecided	8.72	10.38	14.62
	Agree	3.10	3.81	7.79
	Strongly agree	3.55	4.16	7.75
online_transition	No answer/Not my case	8.05	7.23	9.74
	Strongly disagree	10.64	6.27	7.88
	Disagree	14.96	10.02	8.79
	Undecided	25.20	22.92	19.91
	Agree	24.82	28.04	25.39
	Strongly agree	16.33	25.52	28.28
online_resources	No answer/Not my case	8.09	7.33	8.38
	Strongly disagree	2.16	1.87	5.20
	Disagree	4.01	3.04	5.73
	Undecided	11.30	9.91	17.63
	Agree	35.86	34.98	27.25
	Strongly agree	38.58	42.87	35.80

(continued)

		study_cycle		
		Bachelor degree (%)	Master degree (%)	Ph.D. (%)
HEI_information	No answer/Not my case	8.09	7.31	7.38
	Strongly disagree	6.80	4.04	7.92
	Disagree	11.08	8.48	6.01
	Undecided	19.80	16.78	15.43
	Agree	30.41	32.90	30.12
involved_teachers	Strongly agree	23.83	30.48	33.13
	No answer/Not my case	8.12	7.27	9.98
	Strongly disagree	13.07	9.23	8.70
	Disagree	17.74	12.72	9.20
	Undecided	26.29	22.37	19.54
evaluation_agreement	Agree	21.02	25.30	25.51
	Strongly agree	13.76	23.12	27.08
	No answer/Not my case	8.19	7.43	11.37
	Strongly disagree	10.51	5.24	7.02
	Disagree	13.07	8.66	7.57
students_opinion	Undecided	22.83	19.64	15.07
	Agree	27.50	31.94	30.64
	Strongly agree	17.90	27.08	28.33
	No answer/Not my case	8.24	7.41	9.48
	Strongly disagree	26.71	16.01	13.87
	Disagree	18.00	15.66	7.24
	Undecided	20.26	20.96	21.58
	Agree	15.72	20.39	23.63
	Strongly agree	11.08	19.57	24.20

## References

- Aguilera-Hermida, P. A. (2020). College students' use and acceptance of emergency online learning due to COVID-19. *International Journal of Educational Research Open, 1*. <https://doi.org/10.1016/j.ijedro.2020.100011>
- Andersen, M. S., Bento, A. I., Basu, A., Marscciano, C. R., & Simon, K. (2021). College openings in the united states increased mobility and COVID-19 incidence. *The Preprint Server for Health Sciences*. <https://doi.org/10.1101/2020.09.22.20196048>
- Bączek, M., Zagańczyk-Bączek, M., Szpringer, M., Jaroszyński, A., & Wożakowska-Kapłon, B. (2021). Students' perception of online learning during the COVID-19 pandemic. *Medicine (Baltimore), 100*(7). <https://doi.org/10.1097/MD.00000000000024821>.
- Bergan, S., Gallagher, T., Harkavy, I., Munck, R., & van't Land, H. (2020). A word from the editors and a call to action. In S. Bergan, T. Gallagher, R. Munck, & H. van't Land (Eds.), *Higher education's response to the Covid-19 pandemic* (pp. 7-18). Strasbourg: Council of Europe.
- Chirică, A., & Lazăr, D. T. (2021). Cluj-Napoca without students: An estimation of the gap in the city's economy. *Transylvanian Review of Administrative Sciences, 62* E, 44–59. <https://doi.org/10.24193/tras.62E.3>.
- Deaconu, Ș.M., Haj, C. M., & Olah, R. (2020). Assessing students' perspective on teaching and learning. The case of national students' surveys. In A. Curaj, L. Deca, & R. Pricopie (Eds.), *European higher education area. Challenges for a new decade* (pp. 341–357). Cham: Springer.
- Deca, L., Gologan, D., & Santa, R. (2021). Romanian higher education facing Covid-19: New challenges for the university-state partnership. In S. Bergan, T. Gallagher, R. Munck, & H. van't Land (Eds.), *Higher education's response to the Covid-19 pandemic* (pp. 203–211). Strasbourg: Council of Europe.



- Deng, J., Zhou, F., Hou, W., Silver, Z., Wong, C. Y., & Chang, O. (2021). The prevalence of depressive symptoms, anxiety symptoms and sleep disturbance in higher education students during the COVID-19 pandemic: A systematic review and meta-analysis. *Psychiatry Research, 301*, 113863. <https://doi.org/10.1016/j.psychres.2021.113863>.
- Dumulescu, D., & Muşiu, A. I. (2021). Academic leadership in the time of COVID-19-experiences and perspectives. *Frontiers in Psychology, 12*. <https://doi.org/10.3389/fpsyg.2021.648344>
- EC. (2020). Communication from the commission to the European parliament, the council, the european economic and social committee and the committee of the regions on achieving the European education area by 2025. 30 September 2020. [https://ec.europa.eu/education/sites/default/files/document-library-docs/eea-communication-sept2020\\_en.pdf](https://ec.europa.eu/education/sites/default/files/document-library-docs/eea-communication-sept2020_en.pdf).
- Hâncean, M. G., Perc, M., & Lerner, J. (2020). Early spread of COVID-19 in Romania: Imported cases from Italy and human-to-human transmission networks. *Royal Society Open Science, 7*(7), 1–8.
- Harkavy, I., Bergan S., Gallagher, T., & van't Lant H. (2020). Universities must help shape the post-Covid-19 world. In S. Bergan, T. Gallagher, R. Munck, & H. van't Land (Eds.), *Higher education's response to the Covid-19 pandemic* (pp. 21–30). Strasbourg: Council of Europe.
- Hasan, N., & Bao, Y. (2020). Impact of “e-Learning crack-up” perception on psychological distress among college students during COVID-19 pandemic: A mediating role of “fear of academic year loss.” *Children and Youth Services, 118*. <https://doi.org/10.1016/j.childyouth.2020.105355>
- Hodges, C., Moore, S., Lockee, B. B., Trust, T., & Bond, M. A. (2020). The difference between emergency remote teaching and online learning. *EDUCASE Review, 2020*. <https://er.educause.edu/articles/2020/3/the-difference-between-emergency-remote-teaching-and-online-learning>
- Kim, T., Yang, M., Bae, J., Min, B., Lee, I., & Kim, J. (2017). Escape from infinite freedom: Effects of constraining user freedom on the prevention of dropout in an online learning context. *Computers in Human Behaviour, 66*, 217–231. <https://doi.org/10.1016/j.chb.2016.09.019>
- Lee, K., Fanguy, M., Xuefei, SLu., & Bligh, B. (2021). Student learning during COVID-19: It was not as bad as we feared. *Distance Education, 42*(1), 164–172. <https://doi.org/10.1080/01587919.2020.1869529>
- Marioni, G., & van't Land, H., & Jensen, T. (2020). *The impact of Covid-19 on higher education around the world*. IAU global survey report, Paris: International association of universities. 978-92-9002-212-1
- Mălăeşcu, S., Chiribucă, D. F., & Pavlenko, S. (2018). The efficiency of emerging institutional mechanisms addressing educational inequality and students' dropout in a romanian higher education institution. In *ICERI2018 Proceedings*. <https://doi.org/10.21125/iceri.2018.2663>
- Mackowiak, P. A. (2021). Prior pandemics. Looking to the past for insight into the COVID-19 pandemic. *Journal of Community Hospital Internal Medicine Perspectives, 11*(2), 163–170.
- Pan, H. (2020). A glimpse of university students' family life amidst the COVID-19 virus. *Journal of Loss and Trauma, 25*(6–7), 594–597. <https://doi.org/10.1080/15325024.2020.1750194>
- Pigaiani, Y., Zoccante, L., Zocca, A., Arzenton, A., Menegolli, M., Fadel, S., Ruggeri, M., & Colizzi, M. (2020). Adolescent lifestyle behaviors, coping strategies and subjective wellbeing during the COVID-19 pandemic: An online student survey. *Healthcare, 8*(4), 472. <https://doi.org/10.3390/healthcare8040472>
- Ratner, B. (2009). The correlation coefficient: Its values range between +1/–1, or do they? *Journal of Targeting, Measurement and Analysis for Marketing, 17*(2), 139–142. <https://doi.org/10.1057/jt.2009.5>
- Roman, M., & Plopeanu, A.-P. (2021). The effectiveness of the emergency eLearning during COVID-19 pandemic. The case of higher education in economics in Romania. *International Review of Economics Education, 37*, 1–14.
- Schnakovszky, C., Radu, M.-C., Herghelegiu, E., Ciubotariu, V.-A., & Cristea, I. (2020). The impact of the Covid-19 pandemic on the quality of educational process: A student survey. *International Journal of Environmental Research and Public Health, 17*(23), 1–15.

- Son, C., Hedge S., Smith A., Wang X., & Sasangohar F. (2020). Effects of COVID-19 on college students' mental health in the United States: Interview survey study. *Journal of Medical Internet Research*, 22(9). <https://doi.org/10.2196/21279>.
- Sweet, R. (1986). Student dropout in distance education: An application of Tinto's model. *Distance Education*, 7(2), 201–213. <https://doi.org/10.1080/0158791860070204>.
- Tesar, M. (2020). Towards a post-Covid-19 'new normality?': Physical and social distancing, the move to online and higher education. *Policy Futures in Education*, 18(5), 556–559.
- UBB. (2020). UBB propune variante posibile de începere a anului universitar 2020-2021. *NewsUBB*. <https://news.ubbcluj.ro/ubb-propune-variante-posibile-de-inceperea-a-anului-universitar-2020-2021/>.
- UniBuc. (2021). Universitatea din Bucuresti reia activitățile didactice față în față odată cu începerea noului an academic. <https://unibuc.ro/universitatea-din-bucuresti-reia-activitatile-didactice-fata-in-fata-odata-cu-inceperea-noului-an-academic/>.
- Young, E. (2020). How the pandemic defeated America. *The Atlantic*, 4 August.

**Stefan-Marius Deaconu** is a Ph.D. student in History at the University of Bucharest. His experience includes positions such as vice-president or president of the National Alliance of Student Organizations in Romania—ANOSR (2017–2018), or in various structures like the National Council for Higher Education Financing (2017–2018), the Romanian Agency for Quality Assurance in Higher Education (2013-present) or the National Council of Ethics and University Management (2017-present). He currently works at the Executive Agency for Higher Education, Research, Development and Innovation Funding (UEFISCDI), where he coordinates the development and implementation of the National Student Survey (NSS-RO) and National Employability Survey (NES-RO).

**Roland Olah** is a Ph.D. student at the Doctoral School of History of the University of Oradea and an MSc student in Human Resources Management from the Faculty of Social and Human Sciences, University of Oradea. He has gathered experience in student representation as a member of different deliberative and decisional structures and student organizations at the local and national levels in the National Alliance of Student Organizations in Romania (ANOSR). He is also an expert evaluator of the Romanian Agency for Quality Assurance in Higher Education (ARACIS).

**Open Access** This chapter is licensed under the terms of the Creative Commons Attribution 4.0 International License (<http://creativecommons.org/licenses/by/4.0/>), which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.



# Romanian Universities: The Use of Educational Marketing to Strengthen Internationalization of Higher Education



Cristina Ramona Fiț, Cristian Andrei Panțir, and Bianca-Florentina Cheregi

**Abstract** With the European Universities Initiative underway, the COVID-19 pandemic and various national or European strategies reaching their initially designated timeline, 2021 is a good moment to take stock of how Romania fulfilled its commitments regarding internationalization. One of the key dimensions of internationalization of higher education, both in Romania and global terms, is marketing and promotion, especially if one looks at the institutional efforts to attract talent. The article aims to show how Romanian universities use educational marketing to promote their study programs offer, in order to attract both international students and national students in the context of a steep student population decrease. The paper addresses two main research questions: How do universities use media and other mechanisms to promote their educational offer globally? Which are the main strengths allowing Romanian higher education to better attract international students? The article presents the main findings of the SWOT analysis for the Romanian higher education system, with information from 47 public universities. It compares the current findings with those from a similar SWOT analysis performed in 2015, while also putting forward a cost-benefit analysis of attracting international students and developing internationalization of higher education. The paper also underlines several areas where universities can focus their efforts in attracting international students (such as the [www.studyinromania.gov.ro](http://www.studyinromania.gov.ro) portal) and policy recommendations based on the data analyzed

**Keywords** Educational marketing · Promotion · Media · Romanian universities · Strengths · International students · Internationalization of higher education

---

C. R. Fiț (✉) · B.-F. Cheregi  
National University of Political Studies and Public Administration, Bucharest, Romania  
e-mail: [bianca.cheregi@comunicare.ro](mailto:bianca.cheregi@comunicare.ro)

C. A. Panțir  
Adecco Romania, Bucharest, Romania

© The Author(s) 2022  
A. Curaj et al. (eds.), *Higher Education in Romania: Overcoming Challenges and Embracing Opportunities*, [https://doi.org/10.1007/978-3-030-94496-4\\_9](https://doi.org/10.1007/978-3-030-94496-4_9)

## Abbreviation

ANS	The national platform for collecting statistical data for higher education
AUF	Agence Universitaire de la Francophonie/Francophonie University Agency
DESI	Digital Economy and Society Index Report
EAIE	European Association for International Education
EUA	European University Association
EUI	European Universities Initiative
GTCI ranking	Global Talent Competitiveness Index, 2020
IAU	International Association of Universities
NCR	National Council of Rectors
NAFSA	Association of International Educators
QS	QS World University Ranking
RMU	National Student Enrolment Registry
THE	Times Higher Education World University Rankings

## 1 Introduction

### 1.1 *Research Questions and Aim of the Study*

The Romanian higher education national and institutional stakeholders have to adapt to a world that faces quick changes, with the European Universities Initiative underway, various national/institutional or European strategies reaching their initially designated timeline, as well as new external challenges such as COVID-19 and the demographic downturn. COVID-19 had an impact on the world higher education systems and made the transition to online learning very fast (Marinoni et al. 2020).

The internationalization of higher education in Romania “is not a new concept”, but its redefinition as a “comprehensive process” integrated in a strategic approach is still ongoing. (Deca et al. 2015) Also, “different rationales for internationalization between national and institutional level” (Deca 2014, p. 3) may lead to inconsistency in terms of public objectives and policies (Deca 2014) for all those involved in the formulation and implementation of public education policies. Currently, Romanian universities are facing challenges such as the steady decline of the student population, competition with higher education institutions in the rest of the world to attract international students or, most recently, maintaining relevance in the context of the COVID-19 pandemic.

Thus, 2021 was considered by the authors a good time to conduct a new SWOT analysis of the internationalization of Romanian higher education in order to have a clear vision on where Romania stands in terms of internationalization, identify the

strengths it can build to increase the quality of its higher education system and ascertain how universities make use of marketing mechanisms to attract more international students.

This article is based on a more elaborate study—“Marketing study on the promotion potential of the Romanian universities”, developed within the project titled “Quality in higher education: internationalization and databases for developing the Romanian higher education”.<sup>1</sup>

The aim of the article is to show how Romanian universities use educational marketing to promote their study program offer to attract international students, in the context of a steep student population decrease caused by a decline in demographics, a low Baccalaureate promotion rate, but also high school dropout or migration (UEFISCDI 2018). The main research questions are:

- How do universities use media and other mechanisms to promote their educational offer globally? and
- Which are the main strengths allowing Romanian higher education to better attract international students?

The paper includes, inter alia, a short analysis on the educational marketing tools used by Romanian universities, the outcomes from a new SWOT analysis of 47 public higher education institutions (HEIs) in Romania, a cost-benefit analysis, and the authors’ perspective on the competitive advantage Romania has for attracting international students. The conclusion section will highlight recommendations for the national and institutional stakeholders on the use of educational marketing.

This article, together with the previously mentioned marketing study (Fit et al. 2020), could be the starting point in shaping a national marketing strategy, with clear priorities, such as building well-defined promotion campaigns in regions of interest to Romania and defining clear, quantifiable targets for measuring the assumed targets. Emerging recommendations in this article could lead to a future increase in Romania’s attractiveness as a study destination.

## 1.2 *Theoretical Framework*

While acknowledging the diversity of theoretical approaches used for the internationalization of higher education, the authors chose the following working definition:

Internationalization of higher education is the intended process of integrating an international, intercultural or global dimension into the purpose, functions and delivery of post-secondary, in order to enhance the quality of education and research for all students and staff, and to make a meaningful contribution to society. De Wit et al. (2015, p. 9)

---

<sup>1</sup> Project funded through European Funds and coordinated by the Executive Agency for Higher Education, Research, Development and Innovation Funding (UEFISCDI) in partnership with Ministry of Education.

In the last decade, debates in the academic communities led to a redefining and rethinking of the internationalization of higher education. Following the 5th Global Survey Report, developed by IAU (Marinoni 2019), the benefits of internationalization are seen as predominantly improving “international cooperation and capacity building” and the “quality of teaching and learning”. The relevance of internationalization is becoming increasingly important, depending on the size of the institution. According to Egron-Polak and Hudson (2012), the way institutions approach international dimensions depends very much on the size of the Higher Education Institution (HEI): institutions of small size have the tendency to focus more on the mobility dimension (having a strong economic motivation related to the extra funds brought by international fee-paying students), while universities with a comprehensive character have the tendency to concentrate more on research partnerships. Universities worldwide increased their interest in internationalization since it contributes to the increased differences between universities. Marinoni (2019).

Institutions with a strong economic motivation are more and more interested in attracting international students (Marinoni 2019) and, in order to attract students, universities design and implement comprehensive marketing campaigns. Universities view social media, in particular Facebook, as an efficient mechanism for attracting international students (Assimakopoulos et al. 2017 cited in Bamberger et al. 2020). This preference seems to be influenced by how target groups use social media platforms. As the Pew Research Center (2018) shows, the new generation is active on social media, with YouTube, Facebook and Instagram being the most frequently used social media platforms for the 18–24 age group.

### ***1.3 Methodology***

The methodology consists of desk research, legal documents and strategic documents analysis, analysis of data from the national platform for collecting statistical data for higher education (ANS), or data retrieved from the National Student Enrolment Registry (RMU), official universities’ websites, and their social media pages analysis.

The sample was composed of 47 public universities in Romania (excluding military universities and private universities). The purpose was to have universities from all eight geographic/development regions. Therefore, there are twelve universities from Bucharest-Ilfov region, seven universities from the North-West, seven universities from the North-East, seven universities from the West region, five universities from the Centre, three universities from the South, three universities from the South-East, and three universities from the South-West. At the same time, for the analysis, we took into account the university profiles, divided according to their fundamental fields of study: 16 comprehensive, nine architecture, arts and sports universities, six science, socio-humanities & economics universities, six medical universities, six technical universities, and 4 agronomic universities. The data was collected in four intervals: October–December 2019 for data on how universities use media,

April–May 2019–2021 for StudyinRomania<sup>2</sup> website statistics, January–April 2020 for social media communication, and October–December 2020 for SWOT-relevant data.

To address the main strengths for better attracting international students, a SWOT analysis for 47 Romanian public universities was performed. A cost-benefit analysis related to the economic advantages that international students bring to Romania was developed, with an emphasis on the financial benefits for the purposes of this article.

The SWOT analysis aims to encourage collaboration between universities and increase their attractiveness and reputation through the study programs. It was based on numerous indicators, the most relevant being: double degree programs, education programs in English/other foreign languages, cost of living, collaboration with stakeholders, international rankings alumni network, participation at international educational fairs, fees for international students, legislation in the internationalization area, the impact of COVID-19 pandemic, etc. The SWOT analysis also contains a Political, Economic, Social, and Technological factors (PEST) analysis, providing both a micro and macro-level perspective of the Romanian universities.

Some limitations of the present article: there is no perspective of private and military universities due to the lack of data; also, no questionnaires or interviews with universities' representatives were performed, thus limiting the contribution of qualitative research methods to the conclusions of the article.

## 2 Internationalization of Higher Education in Romania

### 2.1 Data on International Students

In the 2019/2020 academic year, Romania had 457,244 students enrolled in 47 public universities at bachelor, master, and doctorate levels. 28,616 international students were enrolled for a full cycle, 6% out of the total student population, an increase of 34% since 2014/2015 when international students represented 5%. In 2019/2020, 27% of international students were from EU/ EEA, 73% of non-EU students were from non-EU countries (out of which 47% were from non-EU, and 53% were from the Republic of Moldova). (Haj et al. 2020a).

According to the policy brief (Haj et al. 2020a), most international students were enrolled in Bachelor studies—94% for EU students and 78% for non-EU. 22 universities also organized the Romanian language preparatory year, and in 2019/2020, there was a 25% increase in the number of international students enrolled in these programs, compared to 2017/2018, and a diversification of the countries of origin.

International students come from over 127 countries, but a majority of them—87%, originate from 17 countries (listed according to the number of students in descending order): Republic of Moldova, France, Israel, Germany, Italy, Morocco,

---

<sup>2</sup> Study in Romania portal—is the official website that presents the Romanian higher education offer to a national and international audience.

Greece, Tunisia, Serbia, Syria, Hungary, Ukraine, Iraq, Jordan, Albania, Lebanon, and Nigeria. (Haj et al. 2020a).

62.18% of international students are enrolled in the following ten study domains (listed according to the number of students in descending order): medicine, dentistry, business administration, veterinary medicine, pharmacy, law, economics and international relations, language and literature, computers, and information technology and management. The largest share of international students enrolls in programs taught in French (67%) and English (28%).

## ***2.2 Strategic Perspective at a National Level***

Romania still does not have a national strategy for the internationalization of education and no central level institution dedicated to attracting international students or promoting Romanian higher education (Fit 2020). The Ministry of Education is the official institution responsible, and no national marketing strategy for promoting Romanian higher education exists either.

In the last ten years, UEFISCDI implemented various projects focusing on the internationalization of higher education, with a number of outcomes that could support a more strategic national approach on the topic, such as a national analysis of the status quo of internationalization, institutional strategies for 20 Romanian universities, the StudyinRomania platform, a strategic framework for a national internationalization strategy, a blueprint for a structure to promote information about the Romanian higher education system, a methodology to monitor internationalization, or a series of policy briefs.

Half of the universities participating in the 2015 UEFISCDI project do not have marketing or communication strategies, having limited capacity and resources to implement these (Egron-Polak et al. 2015). This can be seen as an obstacle to attract international students. The lack of a strategic approach for recruiting international students was also visible on the universities' websites, which often had little or no information in English.

Moreover, in 2016, the Ministry of Education conducted a questionnaire regarding the internationalization objectives among universities, with 52 respondents out of 92 universities, 43 public, nine private, and five military universities (Fit, 2020). The top five objectives in their internationalization strategy listed by universities were: increasing partnerships with international universities, increasing the number of student and academic mobility, promoting the university internationally, attracting international degree-seeking students, and internationalizing the curriculum and research priorities.

In 2017, the National Council of Rectors (NCR) started to informally support internationalization by coordinating joint participation at educational fairs or international conferences under the StudyinRomania umbrella, although not all universities were involved (Fit 2020).



In 2021, UEFISCDI, together with the Ministry of Education and with the support of the National Council of Rectors, launched the first professional video<sup>3</sup> to promote the Romanian higher education and attract international students.

### ***2.3 Marketing Endeavors at the Institutional Level***

Since 2016, through the National Council for Higher Education Financing (CNFIS), the Ministry of Education has conducted project competitions to support specific university activities through the Institutional Development Fund (IDF). While priorities have varied, internationalization has remained a constant. During the five years of competitions, 52 universities have received funding for internationalization activities, 31% participating in all yearly competitions.

The main activities for which universities requested funding were: increasing the number of international students, increasing the number of mobility/partnerships (including research), developing support materials to attract international students, websites in English, and participation in international promotion fairs. Other priorities included internationalization at home activities (including improving language skills for teachers and, in some cases, non-teaching staff), study programs in foreign languages, summer schools or "Orientation Days", "buddy system"<sup>4</sup> programs, or online registration applications/mobile applications for students.

## **3 Educational Marketing in Romanian Universities. How Romanian Universities Use Media and Other Mechanisms to Promote Their Educational Offer Locally and Globally**

Most Romanian universities use a mix of instrument types to promote their education offer, in different combinations, with an emphasis on the four traditional media types: Owned Media, Earned Media, Social Media, and Paid Media (Fit, et al 2021).

As public educational and research institutions, Romanian universities perform marketing actions and campaigns similar to companies. They are large employers in the cities where they operate, interact with a large number of partner institutions and providers, and turn out yearly alumni. The alumni community will always bear the educational "mark" of the university. This is why it is important to understand each type of media separately and which indicators can be relevant for their performance (Brand Watch 2016).

---

<sup>3</sup>[https://www.youtube.com/watch?v=\\_aOSG\\_0iOko&t=4s&ab\\_channel=StudyinRomania](https://www.youtube.com/watch?v=_aOSG_0iOko&t=4s&ab_channel=StudyinRomania).

<sup>4</sup> Integrating international students by pairing them with national students.

Owned media is considered the base for any marketing activity acting as the organization's "official" source of information. It is essential for any marketing mix, and for universities, this usually includes the website or connected blogs, or any other content created and shared via social media or their website (Corcoran 2009). The indicators monitored to determine if a university makes good usage of its own media include the retention rate of website visitors, the average number of pages visited during a visit, the total number of monthly visits and the average duration of a visit. In addition, official YouTube channels and Facebook events play a key role in owning the communication flow. The number of followers of the official YouTube channel and the number of events created on the universities' official Facebook page are relevant indicators of the effectiveness and consistent marketing activities organized by the university. During 2020 and influenced by the global pandemic, the role of the owned official channels of communication has increased (Mander 2020 and Crisp 2020).

Earned media refers to all the awareness and "buzz" surrounding the brand or product that have been generated by other people or institutions and can include traditional media mentions, social media mentions, shares and retweets, online reviews, and blog articles hosted by authors external to the brand (Corcoran 2009). In this case, the indicator used to monitor universities' performance in earned media was the number of articles published on Mediafax<sup>5</sup> news agency. This number indicates the notoriety of the university, its students, and Alumni in the media (the articles displayed were shared by other media institutions). The third type of media, paid media, consists of any marketing activity that the university must pay for. This includes TV advertising, radio spots, and outdoor advertising. In online, there are three subcategories of paid media: pay per click (PPC), visual banner advertising, and sponsored newsfeed content (Corcoran 2009).

Since no official university data was available, the authors counted and scored the participation in university/educational fairs, outdoor advertising, TV and radio advertising, paid online advertising. Social media was integrated only in the last decade on the marketing stage. For many age groups, social media has become the best and most used advertising channel, which is strongly influenced by the technology and age groups, and it consists of social networks, blogs, audio-video content (Alalwan et al. 2017). To measure the universities' performance in social media, the following indicators were used: the number of followers of the official Facebook page of the university, number of alumni and followers of the official LinkedIn page, the Google and Facebook ratings of the university (Fit, et al. 2021).

All the indicators for each media type have contributed to a scoring system of 100 maximum points. Some findings are listed below, focused on number of international students, size, and type of university (Fit, et al. 2021)

One can assume universities with a higher number of international students take more and more coordinated actions for attracting them. While medical universities have the highest percentage of international students, their scoring was around 20 points, the best. The high number of international students in these universities is

---

<sup>5</sup>[www.mediafax.ro](http://www.mediafax.ro).

probably linked with a long-standing tradition of attracting them and has its beginnings in the public higher education policies from the 1970s and 1980s. In time, the graduates from these universities have created communities and distinguished themselves as key members of local societies. They created opportunities for students, and this awareness has fueled the flux of international students until today.

In terms of size, the universities have been split in four categories: under 10,000 students, between 10,000 and 20,000 students, between 20,000 and 30,000 students, above 30,000 students. Large universities have better scores since some indicators are determined by numeric values, such as the number of alumni, visitors on the official website, followers on official media channels etc.

In terms of university type, the best scores were registered by those in the field of Sciences, Socio-Human, Economic, and those with a Technical profile. The ones with the lowest score were the Architecture, Art and Sports profiles. The high scores of Sciences, Socio-Human, and Economic universities might have to do with their faculties' profile. For example, these universities have a Faculty of Communication Sciences, which is or may be responsible for the management of an official university blog, or the Faculty of Mathematics and Computer Science is or may be responsible for the administration of the website. This is a great opportunity for the expertise created through the educational process to be used in promoting the university.

### ***3.1 Romanian Universities' Preferred Marketing Tools***

Although Romanian universities have access to all the instruments mentioned above, they use some more than others. The most accessible and frequently used are official websites, participation in educational fairs, social media, and the StudyinRomania platform. In a recent overview of the websites of 47 Romanian public universities, only 79% have their websites in English. Some of the websites are translated into French or German, as well, but this percentage shows the level of interest that universities have for international students (Fit 2020).

Concerning social media platforms, Facebook is the most widely used. The frequency of communication and promotion shows that 16 of the studied universities have between 2 and 10 posts a month, nine of the universities up to 20 posts per month, 14 universities up to 40 posts per month, and the seven most active universities have over 40 posts, some reaching up to 100 posts per month (Fit 2020).

Taking part in university fairs (nationally and internationally) has been a key activity in promoting their educational offer. During the past decade, the presence of Romanian universities in international fairs has been treated more holistically, but starting with 2017, under the umbrella of StudyinRomania, universities have started to participate in international promotional events. The most important international fairs include the European Association for International Education (EAIE) Conference and Expo (2017–2019) and NAFSA 2019. These seem to be considered the most popular international conferences/fairs by universities in terms of learning and networking. Universities also took part in several fairs in regions and countries aiming

for student recruitment (Vietnam, Dubai, Morocco, Ukraine, Turkmenistan, Tunisia, etc.). Romanian universities also participated in fairs dedicated to attracting Romanian students, such as the Romanian International University Fair (RIUF) organized in Romania. Additionally, universities organize yearly open doors type events, summer universities,<sup>6</sup> and regional caravans to promote their educational offer. Looking at the countries where Romanian universities participated in international fairs, we found a correlation between these and the countries of origin for international students in 2019/2020. Tunisia, Morocco, Turkmenistan and Ukraine are in the top 15 countries from which almost 83% of the international students originate from. In 2019/2020, 7% of the non-EU students enrolled were from Tunisia (slightly decreasing compared to the previous year), 10% from Morocco (increasing from 8%), 5% from Ukraine (increasing from 3%), and 2% from Turkmenistan (increasing from 1%) (Haj et al. 2020a).

### 3.2 *StudyinRomania Portal ([www.studyinromania.gov.ro](http://www.studyinromania.gov.ro))—The Main National Marketing Tool*

The StudyinRomania portal represents one of the most important tools to promote Romanian higher education to an international audience. The portal offers the most complete set of information regarding the study program offer of the Romanian universities. Its content is available in English and gives the visitor the opportunity to research in depth the educational offer in Romania. An analytical focus was performed using Google Analytics<sup>7</sup> on four indicators: website users, geographical locations of visitors, website access devices, demographic details about visitors.

Almost 25% of website users are from Romania, although some of these visitors could have been foreign nationals in Romania at that time. Visitors from Pakistan, Bangladesh, Morocco, or India have the longest average duration of visit sessions. This finding fits well with the countries from where a significant number of international students originate. The devices used to access the website show an almost 50–50% split between mobile and desktop usage, somehow normal for all internet usage of Romanian websites. In terms of demographics, most users are 25–34 years old, with 58% male visitors (Fit et al. 2021).

The promotion video launched in May 2021 had a clear call to action to visit [www.studyinromania.gov.ro](http://www.studyinromania.gov.ro). Compared with the pre-pandemic period (April–May 2019), the impact of the video is visible in almost all website indicators (e.g. increase

---

<sup>6</sup>Another instrument that has been more and more popular in recent years is the summer university programs. These events take place in summertime and are organized by universities together with student organizations. High school students are invited to experience the full-time student life during two weeks in the university's campus. They register for a specific faculty, take part in classes and even take part in exams.

<sup>7</sup>Due to the COVID-19 pandemic, the analyzed period was October – December 2019.

in the number of users, returning visitors, etc.), but also in the demographics of the visitors (e.g. the number of 18–24 age users has increased alongside with the number of female visitors). Fit et al. (2021)

## 4 The Main Strengths of the Romanian Higher Education to Better Attract International Students

### 4.1 SWOT Analysis of the Romanian Higher Education System

The 2021 SWOT analysis, performed in the framework of a national project, has revealed key aspects that are relevant both for the calibration of institutional objectives and for national public policy proposal regarding the internationalization process. Furthermore, this SWOT analysis focuses on the particularities of Romania as an attractive study destination for international students.

#### Strengths

Among the strengths identified, one notes the collaborative programs with European universities (double degree programs), the number of education programs in English/other foreign languages, and student services (accommodation, canteens-restaurants, and sports facilities). Compared to the 2015 analysis (Egron-Polak et al. 2015), the same elements stand out, with a significant increase in the number of double degree programs with European universities, which could be correlated with the significant efforts in terms of promoting mobility together with learning events made by ANPCDEFP together with the Erasmus+ funds available these past years as well. For some universities, the increase could also be correlated with the presence of the institutions at EAIE conferences and other international fairs, which are important learning vehicles and an open door to networking and collaboration with other institutions. Overall, 30% have collaborative programs with European universities (double degree programs). The total number of double degree programs in the Romanian universities is 82, with 26 (32%) bachelor programs, 55 (67%) master programs, and 1 (1%) at the Ph.D. level (see Table 1).

67% of the total double degree programs are developed by two universities: one in Bucharest and one in Cluj-Napoca.

In terms of programs taught in foreign languages, the English language programs are the most dominant, followed by programs in Hungarian, French, and German.

Student services are an important strength, focusing on accommodation, canteens, and sports facilities. All 47 Romanian public universities offer accommodation in student campuses, which could be an important competitive advantage for international students. In Romania, students have 50% discount for public transportation (including train), 75% discount for museums and cultural institutions, free medical services, and free counseling and orientation services. All these facilities apply to the international students (up to 26 years) that study in Romania.

**Table 1** Collaborative programs with European universities (double degree) and study programs in foreign languages (English, French, German, Hungarian)

University profile	No of universities by profile	No of study programs (Ba, Ma) in foreign languages (English, French, German, Hungarian)	No of universities with double degree programs/ double degree programs reported at profile universities	No of partner universities for all double degree programs
Science, socio-humanities & economics	6	308	6/26	21
Technical	6	105	5/51	25
Comprehensive	16	132	2/3	7
Architecture, arts and sports	9	30	1/2	2
Agronomic veterinary	4	22	0	0
Medical	6	30	0	0

Source Universities' websites & RMU 2019/2020, data aggregated by the authors

Furthermore, the cost of living in Romania is accessible compared to other European countries. The average cost of living in Romanian cities is approximately 643 EUR/month, according to numbeo.com. For the whole academic year, the average cost of living can reach 5,790 EUR (numbeo.com n.d.).

The accessible study fees for international students is another strength resulting from the national SWOT analysis, a strength mentioned in the previous IEMU study in 2015 (Egron-Polak et al. 2015). In fact, fees in Romania are low in comparison with other states. For instance, the fees for non-EU students (in the academic year 2019/2020) range between 2,600 and 5,500 EUR for an academic year, with the biggest fees for medical universities, followed by architecture, arts and sports universities, agronomy and veterinary universities, comprehensive universities, technical universities, and science, socio-humanities and economics universities.

Another strength is the high-speed Internet connection, Romanian being one of the top ten countries with the highest Internet speed connection—100 Mbps (Netograf.ro n.d.). According to a study made by the Digital Economy and Society Index Report (DESI) in 2020, Romania is in the 9th place at the EU level.

Last but not least, the collaboration with stakeholders (public and private companies) is also a strength and an opportunity for students to find job offers and internships. 37 out of the 47 public universities (79%) have partnerships with public or private companies based on research projects, events and conferences, or job fairs. Medical universities have mainly partnerships with hospitals and institutions, while for the architecture, arts, and sports universities, the partners are usually the sponsors. Almost all universities provide career opportunities for students and some universities have also developed job portals for students. The partnership between

the academic and professional areas can lead further to collaboration between universities and companies, which might be an important competitive advantage for Romania, especially if we look at the research reputation.

### **Weaknesses**

Romania does not yet have a national online admission system, and this is both a weakness and an opportunity. If we take into account the fact that in 2015, online admission was possible only for a few universities, while in 2020 the number of universities that have an online admission system has grown considerably, this means that in the future, this weakness can turn into a strength. The growth of universities that now have an online admission system can be explained by the COVID-19 pandemic, which increased the digitalization of education and a streamlining of bureaucratic procedures following the restrictions of circulation.

Although Romania is among the top English-speaking countries according to Education First (2019), the level of English proficiency for academic staff that teaches in Romanian universities is still low. The 2015 analysis proved that there is a need to develop the linguistic competence of academic staff (Egron-Polak et al. 2015, p. 39), but the authors have no recent information gathered to analyze the evolution since.

Incoming and outgoing mobility for students and academic staff is another weak point since Romania is far from achieving the objective of 20% student mobility by 2020 (Deaconu and Haj 2020, p. 42). Overall, in the academic year 2018–2019, twice as many students went to study abroad compared to international students deciding to study in Romanian universities (Haj et al. 2020b, p. 4).

The national and international research grants are also a weak point since Romania has only a 2.6% success rate in the European Research Council (ERC) projects, financed from Horizon 2020 budget (Euractiv 2019). A possible explanation for this is the total number of teaching hours, which implies that the budget and time allocated for research are lower. Romania is a modest innovator in research, with more than 50% below the European average, and on the next to last place in the European Union, followed by Bulgaria (Hollanders et al., 2020).

Among the weaknesses is the public communication of universities in foreign languages, especially if we look at the university websites, official social media pages (Facebook, Instagram, YouTube, etc.) in English or other international circulation languages.

### **Opportunities**

The SWOT analysis shows five major opportunities for Romanian universities: alumni network, participation in European/global initiatives, participation at international educational fairs, participation in international rankings, and the insertion of graduates on the labor market.

The alumni community is an important image vector for the country brand, as well as for the universities' brand. 90% of universities have an alumni section on their website, and 66% have a LinkedIn dedicated page for alumni. Universities of Science, humanities, and economic profile have the most followers and alumni on LinkedIn, thus contributing to increased institutional visibility. The alumni network

can be a potential source for financing research projects and for launching a national alumni community, reuniting graduates from different backgrounds, and together promote the Romanian HE brand.

The 34% increase in the number of international students since 2014/2015 impacts the diversity in the classroom and, in general, improves internationalization at home.

Participation in European or global initiatives is a potential opportunity, with 19 surveyed universities part of the European University Association (EUA), eight part of the International Association of Universities (IAU), with almost half of them part of at least one of these global initiatives, and 34 part of the Agence universitaire de la Francophonie/Francophonie University Agency (AUF) as a full member, associate or observer. Recently, ten universities also joined the European University Initiative (EUI).

Participation in international educational associations and international fairs can help promote universities and increase their international partnerships.

Therefore, also due to the COVID-19 pandemic, Romanian universities too have migrated to e-learning platforms, and now the websites are geared towards actively engaging learning in the educational process, leaving behind their previous almost exclusive informative role. This constitutes a real opportunity for students, both international and domestic.

### **Threats**

Legislation and excessive bureaucratization of internationalization is still a threat, without significant changes from the 2015 analysis (Egron-Polak et al. 2015), potentially impacting the student and staff recruitment process, as well as financial management. The lack of collaboration between ministries/institutions is also a threat, with a direct impact on admission of international students.

“The new demographic context has already generated a decrease of the students’ number, which will continue if the demographic profile of the ones who enroll in tertiary education stays the same” (Santa and Fierăscu 2020, p. 5). The study emphasizes that discrepancies between the regions and the development areas are concentrated around big university cities such as Bucharest, Cluj-Napoca, Timisoara, and Iasi.

Other threats could be the economic context (inflation, the increase in prices), and the COVID-19 pandemic, which affected the ongoing physical mobility (considering the travel limitations).

Finally, yet importantly, the brain drain phenomenon negatively influences the migration of talents, especially the migration of skilled workforce outside Romania, leading to an imbalance between the incoming and outgoing workforce in medicine. In the medical area, Romania has one of the highest migration rates from the last two decades, compared to other countries from Eastern Europe (Botezat and Moraru 2020). This also can influence the attraction and retention of international students by seeing the imbalance between those who choose to work in Romania and those who choose to leave.



### **The cost-benefit analysis in the Romanian universities**

The cost-benefit analysis is a very useful instrument in understanding the socio-economic impact of internationalization, in particular the financial contribution of international students.

The authors looked at the international students that come to study in Romania for a full cycle at Bachelor's degree. The cost-benefit analysis was based on the following indicators calculated only at the Bachelor level: the number of international students (in the 2019/2020 academic year), the study fees at Bachelor's degree for international students from non-EU countries (without taking into account the students from Republic of Moldova, since most of them are beneficiaries of state subsidies) and the average cost of living in Romania for international students (calculated for UE/SEE students, non-EU students and the Republic of Moldova students).

The results of the cost-benefit analysis show that the average study fees for the Bachelor's degree for non-EU students is between 2,600 and 5,500 EUR per academic year. The highest study fees are at medical universities, followed by architecture, arts and sports universities, agronomy universities, veterinary universities, comprehensive universities, technical universities, and science, socio-humanist, and economics universities. The income from study fees from non-EU students is around 28 million EUR for one study year at Bachelor. The highest income was observed at medical universities because 10% of their total student population is comprised of international students coming from non-EU countries, and the study fees are higher compared to other types of universities.

The average cost of living in university cities is approximately 643 EUR/month, according to numbeo.com. For the whole academic year, the medium cost of living for 9 study months can reach 5,790 EUR (numbeo.com, n.d.). The financial benefit for the Bachelor level reaches around 165 million euro, taking into account both the cost of living (for all international undergraduate students: EU/EEA, non-EU, including Romanian ethnics) and tuition fees (exclusively for students from non-EU countries) for one academic year, which represents 2.62% out of the education budget in 2019 and around 0.08% of the 2019 GDP (Fit, et al. 2021).

## ***4.2 The Competitive Advantage of Romania***

The competitive advantage of Romania is linked to the country's image on the international stage. In the era of globalization, nations are perceived as brands, sometimes even commercial brands. Therefore, the brand of a nation has six fundamental dimensions: tourism, export, diplomacy, investments and immigration, culture and heritage, people (Anholt 2007). This model measures the power of a country brand and constitutes a public opinion barometer (Cheregi 2018, p. 53). According to the Future Brand Index 2020 rank, Romania is in the 62nd place out of 75 countries (Future Brand 2020). Countries such as Japan, Switzerland, and Norway are in the first places, while Iraq is in the last place.

In terms of digital competitiveness at a global level, Romania is in the 49th place out of 63 countries (IMD World Competitiveness Centre 2020, p. 18). In a study published in 2020, Cheregi and Bârgăoanu prove that Romania is framed in the media as "a pole for Artificial Intelligence worldwide", a European destination for tech investors, an IT outsourcing destination with one of the best Broadband Internet speed, science-savvy workforce, and women involved in scientific research (Cheregi and Bârgăoanu 2020, p. 300). Technology is an important competitive advantage, including for the attraction of international students. Furthermore, technology is also a *soft power* instrument linked to the cultural, social, and public policy dimensions (Cheregi and Bârgăoanu 2020, p. 296). And a key role in Romania's competitiveness is given by public diplomacy and international relations, both having an impact on internationalization as well.

In 2020, Romania and Bucharest are situated approximately at the middle of the GTCI ranking (Lavin and Monteiro 2020). Even though Romania has increased its purchasing power and the cost of living, the competitiveness of Romania and Bucharest to attract talents is reduced, compared to other EU countries or North America. As for the attraction level, Romania is surpassed by Poland, but it is in front of Turkey. As for Bucharest's level of attraction, the city is surpassed by Warsaw, but in front of Ankara.

The fact that Romania is part of the European Union increases its competitive advantage as well. For many foreign citizens (outside the EU), the opportunity to spend a limited time in Romania and then relocate to a Western state is an option often considered. Compared to neighboring countries, Bucharest is better situated from a competitive point of view, while Romania has a lower position if we take into account the competitive advantage.

## 5 Conclusion and Recommendations

Starting from the two main research questions—*How do universities use media and other mechanisms to promote their educational offer globally?* and *Which are the main strengths allowing Romanian higher education to better attract international students?*—this section of the article outlines the main recommendations for better using higher education marketing in order to achieve the national and institutional goals set for higher education.

In light of the first research question, the media & other mechanisms' mix (official websites, participation in educational fairs, social media, and the StudyinRomania platform) used by Romanian universities for marketing activities is diverse but highly disproportioned in terms of importance attributed by the universities. The official website is the most frequently used mechanism, although not all universities have proper English versions of their websites. Facebook is the most widely used social media platform, and participation at national and international educational fairs has made a shift from a holistic to a more strategic participation, including the presence of the Romanian universities under the StudyinRomania brand. The constant presence

of some universities at the EAIE annual conferences might be due to their need for a better learning about internationalization, marketing and also the need for opening to new collaborations by exploring networking.

As well, it is important to mention there is a correlation between the international fairs where Romanian universities participated and the countries of origin for international students in the 2019/2020 academic year. The data regarding international students shows an increasing trend of participation at studies in Romania from countries where these international fairs were held (Morocco, Tunisia, Ukraine, and Turkmenistan). The StudyinRomania platform is also one of the mechanisms used to promote their educational offer globally, and findings show a good connection between the visitors that have the longest average duration of visit sessions on the website with countries from where a significant number of international students originate. Very few universities make use of all the tools available for promoting their educational offers. These tools are available to all universities and are similar around the world. The reasons for not using all of them might have to do with financial resources, marketing expertise, and strategic approach.

We think that universities should link their objectives to clear marketing goals. This can be done at the beginning of each financial exercise or start of the academic year. Also, for a long-term impact, universities should invest in managing their social media platforms with community managers. With quick-term response time and constant web content provision, universities could gain faithful followers and good online ratings.

As a national online initiative to attract students from abroad (but not only), the StudyinRomania platform has tremendous potential. Now, it serves as an information and awareness tool. The analytical data of the website indicate opportunities to attract students interested in the Romanian educational offer. In the future, the website platform could be a “one-stop-shop”. The brand authority and visibility of the platform offer the opportunity for adding new functionalities, such as centralized online application modules for students. In addition, the practice of recurrent media content together with the promotion video launched in 2021 and promoted in social media in line with a comprehensive communication strategy should be continued, as it proved to be impactful in the number and quality of the website’s users.

As previously mentioned, Romanian universities have the means to promote themselves similar to their international peers. If one looks at the way universities promote themselves/communicate, it is clear that a small number of universities outsource these needs to professional advertising and marketing agencies. Most of them prefer to keep the process “inside” and do not follow multi-annual marketing objectives. One example in this sense is that the student leads attracted at university fairs are not included in follow-up processes.

In this regard, universities should coordinate their strategic objectives with marketing goals. Clear annual Key Performance Indicators (KPIs) should be established, measured, and followed through together with a communication package that should include unique selling points. Based on them, specialists (internal or external from dedicated agencies) can draw strategies and implement them.

Starting from the findings based on the second question—Which are the main strengths allowing the Romanian higher education to better attract international students?—a few conclusions and recommendations are outlined in what follows.

The reduced cost of living, the moderated/affordable study fees, the services and facilities available for students, the available programs in foreign languages and double degree programs, the high-speed broadband Internet connection, and the lack of a *numerus clausus* in some specific universities are among the most visible advantages for promoting the Romanian higher education. As a study destination, Romania is more attractive than Turkey or other neighboring countries but less attractive than countries from Central Europe. The political stability, the process of digitalization and bureaucratization help in differentiating Romania on the global stage, compared to other Balkan countries or to the Middle East.

Romania is an attractive destination for international students and can become more appealing if the common efforts on educational marketing and communication will be part of the universities' strategic approach and a national strategy. Romania still does not have a national strategy for internationalization neither a national marketing strategy, so there is a need for a unitary and comprehensive approach to develop public policies for the internationalization of education.

Other positive reasons of which universities should take advantage of in their efforts to increase internationalization and while promoting their educational offer are the participation in European and global initiatives, such as EUA, IAU, AUF, the EUI, along with the presence of Romanian universities in international rankings such as THE and QS. Furthermore, the Alumni community has an important role as brand ambassador in promoting both the university and Romania's brand and in attracting international students. Alumni networks might be, as well, an important source for financing research projects. The collaboration with different stakeholders (private, NGOs, Governmental) is another opportunity for attracting and integrating international students by offering them career perspectives. The new business rate is also an important vector for attracting international students, which could further develop their career in Romania, especially if we look at the entrepreneurial ecosystem in Romania, open to partnerships between universities, business incubators and hubs.

Nevertheless, the attractiveness of Romania depends on a joint effort on how the Romanian higher education is promoted by each university separately, by all universities under the StudyinRomania umbrella, and by the Romanian state through the institutions at the national level. In addition, public policies that lead to the increase of the population income, the improvement of the medical system, the demographic increase through sustainable measures, and supporting entrepreneurial initiatives would improve Romania's attractiveness. Furthermore, for a higher retention of international students in Romania, more public policies supporting the graduates to stay in Romania together with promoting these initiatives should be taken into consideration.

The research reputation and the success rate of national and international research grants in Romania compared to other EU countries is weak. As a recommendation, Romania's research reputation could improve through strategic partnerships with universities that perform in a specific domain. Furthermore, strategic academic partnerships should be seen as an opportunity to increase the number of double degree programs and consolidate of research and development.

Finally, in order to increase the development of quality study programs in foreign languages, a recommendation would be to prioritize the development on clear objectives for higher education promotion. Defining a target international student (for instance, students that speak French, the focus should be on developing academic programs in French) while also working to improve language skills of academic staff and developing double and joint degrees relevant for the desired target student.

## Notes

*\*Comprehensive universities have programs in fundamental fields (DFI) such as Mathematics and natural sciences, Sports science and physical education, Biology and biomedical science, engineering sciences, social sciences, humanities and arts. Science, Socio-humanities & Economics universities have programs mainly in fundamental fields (DFI) such as Social sciences, humanities and arts. Furthermore, some have programs in DFI areas such as Mathematics and natural sciences, Sports science and physical education, Biology and biomedical sciences, and engineering sciences.*

*Architecture, arts and sports universities have programs in fundamental fields (DFI) such as Sports science and physical education, humanities and arts.*

*Technical universities have programs mainly in fundamental fields (DFI) such as Engineering sciences, and Mathematics and natural sciences. A part of universities from this field have programs also in social sciences, humanities and arts, and biology and biomedical sciences.*

*Medical universities have programs especially in fundamental fields (DFI) such as Biology and biomedical sciences and engineering sciences.*

*Agronomy universities have programs in fundamental fields (DFI) such as Biology and biomedical sciences and engineering sciences.*

*\*\*Detailed information on the objectives and results of IDF competitions can be found in the analysis developed within the project Quality in higher education: internationalization and databases for the development of Romanian education, sub-activity A4.3—Carrying out studies and analyses on financing higher education from a perspective type economics of education for substantiating and optimizing the proposals for financing higher education in Romania, in order to ensure the quality of SIS.*

## References

- Assimakopoulos, C., Antoniadis, I., Kayas, O. G., & Dvizac, D. (2017). Effective social media marketing strategy: Facebook as an opportunity for universities. *International Journal of Retail & Distribution Management*, 45(5), 532–549. <https://doi.org/10.1108/IJDM-11-2016-0211>
- Alalwan, A., Rana, N. P., Dwivedi, Y. K., & Algharabat, R. (2017). Social media in marketing: A review and analysis of the existing literature. *Telematics and Informatics*. <https://doi.org/10.1016/j.tele.2017.05.008>
- Anholt, S. (2007). *Competitive identity: The new brand management for nations*. Cities and Regions: Palgrave Macmillan.
- Botezat A. & Moraru A. (2020). Brain drain from Romania: What do we know so far about the Romanian medical diaspora? *Eastern Journal of European Studies*, 11(1), 309–334. Centre for European Studies, Alexandru Ioan Cuza University.
- BroadBand Deals. (2020). *The Remote Working Index*. <https://broadbanddeals.co.uk/remote-working>
- Brand Watch. (2016). <https://www.brandwatch.com/blog/define-measure-paid-owned-earned-media/>
- Bamberger, A., Bronshtein, Y., & Yemini, M. (2020). Marketing universities and targeting international students: A comparative analysis of social media data trails. *Teaching in Higher Education*, 25(4), 476–492.
- Cheregi, B. -F. (2018). *Nation branding in post-communist Romania: A semiotic approach*. comunicare.ro.
- Cheregi, B. -F., & Bărgăoanu, A. (2020). Branding Romania in the age of disruption: Technology as a soft power instrument. *Journal of Media Research*, 13(3), 5–30. <https://doi.org/10.24193/jmr.38.1>
- Corcoran, S. (2009). *Defining earned, owned, and paid media*. Retrieved October 1, 2013, from <http://blogs.forrester.com>.
- Crisp, J. (2020). How COVID-19 Is changing online streaming behavior globally, NPAA; Academy Blog. Retrieved October 2020, from <https://npaw.com/blog/how-COVID-19-is-changing-online-streaming-behavior-globally/>.
- De Wit, H., Hunter, F., Howard, L., & Egron-Polak, E. (2015). *Internationalisation of higher education, European parliament*, p. 9.
- Deaconu, Ș, M., & Haj, C. M. (2020). *Raport privind asumările României la nivel internațional privind implementarea Procesului Bologna*. UEFISCDI. <https://uefiscdi.gov.ro/resource-824413-raport-privind-asumarile-romaniei-la-nivel-international-privind.pdf>.
- Deca, L. (2014). Internationalisation in Romanian higher education: Between the race for rankings and re-building historical partnerships. In A. Glass (Ed.), *Stepping into a new era*. The 2014 Conference Conversation Starter (p. 39).
- Deca, L., Egron-Polak, E., & Fit, C. R. (2015). Internationalisation of higher education in romanian national and institutional contexts. In A. Curaj, L. Deca, E. Egron-Polak, & J. Salmi (Eds.), *Higher Education Reforms in Romania*. Between the Bologna Process and National Challenges: Springer.
- Egron-Polak, E., de Wit, H., Marinoni, G., Calotă, M., Korka, M., Dumitru, M., Reinhardt, Z., Deca, L., & Fiț, C. R. (2015). *Cadrul strategic pentru internaționalizarea învățământului Superior din România. Analiză și recomandări, IEMU* [Strategic model for the internationalisation of Romanian universities: Analysis and recommendations, IEMU].
- Education First (EF). (2020). *The world's largest ranking of countries and regions by English skills*. <https://www.ef.com/wwen/epi/>.
- Euractiv. (2019). *UE finanțează cercetarea în universitățile românești: Cum se face un soft de protecție a rețelelor IT*. <https://www.euractiv.ro/educatie/UE-finanteaza-cercetarea-in-universitatile-romanesti-Cum-se-face-un-soft-de-protectie-a-retelelor-IT-16773>.

- European Commission. (2020a). *Digital economy and society index (DESI) 2020*. <https://ec.europa.eu/digital-single-market/en/news/digital-economy-and-society-index-desi-2020>.
- European Commission. (2020b). *European innovation scoreboard 2020*. [https://ec.europa.eu/commission/presscorner/detail/en/QANDA\\_20\\_1150](https://ec.europa.eu/commission/presscorner/detail/en/QANDA_20_1150).
- European Research Council. (n.d.). *Grantees by country per call year*. Retrieved January 19, 2021, from <https://erc.europa.eu/projects-figures/statistics>.
- European Commission. (2017). *Specific support to Romania start-ups, scale-ups and entrepreneurship in Romania*. Publications Office of the European Union. <https://uefiscdi.gov.ro/resource-87095>.
- European Commission. (2019). *Supporting entrepreneurship and innovation in higher education in Romania*. OECD European Union. <https://www.oecd.org/cfe/smes/HEInnovate-Romania.pdf>.
- European Commission/EACEA/Eurydice. (2020). *National student fee and support systems in European higher education—2020/21*. Eurydice—Facts and figures. Publications Office of the European Union. <https://op.europa.eu/en/publication-detail/-/publication/01ea3b55-5160-11eb-b59f-01aa75ed71a1/language-en/format-PDF/source-184435368>.
- Egroun-Polak, E., & Hudson, R. (2012). Internationalization of higher education: Internationalization of higher education: Global trends regional perspectives—The IAU 3rd Global Survey Report. IAU.
- Fit, C. R. (2020). How do Romanian universities promote their educational offer and what mechanisms are used to attract international students? In A. Curaj, L. Deca, & R. Pricopie (Eds.), *European higher education area: Challenges for a new decade*. Springer, București.
- Fit, C. R., Cheregi, B. F., Panțir, C. A., Hâj, C. M., & Geantă, I., (2021). *Studiu de marketing privind potențialul de promovare a universităților românești*, UEFISCDI.
- Future Brand. (2020). Future Brand Country Index 2020. <https://www.futurebrand.com/uploads/FBCi-2020-Assets/FutureBrand-Country-Index-2020.pdf>.
- Google analytics, [www.studyinromania.gov.ro](http://www.studyinromania.gov.ro). Data analysis [online] link: [www.analytics.google.com](http://www.analytics.google.com).
- Haj C., Fit C., Geanta, I., Marin, A., Deaconu, M., & Olah, R. (2020a). *Policy Brief: Internaționalizarea învățământului superior românesc: Analiza datelor statistice privind internaționalizarea educației în instituțiile de învățământ superior de stat din România—Evoluții 2017/2018–2019/2020*. Centrul de Politici Publice UEFISCDI.
- Haj C., Popa, N., Fit, C., Geantă, I., Marin, A., Deaconu, M., & Olah, R. (2020b). *Policy Brief: Internaționalizarea învățământului superior românesc: Mobilități de scurtă durată (credit mobilities)—Studenți Analiza datelor statistice privind mobilitățile studențești incoming și outgoing—Evoluții 2014/2015–2018/2019*, Centrul de Politici Publice UEFISCDI.
- Hollanders, H., Es-Sadk, N., Merkelbach, I., & Khalilova, A. (2020). *European innovation scoreboard*. European Commission. <https://ec.europa.eu/docsroom/documents/42981>.
- IMD World Competitiveness Center. (2020). *IMD world digital competitiveness index 2020*. <https://www.imd.org/wcc/world-competitiveness-center-rankings/world-digital-competitiveness-rankings-2020/>.
- Lanvin, B. & Monteiro, F. (2020). Global talent competitiveness index: Fontainebleau, France. [online] [gtcistudy.com](http://gtcistudy.com). <https://www.insead.edu/sites/default/files/assets/dept/globalindices/docs/GTCI-2020-report.pdf>.
- Mander, J. (2020). *Coronavirus: Insights from our multinational study*, *globalwebindex blog*. Retrieved October 2020, from <https://blog.gwi.com/trends/coronavirus-international-study/>.
- Marinoni, G. (2019). Internationalization of higher education: An evolving landscape, locally and globally, IAU 5th global survey. IAU.
- Marinoni, G., Van't Land, H., & Jensen, T. (2020). *The impact of COVID-19 on higher education around the world*. International Association of Universities.
- Numbeo.com. (n.d.). *Europe: Property prices index by country 2021*. Retrieved November 1, 2021, from [https://www.numbeo.com/property-investment/rankings\\_by\\_country.jsp?title=2021&region=150](https://www.numbeo.com/property-investment/rankings_by_country.jsp?title=2021&region=150).

- Netograf. (n.d.). Testează calitatea serviciului tău de Internet. Retrieved January 25, 2021, from <https://www.netograf.ro/#/>.
- Research Center Pew. (2018). Social Media Use in 2018. Center Pew Research.
- Santa, R., & Fierăscu, S. (2020). *Anticiparea principalelor tendințe demografice și a impactului lor asupra populației de studenți din România*. UEFISCDI.
- The National Institute of Statistics. (2020). *Produsul intern brut trimestrial—Estimări “semnal”*. [https://insse.ro/cms/sites/default/files/com\\_presa/com\\_pdf/pib\\_tr3r2020.pdf](https://insse.ro/cms/sites/default/files/com_presa/com_pdf/pib_tr3r2020.pdf).
- National Student Enrolment Registry (*Registrul Matricol Unic, RMU*) (2019–2020), <https://rei.gov.ro/>.
- The National Platform for collecting statistic data for Higher Education (2019–2020), (*Platforma ANS—Platforma națională de colectare a datelor statistice pentru învățământul superior, ANS*), [www.date.invatamant-superior.ro](http://www.date.invatamant-superior.ro).
- UEFISCDI. (2016). *Studenți, absolvenți și piața muncii*. [http://sapm.forhe.ro/wp-content/uploads/2016/04/SAPM\\_raport\\_centralizat-final.pdf](http://sapm.forhe.ro/wp-content/uploads/2016/04/SAPM_raport_centralizat-final.pdf).
- UEFISCDI. (2018). *Policy brief Accesul în învățământul superior: Analiza datelor statistice privind accesul la bacalaureat din 2015 în învățământul superior (an universitar 2015/2016), nr. 3/2018*. <https://uefiscdi.gov.ro/resource-824105-policy-brief-accessul-in-is.pdf>.
- UNESCO. (2020). COVID-19 and higher education: Today and tomorrow: UNESCO Institute of Statistics. (2021). Retrieved February 2021, from <http://uis.unesco.org/en/uis-student-flow>.

**Cristina Ramona Fiț** has an experience of more than ten years in higher education. Presently, she is a public policy expert on higher education at the Executive Agency for Higher Education, Research, Development and Innovation Funding (UEFISCDI), with a special focus on internationalisation of higher education and the Bologna Process implementation. She coordinated different work-packages in national projects, financed from structural funds and implemented by UEFISCDI, and different national conferences on higher education and research. She is the author and co-author of academic articles, studies, and reports on internationalisation of higher education, equity, and social inclusion. She coordinated the development of [www.studyinromania.gov.ro](http://www.studyinromania.gov.ro), the official Romanian website dedicated to promoting the Romanian HE abroad. She has a bachelor's degree in International Relations and European Studies and a master's degree in marketing, both at the West University of Timisoara. She studied at the Romanian Diplomatic Institute. She is an accredited project manager and an experienced and accredited trainer. Also, she has an experience of more than ten years as PR Manager or PR Executive on education, human rights, women, minorities and ethnic groups, corporate communication, and cultural projects.

**Cristian Andrei Panțir** is a senior Marketing and Communications Manager with more than ten years of experience. He is currently managing multiple roles and teams within The Adecco Group. He is Marketing Cluster Head of Serbia, Slovenia, and Hungary, Marketing & Communications Manager of Adecco Romania, and the Coordinator of Thought Leadership Initiatives in Eastern Europe, Middle East, and Nord Africa at Adecco. Latest publications - *Inovantage 5: Workforce Investment* (The Adecco Group, 2019), *Inovantage 6: Reading the workforce DNA of Eastern Europe, Middle East and North Africa* (The Adecco Group, 2020), *The HR 20.21 Report* (The Adecco Group, 2021). Professional interests: digital marketing, SEO, entrepreneurship, mentoring, business development.

**Bianca-Florentina Cheregi** is a Lecturer and a Postdoctoral Researcher at the College of Communication and Public Relations, National University of Political Studies and Public Administration, Bucharest, Romania. She is also a program coordinator of MA in Brand Management and Corporate Communication and a researcher at the Communication, Discourse, Public Issues (CoDiPo) Lab. In the academic year 2017–2018, she was a “Spiru Haret” fellow, with a research on interactive media campaigns on Romanian migration. She was also a marketing expert in the project *Quality in Higher Education: Internationalization and Databases for the Development of*



the Romanian Educational System (POCU INTL), performing a SWOT analysis for the Romanian Higher Education system. Latest publications - book: "Nation Branding in Post-Communist Romania. A semiotic approach" (comunicare.ro, 2018), book chapters: "Artificial Intelligence: The New Tool for Cyber Diplomacy. The Case of the European Union" (Bârgăoanu & Cheregi, 2021, Springer), "The New Diaspora" and Interactive Media Campaigns: the Case of Romanians Migrating to the UK after Brexit" (Transnational Press London, 2020), "Let's Change the Story!" - Nation Branding and Interactive Media Campaigns on Romanian Migration (Cambridge Scholars Publishing, 2017), journal articles: "Branding Romania in the Age of Disruption. Technology as a Soft Power Instrument" (Cheregi & Bârgăoanu, 2020, Journal of Media Research). Academic interests: educational marketing, digital ecosystem, nation branding, public diplomacy, migration, semiotics.

**Open Access** This chapter is licensed under the terms of the Creative Commons Attribution 4.0 International License (<http://creativecommons.org/licenses/by/4.0/>), which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.



# How to Cope with GDPR for Graduate Tracking: A Discussion at the Intersection of Law and Policy and Two Solutions



Viorel Proteasa and Andreea Vertes-Olteanu

**Abstract** Research on higher education, and not only, has used data collected for administrative purposes—register data, to answer various policy-relevant questions. The employability of university graduates is one of such questions, which have been pending, especially in those countries whose higher education massified in the last decades. The promise of register data relies on its objective nature and apparent low cost: researchers are basically processing data that is collected for administrative purposes. In spite of these advantages, register data is still underused. Data protection restrictions, especially the alignment to the General Data Protection Regulation, are reported to temper the thrust towards making administrative data available as micro-data for secondary use. We consider that the policy dialogue would benefit from a transdisciplinary exploration of the solutions found in the EU to counter such reservations to the use of register for research. We propose an analysis at the intersection of policy studies and law of two solutions found in the EU to make register data available to researchers. We attempt to address two related questions: how are the processes designed? How is the GDPR compliance put into practice? We used structured observations of primary and secondary literature to collect our data. Our aim is to enrich the debate surrounding register data as a basis for policy-relevant research and, pragmatically, to indicate policy solutions that can be easily adjusted to national contexts in the EU and put on the table of decision-makers.

**Keywords** Graduate tracking · Register data · GDPR · Data protection

---

V. Proteasa (✉) · A. Vertes-Olteanu  
West University of Timisoara, Timisoara, Romania  
e-mail: [viorel.proteasa@e-uvt.ro](mailto:viorel.proteasa@e-uvt.ro)

A. Vertes-Olteanu  
e-mail: [andreea.verts@e-uvt.ro](mailto:andreea.verts@e-uvt.ro)

© The Author(s) 2022  
A. Curaj et al. (eds.), *Higher Education in Romania: Overcoming Challenges and Embracing Opportunities*, [https://doi.org/10.1007/978-3-030-94496-4\\_10](https://doi.org/10.1007/978-3-030-94496-4_10)

## 1 Introduction

Graduate tracking for tertiary education has been pushed on the European Union's policy agenda in recent years. A Recommendation of the European Council advances 2022 as the deadline for the Commission to report on the implementation of graduate tracking (The Council of the European Union 2017). The initiative has been built on various policy goals and agendas which highlight the importance of having a solid evidence basis for evaluating the employability of tertiary education graduates, the standards for quality assurance in higher education (ENQA 2009) and vocational education (European Council and European Parliament 2009) or the European Commission's Communication "New Skills Agenda for Europe" (European Commission 2016).

The Recommendation indicates two approaches for data collection: administrative data, also referred as register/registry/registrar data, and questionnaires. The 2020 report on the state of graduate tracing in the European Union (Beadle et al. 2020), an exercise requested in the text of the Recommendation, adds another source: big data. Overall, the report indicates that questionnaires and administrative data are the main sources of information for graduate tracing, while big data is still an emerging instrument.

We focus in this paper on register data—which builds on the possibility "to link, on an anonymised basis, data from different sources, in order to build a composite picture of graduate outcomes" (The Council of the European Union 2017). Such systems—or in some cases, such analyses, are reported to be institutionalized in most of the EU countries (and other countries included in the Report), with the exception of Croatia, Cyprus, France, Greece, Malta, and Romania, according to 2020 report (Beadle et al. 2020). Even though it is claimed that the secondary use of administrative data is less intrusive than surveys (Crato and Paruolo 2018, p. 4), the personal data protection regime in the European Union was reported to be an obstacle in linking the administrative data sources needed to construct a graduate tracing system using this approach (Beadle et al. 2020, p. 21). The administrative data needed for an analysis of the labor outcomes of tertiary education graduates are generally collected by different entities and stored in different databases. They need to be linked and interrogated for secondary use, compared to the scope of data collection. Of course, this process is governed by personal data protection restrictions. Afterwards, micro-data would need to be made available to an analyst, preferably in a de-identified format, who would compute statistics and provide a report. Researchers claiming access to micro-data have been for a long time regarded as 'intruders' by registrars (Jackson 2018). A new thrust was given to the culture of statistical confidentiality and micro-data access, especially after 2007: "to enable conditional gateways through the non-disclosure laws and policies that apply to statistical and other government outputs derived from personal records" (ibid, p.20).

The General Data Protection Regulation (GDPR) was enacted in the European Union to stop the overuse of personal data by private operators and poses the risk of underusing administrative data as key public infrastructure for evidence-based policy

and research (Crato and Paruolo 2018; Świącicki 2019). Our contribution focuses on the interaction between the establishment of graduate tracer studies as a policy instrument and GDPR as a new source of constraints and opportunities.

We begin by laying the conceptual grounds for this discussion in the next section. We follow it with an empirical section in which we analyze how tracer studies function in two different cases, focusing on the intersection between the policy process and GDPR. The first case we study is Sweden, a country with a functional graduate tracer at the time when GDPR was enacted. The second case is Romania, a country caught by the adjustment of personal data legislation in an ignition phase of graduate tracer studies' development. We conclude by outlining the two approaches we have identified in order to overcome data protection legislation obstacles for tracer studies. As GDPR is an EU-specific issue, our discussion is EU-specific and includes actionable solutions for the decision-makers with a legitimate interest in developing graduate tracing studies.

## 2 Employability, Employment, and Personal Data Protection: A Conceptual Discussion

Employability and employment have been thoroughly and diversely defined in the academic literature—see Nilsson (2017) for an overview. An excursus to the concept and history of the terms would diverge from the pragmatic approach we promised in this paper. Thus, we will cherry-pick some perspectives for a working representation of the concepts we consider necessary for the discussion on policy, registry data, and personal data protection.

In quantitative sociology, employment is modeled as a search process determined by “individual's own resources, [...] the resources of all others in the job market and upon the available jobs” (Coleman 1991, pp. 4–5). “[W]orkers and jobs possess resource” (Coleman 1991, p. 5) which make them desirable for their counterparts. Leaving aside structural determinants—for an overview, Nilsson (2017) is again an inspired companion—one of the key resources of individuals looking for employment is (considered to be) formal education. Economists have been interested mainly in the monetary returns to education, though more recent accounts also focus on non-monetary returns to education (McMahon 2009). One of the key findings in the Nobel winning human capital theory is that college education pays off in the labor market (Becker 1993). The relationship between schooling and earnings has been translated into an influential model by Mincer (1974). He explains the wages via mainly schooling and experience.<sup>1</sup>

Current (quantitative) research on the match between education and labor outcomes is facing a methodological challenge: how to isolate causal relations in a setting in which experimental designs i.e. holding education away from a “control”

---

<sup>1</sup>Overviews on the cumulation of research using the Mincerian equation can be consulted in dedicated articles (Heckman et al. 2003; Lemieux 2006).

group in order to estimate the effect of receiving tertiary education by another group, termed ‘treated’, would be unethical (Crato and Paruolo 2018)? We also approached (with different authorships) this matter in more technical terms elsewhere (Crăciun et al. 2020; Orosz et al. 2020). Here, we will use an example to illustrate its stakes: a boy is raised in a family in which the father earns enough to pay not only for the basic needs, but also for private classes. The mother finds time and finesse to keep him focused on his education. The boy is among the 41.6%<sup>2</sup> of the children of his age group who graduate high school and pass the baccalaureate exam. Then he goes to higher education, graduates, and finds a job, benefitting not only from a fine education but also from a network of acquaintances and collaborators of his parents. Of course, this is a success story, and the boy will reward his schools in statistics, but the question is, in our opinion, what is the impact of his university education on his career? The story is specific to the Romanian context, its gendering being intentional.

However, the public and the policymakers are less interested in such questions and are keener on finding out the crude evidence of what happens with whole cohorts of graduates, grouped in terms of likeness: graduates of ITC, of arts, of a certain university or a certain study program. Of course, such an approach, in most cases, omits the contribution of the non-random selection into higher education trajectories. The interest for the employability of tertiary education graduates i.e., their gain from formal schooling, measured as their status of employment, is motivated in relation to structural changes in our societies. Such structural changes are used as a justification for urgency, which seems to be a rhetorical artifice used in most official texts we consulted on the topic—and not only on this topic. The Council of the European Union relates its interest in the employability of tertiary education graduates to the un-full recovery from the 2008 financial crisis. Nilsson (2017) relates it to the expansion of tertiary education (in Sweden in the 60 and 70s), though such concerns of “intellectual unemployment” were articulated some tens, almost hundred years before—see, for example, the discussion regarding the “proletariat of the pen” in the 1880s Austria (Janos 1978, p. 108). This narrative was also imported in Romania via Mihai Eminescu, the national poet of Romania, who borrowed it in his editorial writings (Eminescu 1984).

Noting that the employment of university graduates has been an issue of concern [for some] at least since the 19th century, we will add an operational definition of labor market outcomes to the conceptual references to employment and employability we provided in the previous paragraphs. According to the data collected by Beadle et al. (2020), labor market effects are quantified using indicators pertaining to: “employment status (employed, full-time, part-time, unemployed, self-employed, in maternity leave, etc.), NACE [economic sector] code of employer, duration of employment/unemployment, length of job search, salary level, geographical/sectoral

---

<sup>2</sup>Calculations based on the publicly available data from the National Statistics Office, Tempo Online database. The percentage represents the 2015–2018 high school graduates who passed the baccalaureate exam in their respective cohort of live newborns, presuming 19 is the age when they take the exam.

mobility, job history, [...], location of work [...]”<sup>3</sup> (p. 29) and “classification of occupations and/or skills on the basis of ILOSTAT, ESCO/ISCO” (p. 62).

As these indicators come from multiple sources, mainly registers for population, social security, education achievements, unemployment, tax, and European Social Fund beneficiaries (Beadle et al. 2020, p. 31) and imply the processing of personal data, they must comply with specific restrictions. The previously quoted, authors identify a set of “common requirements”: “anonymization of personal data”, “aggregation of data for too small groups”, “access to data only for accredited people”, “access for researchers who want to work with data via secure data centers or secure work rooms”, “data handling and storage” (p. 33). Most of these precautions are determined by compliance with the current legislation regarding the protection of personal data, which represents the transposition of the GDPR into domestic law by individual member states (European Commission 2021).

The European Union’s view on data protection is closely linked to privacy issues. The privacy concept, as outlined in Art. 8 of the European Convention on Human Rights refers mainly to the right to private and family life, respect of private home and private correspondence. According to Salecl (2002, p. 8), a definition of the term ‘privacy’ which would be universally accepted is prone to face major difficulties, intrinsically linked to the different cultural renditions of what privacy is. The present “information age” adds another dimension to the cultural and anthropological definitions of what should be kept away from prying eyes, namely the accessing by “the public” of numerous “private aspects” that individuals unwillingly fall prey to, due to the massive outspread of state-of-the-art technology in the last decades (Vertes-Olteanu and Racolta 2019, p. 122).

The European concept of privacy “as a form of protection of a right to respect a personal dignity” differs from the American conception of privacy as a form of “liberty against the State”, or “the right to Freedom from intrusion by the state, especially in your own home (Whitman 2004, p. 1161)”. Information privacy is “an individual’s claim to control the terms under which personal information—information identifiable to the individual—is acquired, disclosed, and used”, as defined in *Principles for Providing and Using Personal Information (“IITF Principles”)* (The Privacy Working Group 1995). Not surprisingly, the key component of information privacy is the term personal information, in other words, information identifiable to the individual.

In Europe, information privacy has been recognized for a long time, or at least since the European courts began to recognize a right to informational self-determination. The term “informational self-determination” was used for the first time in the context of a decision of the German Constitutional Court regarding the personal data collected upon the occasion of the 1983 census, the German term being “*informationelle Selbstbestimmung*” (Frosio 2017, p. 313).

However, data protection values are not exclusively privacy-related ones, but partially autonomous, granting—on their own—fundamental rights—the right to data

---

<sup>3</sup>We eliminated from the list those indicators which we consider impossible to collect via administrative data: “ways of access to job (via WBL, PES, friend/family, advertisements, other)” and “satisfaction with job”. We also adjusted the list to avoid repetitions.

protection as recognized by Article 8 in the Charter of Fundamental Rights of the European Union: “Protection of personal data: Everyone has the right to the protection of personal data concerning him or her. Such data must be processed fairly for specified purposes and on the basis of the consent of the person concerned or some other legitimate basis laid down by law. Everyone has the right of access to data which has been collected concerning him or her, and the right to have it rectified”. We stress that the informed consent is related to some other legitimate basis, such as the public interest, through disjunction, or, in simple terms, there are also other legitimate grounds to process personal data, different from the informed consent of the subject.

As such, data protection can be understood as the right of a person to know which data is gathered in regards to her person, how the data is used, aggregated, protected, and where the data is transmitted. The right to informational self-determination is a huge achievement in recognizing users’ rights, later included in Article 12 (b) of the Data Protection Directive (The Privacy Working Group 1995) by the rule that allows the data subject to request the operator to “rectify, erase or block data the processing of which does not comply with the provisions of this Directive, in particular because of the incomplete or inaccurate nature of the data” (Frosio 2017, p. 314). The Data Protection Directive, the first important step in the recognition of data protection by the EU legal framework, granted and protected the free movement of personal information and the protection of fundamental rights and freedoms of an individual.

The newly coined “right to be forgotten”, enshrined in the already famous Regulation (EU) 2016/679 of the European Parliament and of the Council, only translated the right to informational self-determination into the digital domain. The Regulation clarifies that search engines perform data control and, therefore, they must be considered as “operators” within the meaning of Article 2 letter (d) of Directive 95/46/EC, thus complying with the provisions of the Directive. The right to informational self-determination empowers individuals against data processing entities, such as advertisers, insurers, supermarkets, Big Pharma, and data brokers, by guaranteeing the “authority of the individual in principle to decide for himself whether or not his personal data should be divulged or processed” (Rouvroy and Pouillet 2009, p. 45).

Any systematic handling of data corresponds to the notion of ‘processing’ under the material scope of the GDPR. Data means electronically stored information, signs or indications. However, data has to be “personal” data in order to fall within the scope of application of the Regulation. Data is deemed personal if the information relates to an *identified or identifiable* individual. Data is therefore personal if the identification of a person is possible based on the available data, meaning if a person can be detected, directly or indirectly, by reference to an identifier. This is the case if the assignment to one or more characteristics that are the expression of a physical, physiological, psychological, genetic, economic, cultural or social identity is possible, for example, a person’s name; identification numbers, such as a social insurance number, a personnel number or an ID number; location data; online identifiers (this may involve IP addresses or cookies).

We hereby exemplify with several definitions of personal data according to EU court decisions:

- the name of a person in conjunction with his/her telephone number and information about his/her working conditions or hobbies constitute personal data (C-101/01.(2003). Sweden v. Bodil Lindqvist 2003).
- the information published in the press release was personal data, since the data subject was easily identifiable, under the circumstances (C-101/01. (2007). Nikolaou v. Commission 2007). The fact that the applicant was not named did not protect her anonymity.
- the surname and given name of certain natural persons whose income exceeds certain thresholds, *in conjunction* with the amount of their earned and unearned income, constitute personal data (C-73/07. (2008). Tietosuojavaltuutettu [Finnish Data Protection Ombudsman] v. Satakunnan Markkinaporssi OY and Satamedia OY 2008).
- transferred tax data are personal data, since they are “information relating to an identified or identifiable natural person” (C-201/14 Smaranda Bara and Others v. Presedintele Casei Nationale de Asigurări de Sănătate, Casa Națională de Asigurări de Sănătate, Agentia Națională de Administrare Fiscală (ANAF), 2015).

For the proper protection of such data and their subsequent processing, the GDPR sets out stricter requirements for obtaining valid consent<sup>4</sup> (especially for the processing of special categories of personal data).

However, the GDPR institutes a set of derogations that can constitute grounds for processing administrative data for research and evidence-based policy. One of these venues is the statutory permission under Art. 6 of GDPR. In our case, the processing shall fall under letter (e) of Article 6—processing is necessary for the performance of *a task carried out in the public interest* or in the exercise of official authority vested in the controller. The processing should have a basis in EU or EU Member State law and does *not* require the law in question to be a legislative act adopted by parliament (Recs. 41, 45 GDPR). Nevertheless, the legal basis should be clear and precise, and its application should be foreseeable to persons subject to it. Such a law might cover multiple processing operations at the same time (Voigt and von dem Bussche 2017, p. 107). Another venue for grounding access to register data was outlined by Trivellato (2018, p. 32):

The main exemption is in Article 5(1b), which states that ‘further processing for scientific research purposes [of data collected for other specified, explicit and legitimate purposes] shall, in accordance with Article 89(1), not be considered to be incompatible with the initial purposes’, [...] where Article 89(1) stipulates that ‘processing for scientific research purposes shall be subject to appropriate safeguards, in accordance with this Regulation, for the rights and freedoms of the data subject.

---

<sup>4</sup>According to Art. 4 Sec. 11 GDPR—any freely given, specific, informed, and unambiguous indication of the data subject’s wishes by which it, by a statement or by clear affirmative action, signifies agreement to the processing of its personal data.



To conclude, the so-called “right to be forgotten”, as developed by the EU Court of Justice in the 2014 “Google Spain” case (C-131/12, *Google Spain SL and Google Inc. v. (AEPD), Agencia Española de Protección de Datos and Mario Costeja González*, 2014), puts a spotlight on the right of individuals to exercise control over their personal data, by deciding what information should be accessible to the public through search engines. However, it brings nothing new to the table, apart from the heated discussions around the possibilities of its use. Moreover, we strongly believe that its overall effectiveness was even limited, given the fact that GDPR contains much stricter provisions (doubled by the broadening and strengthening of the exceptions and limitations) than did the Data Protection Directive or the now-famous “Google Spain” decision, which claimed that the right to be forgotten could be exercised when the data proved to be “inadequate, irrelevant or no longer relevant, or excessive in relation to the purposes for which they were processed and in the light of the time that has elapsed”. The Directive provided “exemptions or derogations [...] for the processing of personal data carried out solely for journalistic,” artistic, or literary purposes, but these exceptions may be used only when “necessary to reconcile the right to privacy with the rules governing freedom of expression.” The GDPR more generously instructs Member States to “reconcile the right to the protection of personal data [...] with the right to freedom of expression and information, including processing for journalistic purposes and the purposes of academic, artistic or literary expression.”

The right to be forgotten, or the right to erasure, is (like the majority of rights) not absolute, and it only applies in certain circumstances. Controllers—such is the case with the graduate tracking—may process personal data if “processing is necessary for the performance of a task carried out in the public interest”. Furthermore, necessity is interpreted under proportionality—the data processed must have a close link to the attainment of the processing’s objectives. National law, for example, may specify that certain entities are able to rely on the public interest legal basis, or that processing necessary for scientific research may rely on the public interest legal basis, but with additional safeguards. Relying on this legal basis also allows for potentially curtailing the right to object. Following this line of thought, graduate tracking does benefit from the legal basis of public interest, both from a national perspective, as per the National Strategy for Tertiary Education 2015–2020 (Ministerul Educației Nationale și Cercetării Științifice, 2015), the National Reform Programme (The Government of Romania 2020), the strategic institutional plan of the ministry responsible for education (The World Bank 2019) and from a European one, as per the Council Recommendation of 20 November 2017 on tracking graduates (2017/C 423/01).

This is also the reason why, in the case of graduate tracking, the controller is exempt from the obligation to inform data subjects of their rights to object to processing. According to Rec. 156 and Art. 21(6) GDPR, where personal data are processed for scientific and historical research purposes or statistical purposes, the data subject has the right to object, unless the processing is necessary for the performance of a task carried out for reasons of public interest (Voigt and von dem Bussche 2017, p. 179). Such an exemption in no way represents an opportunity to avoid or bypass

the GDPR provisions, rather a way to make the requirements practical and flexible, when the latter would be impossible to execute or would involve a disproportionate effort.

### 3 Case Study 1: Sweden

For Sweden, Beadle et al. (2020) list seven instruments for tracing graduates on the labor market. Two instruments monitor the employment of tertiary education graduates using solely administrative data and target the general population of students: “Establishment on the labor market after higher education—Etablering på arbetsmarknaden efter hogskolestudier” and “Establishment on the labor market after higher vocational education—Etablering på arbetsmarknaden efter kvalificerade yrkesutbildningar och yrkeshögskoleutbildningar”. We will briefly describe the instrument tailored for higher education graduates. The National Agency for Higher Education—the predecessor of the agency currently listed in the European Register for Quality Assurance for Sweden<sup>5</sup> (Swedish Higher Education Authority—UKÄ), has been commissioned by the government to monitor higher education graduates’ “establishment” on the labor market (Nilsson and Viberg 2015). According to the same authors, the first report was issued in 2003 and covered the graduates from academic years 1994/95 to 1999/2000. The reports were compiled as narrative analyses and were issued yearly, at least until 2015. Currently, UKÄ includes a short section on the link between higher education and employment in the annual status report on higher education.<sup>6</sup>

The main source of data for the analyses is LISA—Longitudinell Integrationsdatabas för Sjukförsäkrings- och Arbetsmarknadsstudier [the Swedish Longitudinal Integrated Database for Health Insurance and Labour Market Studies] (Nilsson and Viberg 2015). According to (Ludvigsson et al. 2019), LISA “was launched [*in 2003*] in response to rising levels of sick leave in the country” (p. 423). LISA includes “the Education Register, Register of Income and Taxation, Occupation Register, [...], Structural Business Statistics from Statistics Sweden, the Swedish Social Insurance Agency, and the Swedish Public Employment Service”, in conjunction with general databases on population (p. 424). Most of the links are made via the personal identity number (PIN). Its coverage is national: “it includes all individuals aged  $\geq 15$  years ( $\geq 16$  years between 1990 and 2009) and living in Sweden” (p. 433). LISA is compiled by SCB—Statistics Sweden, the national statistics office.<sup>7</sup>

However, anybody in Sweden could provide an alternative graduate tracing mechanism, provided they have the skills to do it and prove a legitimate interest in it. MONA (Microdata Online Access) is a research infrastructure for humanities and

---

<sup>5</sup><https://www.eqar.eu/register/agencies/>, accessed on the 11th of May 2021.

<sup>6</sup><https://english.uka.se/statistics/annual-statistics-on-higher-education.html>, accessed on the 11th of May 2021.

<sup>7</sup><https://www.scb.se/lisa-en> accessed on the 1th of May 2021.

social science through which researchers in Sweden can get access to microdata generated from registries.<sup>8</sup> It was set up in 2004 due to claims “that data provided to researchers were used for other purposes or by other users than those authorized” (Swedish Research Council 2014, p. 11). The process starts with a request for disclosure of data for research purposes, accompanied by “a detailed description of the project, and in some cases a supportive judgment of an Ethical Review Board” (Swedish Research Council 2014, p. 12). The request is put to a “harm test” which consists of making sure that “individuals, or someone close to them, will not suffer injury or harm” (ibidem). The micro-data is “usually” de-identified—if needed i.e. for longitudinal studies, a “code key” is saved to allow updating or supplementing the data at a later stage. This process of licensing is delegated to state universities and governmental authorities for requests coming from their staff.

The relationship between Statistics Sweden and the end-user of the microdata is governed by GDPR: “the recipient is the personal data controller for the personal data that they process, while Statistics Sweden is a personal data processor”.<sup>9</sup> The two parties sign a “personal data processing agreement”. The administrators of MONA do not follow up on the research performed by the end-users, nor on the actions they perform in order to comply with GDPR. According to our email communication, the end-users are fully responsible for their action—hence also on the way they understand and put to practice issues arising from GDPR, such as subjects’ “right to be forgotten”—as discussed in the conceptual part of the paper. The system does not offer functionalities of communication with the subjects—such as a button that sends an information note to the subjects in a sample whose data was extracted from the database. According to our informal discussions with researchers using the system, the only thing that changed for the end-users of MONA with the enactment of GDPR was an update of the personal data processing agreement.

In Sweden, the state took an active role in interpreting the legislation in order to facilitate the use of data collected for administrative purposes for research and policy purposes, such as tracing tertiary education graduates. The databases are linked by state agencies. Generally, the system is predictable, and individual and corporate actors, such as universities, state agencies or private entities, have clearly assigned roles. Administrative information is treated rather as a public good and a critical research infrastructure. The literature indicates other countries with a simi-

---

<sup>8</sup><https://www.vr.se/english/mandates/research-infrastructure/find-research-infrastructure/list/2018-10-18-mona---microdata-on-line-access.html#:~:text=MONA%20is%20Statistics%20Sweden's%20standard,and%20quality%2Dassured%20registry%20> data accessed on the 11th of May 2021.

<sup>9</sup><https://www.scb.se/en/services/ordering-data-and-statistics/guidance-for-researchers-and-universities/mona--statistics-swedens-platform-for-access-to-microdata/rules-and-regulations/division-of-responsibilities-recipients-and-statistics-sweden> accessed on the 12 th of May, 2021.

lar approach to allowing access to micro-data: Administrative Data for Research—ADRP in the UK<sup>10</sup> and ELA in Poland<sup>11</sup> (Bozykowski et al. 2019 apud Świącicki 2019).

## 4 Case 2: Romania

In terms of tracer studies designed for university graduates, Romania is in the stage of developing “a platform aimed at interconnecting student databases and other national databases with relevant information on employees” (Beadle et al. 2020, p. 19). However, the report does not include detailed information on such initiatives coming from universities. We will fill in this gap by telling the story of the transition from a tracer study of the West University of Timisoara (Proteasa et al. 2018) to the development of a platform designed to offer employment indicators for the entire higher education system, as mentioned in the status report cited above (Beadle et al. 2020). The facts will constitute anchors for ordering considerations on the limitations and opportunities brought by the enactment of the GDPR. We were both actively involved in the two initiatives.

The primary source for employment data was the (electronic) register of employees in Romania (ReviSal)—which was instituted as mandatory for all employers (with some exceptions) in 2006. It is administered by a state agency named Work Inspection, which has been specifically authorized since 2017 to grant access to micro-data from the register to public entities provided their by-laws specify such an entitlement (HOTĂRÂRE 905 14/12/2017 Privind Registrul General de Evidență a Salariatilor, 2017). This specification adds to the derogations from the GDPR—which expand, in our opinion, the list of possible derogations instituted in the previous legislation. Thus, from the legal perspective, the opportunity structure for entrepreneurial action in terms of linking the employee register with student registers can be characterized as rather expanding. It was not matched with action from central authorities not until the development of the platform mentioned by Beadle et al. (2020) was initiated. The empty seat in the policy arena has thus become the subject of entrepreneurial action from other actors that could claim a legitimate basis for accessing employment micro-data: the universities. We cannot establish how many universities managed to get access to employment micro-data to link them to their student registers. We are aware of two. One of them is the initiative of the West University of Timisoara, which developed a platform that matched data and provides access to employment indicators calculated for cohorts—which will be scaled up at a national level in the platform mentioned by Beadle et al. (2020). Another university in Timisoara seems to have accessed employment micro-data, but we could not find a report in the public

---

<sup>10</sup><https://esrc.ukri.org/research/our-research/administrative-data-research-uk/>, accessed on the 12th of May, 2021.

<sup>11</sup><https://www.archiwa.gov.pl/pl/databases/2396-the-registers-of-population-in-archival-materials-ela>, accessed on the 12th of May, 2021.

domain, only media statements (Redactie [The Editors], 2019; Unspecified author, 2021). The legitimate basis for claims of access to micro-data from the employees' register can be constituted by the obligation of the rector to report annually on "the state of professional insertion of the graduates from the previous promotions", as part of the "public accountability" of the universities (Legea Educatiei Nationale [Law on National Education], 2011, Art 130). The press releases of the Politechnic University of Timisoara can be considered as such, but at the same time, they can be considered as part of the marketing efforts of the university, thus serving private interests.

The claim of the West University of Timisoara was grounded on the derogations from the data protection legislation: processing personal data for the purpose of statistical or historical research—before GDPR, and processing personal data for public utility purposes—after the enactment of GDPR. The two registers were linked via the personal identification number—the same as for Sweden's LISA. The platform at the West University of Timisoara delivers indicators on insertion, occupational match, income, employers' size and economic sector, and internal migration flows determined by the transition from secondary education to tertiary education (Proteasa et al. 2018)—of course, the coverage of the data is limited to the students enrolled at the University. It is user-driven in the sense that it allows the users to select and aggregate the cohorts they are interested in via filters for academic years and study programs attributed to fields of specialization and faculties. We cannot account for how many times was it used for substantial aspects of quality assurance, such as updating curriculum in light of the occupational destinations of the graduates but we can document its use for procedural aspects of quality assurance related to study program accreditation and listing of the study programs in the national register of qualifications. Both procedures are imposed through "Member State law", and the graduate tracing mechanism we discuss does "provide for suitable and specific measures to safeguard the fundamental rights and the interests of the data subject" in order to "respect the essence of the right to data protection" (GDPR, Article 9(2j))—a derogation indicated by Trivellato (2018). In our opinion, formal quality assurance procedures substantiate the claims of public utility beyond the public accountability of the rector stipulated in the Law of Education.

The reservations regarding the use of administrative data for graduate tracing invoke formally or informally the "Bara" case (C-201/14 Smaranda Bara and Others v. Presedintele Casei Nationale de Asigurări de Sănătate, Casa Națională de Asigurări de Sănătate, Agentia Națională de Administrare Fiscală (ANAF), 2015). According to the Court of Justice of the European Union, more precisely the judgment (resulted from a reference for a preliminary ruling by the Romanian Court of Appeals), the persons whose personal data are subject to transfer and processing between two public administrative bodies must be informed in advance.

In order to briefly summarize the facts of the case: the applicants made revenues from self-employment. Data relating to their declared income was transferred by ANAF (Agentia Națională de Administrare Fiscală—National Agency for Fiscal Administration) to CNAS (Casa Națională de Asigurări de Sănătate—National Health Insurance House). The latter sought payment of arrears of contributions to the

health insurance regime, based on this data. The applicants challenged the lawfulness of the transfer of tax data relating to their income, alleging that the data were used for purposes other than those for which they had initially been provided to ANAF, without their prior explicit consent and without having been previously informed.

The question referred to the court was whether personal data may be processed by authorities for which such data were not intended where such an operation gives rise, retroactively, to financial loss. The Court of Justice held that the requirement of fair processing of personal data<sup>12</sup> requires a public administrative body to inform the data subjects of the fact that their data will be transferred to another public administrative body, for their processing by the latter, in its capacity as recipient of those data. The directive expressly requires that any restrictions on the requirement to provide information are imposed by legislative measures. National law required the transfer of data necessary to certify that the person concerned qualifies as an insured person to CNAS. However, these do not include data relating to income since the law recognizes the right of persons without a taxable income to qualify as insured. Therefore, income data cannot qualify as “prior information” under Article 10. Thus, within the meaning of Directive 95/46, tax data transferred are personal data, since they are “information relating to an identified or identifiable natural person”, and both the transfer of the data by ANAF and the subsequent processing by CNAS constitute processing of personal data. Furthermore, the transfer of data was made on the basis of a protocol between the two authorities (ANAF and CNAS), which is not a legislative measure and is not subject to an official publication, thus infringing the conditions stipulated in Article 13.

However, in law, *to distinguish a case* means to decide that the holding of the legal reasoning of a prior case, the precedent, will not apply in a subsequent trial due to materially different facts between the two cases. Therefore, the Romanian courts and case-law following the “Bara” case chose to apply or not its holding. The precedent, given the direct effect in the national legal order of the findings from the CJEU decision, was later on invoked<sup>13</sup> in cases related to the incompatibility between the office of vice-mayor and the quality of being a trader, the state of conflict of interests, tax law (the establishment of VAT), a convention concluded between an autonomous administration (of transport) and the local council of city B., the lack of payment of contributions to health insurance or the annulment of a decision on tax liability (Sandru et al. 2017).

In the “Bara” case, the decision was mainly based on Article 13 letter (e) of the Directive 95/46, namely it was held in order to safeguard “an important economic or financial interest of a Member State or of the European Union, including monetary, budgetary and taxation matters”. The ruling of the case does not apply when the transmission of personal data is stipulated by law and, moreover, as stated here above, the processing does *not* require the law in question to be a legislative act adopted by parliament, meaning that it might also come under the form of by-laws or protocols. Furthermore, the processing of data is deemed lawful if it is necessary for compliance

---

<sup>12</sup>As laid down in Article 6 of the Directive.

<sup>13</sup>According to the court decisions published on ROLII, the Romanian Legal Information Institute.

with a legal obligation to which the controller is subject or if it is necessary for the performance of a task carried out in the public interest or utility (Voigt and von dem Bussche 2017, p. 107). Such is the case with the tracking of graduates using administrative data, where the goal of the processing is the public interest. In addition, as stated above, processing for scientific research purposes shall, in accordance with Article 89(1) of Regulation 2016/679, not be considered incompatible with the initial purposes. Subject to appropriate safeguards, the Member States may restrict the data subject's rights to object when it comes to the processing of their personal data for scientific, historical or statistical purposes. Recital 159 of GDPR states that scientific research should be "interpreted in a broad manner" and includes studies carried out in the public interest. In order for the processing to be considered statistical in nature, Recital 162 of the aforementioned Regulation states that the result of the processing should not be "personal data, but aggregate data" and should not be used to support measures or decisions regarding a particular individual. We find it highly unlikely, if not impossible, that a tracing mechanism, with all safeguard measures taken, would affect in any way the graduates who are subject to data collection.

## 5 Discussions and Conclusions

Matching employment and education registers represent a promising avenue for graduate tracing at the national and European level, with both strengths and limitations (Crato and Paruolo 2018, p. 3). Once the links are created, and the algorithms for computing indicators are established, electronic platforms could provide access to up-to-date, user-driven, comprehensive, objective, and accurate statistics. Some limitations inherent to administrative data exist—mainly the fact that they are depleted from important details that cannot be captured without interviews, and they still have limitations given by the jurisdiction of the administrative processes through which data are collected. The set-up costs may be substantial, but the efforts to maintain and update the system would be far less than any other instrument considered for the moment.

The development of instruments that use register data to trace tertiary education graduates has to take into consideration the legislation on personal data and specifically the GDPR. Though most of the data in the registries can be de-identified, the links between databases often require the use of official personal identification numbers—which are personal data. However, solutions have been found: Austria is nominated "for tracking graduates using administrative data [...] with total respect for data privacy regulations" (European Commission 2021, p. 16)—which we understand as matching databases without interaction with personal data. Encryption software tools in conjunction with ingenious designs of the data transactions between the different owners of the databases can also overcome this obstacle, from our point of view.

The alternative would be to put to work the legislation regarding personal data protection. We presented two approaches in the empirical part of the chapter. In the

case of Sweden, the general legal framework was complemented by formal assignments of roles and responsibilities in linking registers (LISA) and accompanied by access instruments (MONA). In the case of Romania, tracing was grounded on legislation that pre-dated the adjustment of national law to the GDPR and on the basis of the derogations from the GDPR. In the case of Sweden, at least for the events we have covered in this chapter, the model resembles a state-coordinated intervention. In the case of Romania, the events can be rather described in terms of policy entrepreneurialism (Mintrom 2019).

Though the 2016 European Union Regulation on data protection is probably invoked in any discussion regarding the development of graduate tracer studies using register data, we do not consider it an obstacle that cannot be handled with proper legislative and coding skills. In the case of Sweden, where a system was built for granting access to register data in the scope of research, its functioning was largely unaffected in its substantial terms by the enactment of national legislation following the adoption of EU's GDPR. We argued in the conceptual part of the paper that GDPR also offers opportunities to grant access to register data for research purposes. We also exemplified how such a case can also be built in the absence of a proper top-down definition of roles and responsibilities, with grounds in the existing higher education legislation—see the case study on Romania. However, this approach does not provide safeguards against administrative action coming from exaggerated or even dubious, in our opinion, interpretations of the GDPR. We did not witness such an event in the realm of higher education, but we documented a case of 'misuse of GDPR' in order to 'muzzle media': the Organized Crime and Corruption Reporting Project accused the Romanian authorities that they wrongfully invoked GDPR to stop abusively a corruption investigation targeting top politicians (OCCRP 2018). We argued earlier in this text that journalistic investigations are among the derogations from GDPR, as well as research in the public interest. We conclude that the development of graduate tracer studies using register data, in the context of GDPR, is a matter of political will, not a technical impossibility deriving from subsequent national legislation.

## References

- Beadle, S., Vale, P., Mannsberger-Nindl, S., Hannah, A., Zaidi, A., Abdallah, C., & Kottmann, A. (2020). Mapping the state of graduate tracking policies and practices in the EU member states and EEA countries: Final report. Publications Office of the European Union <https://doi.org/10.2766/62505NC-01-20-250-EN-N>
- Becker, G. S. (1993). *Human capital: A theoretical and empirical analysis, with special reference to education*. (3rd[1965]). The University of Chicago Press.
- C-101/01. (2007). Nikolaou v. Commission, Case C-101/01.
- C-101/01.(2003). Sweden v. Bodil Lindqvist, I-12992 Cjeu C-101/01 12992.



- C-201/14. (2015). Smaranda Bara and Others v. Presedintele Casei Nationale de Asigurări de Sănătate, Casa Națională de Asigurări de Sănătate, Agentia Națională de Administrare Fiscală (ANAF).
- C-73/07. (2008). Tietosuojavaltuutettu [Finnish Data Protection Ombudsman] v. Satakunnan Markkinapörssi OY and Satamedia OY, CJEU C-73/07 9868.
- C-131/12. (2014). Google Spain SL and Google Inc. v. (AEPD), Agencia Española de Protección de Datos and Mario Costeja González.
- Coleman, J. S. (1991). Matching processes in the labor market. *Acta Sociologica*, 34(1), 3–12. <https://doi.org/10.1177/000169939103400101>
- Crăciun, D., Orosz, K., & Proteasa, V. (2020). Does Erasmus mobility increase employability? Using register data to investigate the labour market outcomes of university graduates. In A. Curaj, L. Deca, & R. Pricopie (Eds.), *European higher education area: Challenges for a new decade* (pp. 105–119). Springer. <https://doi.org/10.1007/978-3-030-56316-5>.
- Crato, N., & Paruolo, P. (2018). The power of microdata: An introduction. In N. Crato & P. Paruolo (Eds.), *Data-driven policy impact evaluation: How access to microdata is transforming policy design*. Springer. [https://doi.org/10.1007/978-3-319-78461-8\\_1](https://doi.org/10.1007/978-3-319-78461-8_1)
- Eminescu, M. (1984). *Opere (XI) Publicistică: 17 februarie—31 decembrie 1880*. Editura Academiei Republicii Socialiste România.
- ENQA. (2009). Standards and guidelines for quality assurance in the european higher education area (3rd ed.). European association for quality assurance in higher education. <http://www.enqa.eu/pubs.lasso>
- European Commission. (2016). Communication on new skills agenda, human capital, employability and competitiveness: “A new skills agenda for Europe”. <http://www.ipex.eu/IPEXL-WEB/dossier/document/COM20160381.do>
- European Commission. (2021). Towards a European graduate tracking mechanism: Recommendations of the expert group. *Publications Office of the European Union*. <https://doi.org/10.2766/970793>
- European Council, & European Parliament. (2009). Recommendation on the establishment of a European quality assurance reference framework for vocational education and training. *Official Journal of the European Union*.
- Frosio, G. F. (2017). Right to be forgotten: Much ado about nothing. *Colorado Technology Law Journal*, 15(2), 307–336. <https://doi.org/10.2139/ssrn.3009153>
- Heckman, J. J., Lochner, L. J., & Todd, P. E. (2003). Fifty years of mincer earnings regression. In *NBER Working Paper Series* (No. 9732). <https://www.nber.org/papers/w9732>
- HOTĂRÂRE 905 14/12/2017 privind registrul general de evidență a salariatilor, (2017). <http://legislatie.just.ro/Public/FormaPrintabila/00000G1ZDUG5FNVCYAC3P8DDKDDG5IXN>
- Jackson, P. (2018). From “intruders” to “partners”: The evolution of the relationship between the research community and sources of official administrative data. In N. Crato & P. Paruolo (Eds.), *Data-driven policy impact evaluation: How access to microdata is transforming policy design* (pp. 17–26). Springer. [https://doi.org/10.1007/978-3-319-78461-8\\_2](https://doi.org/10.1007/978-3-319-78461-8_2)
- Janos, A. C. (1978). Modernization and decay in historical perspective: The case of Romania. In K. Jowitt (Ed.), *Social change in Romania, 1860–1940: a debate on development in a European nation*. Institute of International Studies: University of Berkeley.
- Legea Educatiei Nationale [Law on National Education]. (2011). <http://legislatie.just.ro/Public/DetaliuDocument/125150>
- Lemieux, T. (2006). The “Mincer equation” Thirty years after schooling, experience, and earnings. In S. Grossbard (Ed.), *Jacob mincer a pioneer of modern labor economics* (pp. 127–145). Springer. [https://doi.org/10.1007/0-387-29175-X\\_11x](https://doi.org/10.1007/0-387-29175-X_11x)
- Ludvigsson, J. F., Svedberg, P., Olén, O., Bruze, G., & Neovius, M. (2019). The longitudinal integrated database for health insurance and labour market studies (LISA) and its use in medical research. *European Journal of Epidemiology*, 34(4), 423–437. <https://doi.org/10.1007/s10654-019-00511-8>

- McMahon, W. W. (2009). *Higher Learning, Greater Good*. The Private and Social Benefits of Higher Education: The Johns Hopkins University Press.
- Mincer, J. A. (1974). Schooling, experience, and earnings: Vol. NBER. National bureau of economic research. <https://www.nber.org/books-and-chapters/schooling-experience-and-earnings>
- Ministerul Educației Naționale și Cercetării Științifice. (2015). Strategia Națională pentru Învățământ Tertiare 2015–2020. [https://www.edu.ro/sites/default/files/fisierearticole/Strategie\\_inv\\_tertiar\\_2015\\_2020.pdf](https://www.edu.ro/sites/default/files/fisierearticole/Strategie_inv_tertiar_2015_2020.pdf)
- Mintrom, M. (2019). So you want to be a policy entrepreneur? *Policy Design and Practice*, 2(4), 307–323. <https://doi.org/10.1080/25741292.2019.1675989>
- Nilsson, S. (2017). Employability, employment and the establishment of higher education graduates in the labour market. In M. Tomlinson & L. Holmes (Eds.), *Graduate employability in context: Theory, research and debate* (pp. 65–85). Springer. <https://doi.org/10.1057/978-1-137-57168-7>
- Nilsson, S., & Viberg, A. (2015). Etableringen på arbetsmarknaden för högskoleutbildade 2013: Etablerade läsåren 2011/12, 2009/10 och 2007/08 [Establishment in the labor market for university graduates 2013: Established academic years 2011/12, 2009/10 and 2007/08]. <https://www.uka.se/download/18.12f25798156a345894e4cb4/1487841874338/rapport-2015-12-15-etablering-pa-arbetsmarknaden.pdf>
- OCCRP. (2018). OCCRP strongly objects to Romania's misuse of GDPR to muzzle media: Organized crime and corruption reporting project. <https://www.occrp.org/en/40-press-releases/press-releases/8875-occrp-strongly-objects-to-romania-s-misuse-of-gdpr-to-muzzle-media>
- Orosz, K., Proteasa, V., & Crăciun, D. (2020). The use of instrumental variables in higher education research. In J. Huisman & M. Tight (Eds.), *Theory and Method in Higher Education Research*. Emerald.
- Proteasa, V., Bleotu, C., & Fierăscu, S. (2018). UVT și piața muncii: Studiu privind angajabilitatea absolvenților Universității de Vest din Timișoara [UVT and the labour market: A study on the employability of the graduates from West University of Timișoara]. [angajabilitate.uvt.ro](http://angajabilitate.uvt.ro)
- Redacție [The Editors]. (2019). Surprize În topul facultăților vânat de studenți la Politehnica din Timișoara [Surprises in the top hunted faculties at the Timișoara Politehnic]. Opinia Timișoarei. <https://www.opiniatimisoarei.ro/surprize-in-topul-facultatilor-vanate-de-studenti-la-politehnica-din-timisoara-83-dintre-absolventii-uvt-sunt-angajati-imediat-dupa-terminarea-studiilor/05/04/2019>
- Rouvroy, A., & Pouillet, Y. (2009). The right to informational self-determination and the value of self-development: Reassessing the importance of privacy for democracy. In S. Gutwirth, Y. Pouillet, P. De Hert, C. de Terwangne, & S. Nouwt (Eds.), *Reinventing Data Protection?* (pp. 45–76). Netherlands: Springer.
- Salecl, R. (2002). The exposure of privacy in today's culture. *Social Research*, 69(1), 1–8.
- Sandru, D. M., Banu, C. M., & Călin, D. A. (2017). Aplicarea și interpretarea Directivei 95/46 de către instanțele române: Tipologii și consecințe juridice [The application and interpretation of the directive 95/46 by Romanian courts: Typologies and juridical consequences]. In I. Alexe, N. D. Ploesteanu, & D. Sandru (Eds.), *Protecția datelor cu caracter personal [Personal Data Protection]* (pp. 41–76). Editura Universitară.
- Swedish Research Council. (2014). Evaluation of the MONA system (Microdata Online Access). Swedish Research Council.
- Świącicki, I. (2019). Data economy. In P. Arak, Ł. Czernicki, & I. Świącicki (Eds.), *Common market as a common commitment: Letters to the new EU leadership 2019–2024* (pp. 62–67). Polish Economic Institute.
- The Council of the European Union. (2017). Council Recommendation of 20 November 2017 on tracking graduates. The Council of the European Union. [https://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX%3A32017H1209%2801%29#ntr12-C\\_2017423EN.01000101-E0012](https://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX%3A32017H1209%2801%29#ntr12-C_2017423EN.01000101-E0012)
- European Parliament. (1995). Directive 95/46/EC of the European Parliament and of the Council of 24 October 1995 on the protection of individuals with regard to the processing of personal data and on the free movement of such data, 1995 O.J. (L 281) 31. *In Official Journal of the*

- European Communities* (Issue L281/31, pp. 31–50). <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A31995L0046>
- The Government of Romania. (2020). National reform programme. [https://ec.europa.eu/info/sites/default/files/2020-european-semester-national-reform-programme-romania\\_en\\_0.pdf](https://ec.europa.eu/info/sites/default/files/2020-european-semester-national-reform-programme-romania_en_0.pdf)
- The Privacy Working Group. (1995). Privacy and the national information infrastructure: Principles for providing and using personal information. U.S. Department of Health & Human Services, ASPE Office of the Assistant Secretary for Planning and Evaluation. <https://aspe.hhs.gov/privacy-and-national-information-infrastructure-principles-providing-and-using-personal-information>
- The World Bank. (2019). Plan strategic institutional 2019–2022 pentru Ministerul Educatiei Nationale. <http://sgg.gov.ro/1/wp-content/uploads/2019/11/MEN-RO.pdf>
- Trivellato, U. (2018). Microdata for social sciences and policy evaluation as a public good. In N. Crato & P. Paruolo (Eds.), *Data-driven policy impact evaluation: How access to microdata is transforming policy design* (pp. 27–45). Springer. [https://doi.org/10.1007/978-3-319-78461-8\\_3](https://doi.org/10.1007/978-3-319-78461-8_3)
- Unspecified author. (2021). Studiu universitatea politehnica Timisoara: Piata muncii cere În continuare ingineri, chiar dacă pandemia a afectat unele domenii. Rata de angajabilitate a absolventilor este de 80% În ceea ce privește domeniile de licență, respectiv 89% la programele de. *Financial Intelligence*. <https://financialintelligence.ro/studiu-universitatea-politehnica-timisoara-piata-muncii-cere-in-continuare-ingineri-chiar-daca-pandemia-a-afectat-unele-domenii-rata-de-angajabilitate-a-absolventilor-este-de-80-in- ceea-ce-priveste/>
- Vertes-Olteanu, A., & Racolta, R. (2019). The rise and fall of information privacy. *Curentul Juridic [The Juridical Current/Le Courant Juridique]*, 76(1), 121–132.
- Voigt, P., & Von Dem Bussche, A. (2017). *The general data protection regulation (GDPR): A practical guide*. Springer International. <https://doi.org/10.1007/978-3-319-57959-7>
- Whitman, J. (2004). The two western cultures of privacy: Dignity versus liberty. *Yale Law Journal*, 113(6), 1151–1221. <https://digitalcommons.law.yale.edu/ylj/vol113/iss6/1>

**Viorel Proteasa** is a lecturer at the Department of Political Sciences within the West University of Timisoara. His research covers social phenomena circumscribed to universities and students, ranging from performance evaluation to students’ movements. His current focus is the employability of university graduates, both substantial and methodological issues. Previously he studied student activism & organization in post-communism.

**Andreea Vertes-Olteanu** is senior lecturer at the Faculty of Law, within the West University of Timisoara, Romania, in charge of courses, seminars, and practical courses on Constitutional Law, Internet Law, European Union Internet Law, and Legal Language. In her research, she focuses on topics of Constitutional Law and Internet Law, being also interested in comparative and interdisciplinary aspects (mainly Law and Literature). Her doctoral research addressed civil liability of internet service providers and has, further on, been interested in the topics of freedom of speech, privacy, and intellectual property in the digital age.

**Open Access** This chapter is licensed under the terms of the Creative Commons Attribution 4.0 International License (<http://creativecommons.org/licenses/by/4.0/>), which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter’s Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter’s Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.



# Losing Ground: Romanian Higher Education Since 2006 in Comparative Perspective



Alex Usher and Jonathan Williams

**Abstract** This article uses a new global data set on higher education enrolments and finance covering 56 countries and well over 90% of the global higher education sector by enrolment, in order to examine the Romanian experience in higher education since 2006 in both a regional and a global comparative perspective. These comparisons highlight a few key facts about Romanian higher education, in particular: how different the institutional typology is compared to others in the region, how unprecedented the collapse in enrolments in the years after 2009, and how few resources, either public or private, the country invests in higher education compared to either a continental or global standard. The implications of these facts for Romania's future economic growth are briefly discussed.

**Keywords** Romania · Higher education · Higher education systems · Enrolments · Funding · Tuition fees

## 1 Introduction

This paper examines the Romanian Higher Education system from both a global and a regional comparative perspective. Though there have been some excellent general encapsulations of the Romanian higher education system (notably World Bank 2011; Curaj et al. 2015), these have tended not to include extensive international context. Part of this is a lack of readily comparable national datasets; unlike most other EU countries, Romania chooses not to submit data to the OECD's annual publication *Education at a Glance*, which is the world's most-read work of international comparative data. Indeed, the only regular international comparisons in which Romania can be found are in the excellent annual reports of the Consiliul National al Finantarii din Invatamantul Superior (CNFIS). However, these exercises are limited in two

---

A. Usher (✉) · J. Williams  
Higher Education Strategy Associates, Toronto, Canada  
e-mail: [ausher@higheredstrategy.com](mailto:ausher@higheredstrategy.com)

J. Williams  
e-mail: [jwilliams@higheredstrategy.com](mailto:jwilliams@higheredstrategy.com)

© The Author(s) 2022

A. Curaj et al. (eds.), *Higher Education in Romania: Overcoming Challenges and Embracing Opportunities*, [https://doi.org/10.1007/978-3-030-94496-4\\_11](https://doi.org/10.1007/978-3-030-94496-4_11)

respects. First, they tend to focus on annual cross-sectional analysis, which limits the ability to construct a longer-term narrative. Second, for political reasons, the Romanian analysis tends to focus on other countries in the EU-27, and as one of the EU's newest and least well-off members, any negative comparisons can be waived off as natural given the country's economic position.

Yet, there are other kinds of comparisons that can be made and that, for several reasons, seem more fruitful. Romania is an outlier within the European Union for a number of reasons. First and most importantly, its higher education institutional structure—which is entirely university-based and containing no hybrid or short-cycle institutions—is most dissimilar to that of any other major European country. Second, the extent of its demographic transition and the economic dislocation that occurred during the transition to a mixed economy after 1989 is more similar to what was seen in the ex-Soviet Union than it is to anything seen in Western Europe. Third, the collapse of the country's formerly extensive private higher education sector—partly a consequence of demographic decline, but more importantly a result of the Spiru Haret scandal—is essentially unprecedented anywhere in the world. Fourth and finally, the sector receives the least public support of any major system in the EU, even taking into account differences in the size of national economies. For all of these reasons, an exclusive focus on a set of mainly West European comparators—and moreover one which focuses on annual snapshots rather than longer-term historical analysis—probably results in a set of comparisons that does not do justice either to the system's strengths or its weaknesses.

The purpose of this paper is to try to show Romanian higher education since 2006 in a different perspective: one which highlights the system's evolution, with due attention paid to the four factors outlined above, and against a novel set of regional and global comparators. In order to do so, it takes advantage of a new database on global higher education, which has been developed by Higher Education Strategy Associates.

In this paper, we compare Romania individually to other members of a regional grouping of post-socialist countries, including Poland, Ukraine, the Russian Federation and Kazakhstan, which along with Romania comprise the region's five largest higher education systems. We also compare Romania to three larger aggregate comparators: Western European, the Global North and the World as a whole (see Appendix A for compositions of these groups). In so doing, we place Romania in a comparison group, which is closer to both in historical terms and present-day financial means, while at the same time providing a sense of where it stands in a broader global context. This dual set of comparators permit an understanding of the extent to which various aspects of the present condition of higher education in Romania are a shared condition among all regional comparators and to what extent they are a unique product of local circumstance, constraints and policy choices. The implications of these conditions for future economic growth in Romania are also briefly examined and discussed.

## 2 The Dataset

The dataset from which this analysis is drawn has been developed by Higher Education Strategy Associates over the past three years. It draws on specialized datasets available at the national level in order to enable more detailed global analyses than those available through the world's two major extant databases, developed by UNESCO and the OECD. The former is geographically comprehensive but has severe limitations on topic coverage; the latter is more detailed in terms of topics but limited geographically to mainly the OECD, whose members cover at best about a third of the world's higher education system, as measured by enrolments. The aim of this database is to combine the detail of the OECD's work with the breadth of UNESCO's coverage and—where possible—add some additional detail.

The database includes data on institutions, students and finances from 56 countries. The primary criterion for inclusion was whether the country possessed more than half a million students. We believe we have captured every country meeting this criterion save three—Algeria, Sudan and the Democratic Republic of the Congo—which were excluded due to lack of data. Beyond that, a number of smaller countries which possessed publicly available data on institutions, students and finances were also included, either because they represented interesting policy models (e.g. Ireland, Israel, Singapore) or for reasons of creating better overall geographic balance (e.g. Burkina Faso, Benin). The full list of countries is shown in Appendix A.

For the purposes of this project, our **definition of higher education** (also called tertiary education) corresponds with the International Standard Classification of Education (ISCED) 2011 levels 5, 6, 7 and 8. In general, ISCED 5 refers to short-cycle tertiary education, ISCED 6 to Bachelor's-level or equivalent, ISCED 7 is Master's-level or equivalent, and ISCED 8 is doctoral-level or equivalent. ISCED 4—which is what is known as “post-secondary” but not tertiary—is excluded from our analysis. This has a significant effect on student counts in countries like New Zealand and Canada, where the institutions known respectively as “polytechnics” and “community colleges” offer a mix of ISCED 4 and ISCED 5 programs.

That said, part of the goal of this publication is to present data in terms that are legible to readers in every country without relying too much on abstractions like ISCED levels. That requires portraying data by institution type, which is a more readily legible form of comparison for most readers. Yet, institutions of higher education look very different from one country to another, and even when institutions do appear similar, their national governments do not always categorize them similarly. This creates problems since national reporting conventions necessarily condition the available data. We have therefore, for the purposes of counting institutions and students, grouped institutions around the globe into seven categories. These include firstly **five categories of higher education institutions (HEIs)**:

- **Comprehensive universities**—These institutions deliver predominantly programs at ISCED level 6 or higher in four or more discrete fields of study. These fields of study should include both hard sciences (e.g. biology, chemistry, engineering) and arts or social sciences. This category also tends to be the default category for

institutions classified as universities, where national systems do not separate their institutions into comprehensive or more specialized institutions. All 56 countries in this survey possess these institutions. In Romania, this includes all the universities which are classified as “comprehensive”;

- **Specialized universities**—These institutions offer programs at ISCED level 6 or higher and award their own degrees in a narrow set of disciplines. Their disciplines are usually concentrated around a certain theme, such as education, religion, engineering, agriculture, medicine/pharmacy, fine arts or business. They can also include higher education run by the military or police forces. We identify such institutions in 31 countries in this survey, including Romania, where the definition includes all those universities classified as anything other than comprehensive.
- **University colleges**—These institutions deliver education programs at ISCED level 6 or higher but do not award their own degrees. Instead, their degrees are awarded by an affiliated university. International branch campuses are included in this category. In total, 17 countries in this survey are considered to have such institutions. Romania does not possess institutions of this type.
- **Hybrids**—Hybrids are a diverse group of vocationally oriented institutions, which may offer programs at basically all ISCED levels. Most hybrid students in most countries enroll at ISCED level 6, essentially pursuing long-cycle vocational programs. Thirty-four countries in this survey are considered to have such institutions, which are called universities of applied sciences in Western Europe; university institutions and technological schools in Colombia; simply private higher education providers in a number of countries in Sub-Saharan Africa; etc. Romania does not possess institutions of this type.
- **Short-cycle institutions**—Short-cycle institutions predominantly offer programs at ISCED level 5 and generally do not offer programs above ISCED level 6. These institutions will often have a substantial minority share of their enrolments below ISCED level 5. Thirty-two countries in this survey are considered to have such institutions, which are called things like community colleges or two-year colleges in the United States; Junior Colleges in a number of Asian countries; polytechnics or polytechnic institutes in a few jurisdictions; etc. Romania does not possess institutions of this type.

A handful of countries also provide some higher education instruction either in secondary schools or what we term “semi-higher-education” institutions, which includes institutions that teach at multiple ISCED levels, including below level 5 as well as institutions that are not primarily educational, but still offer educational programming (e.g. hospitals, research units, recognized training facilities within firms). These institutions are excluded from this paper’s analysis.

**This survey also distinguishes public and private higher education providers.**

As with institution-types, assigning institutions and students to each category is complicated by the fact that each country has a different way of defining public and private. In some countries, the dividing line is ownership; in others, it is the receipt of public funds. Wherever possible, we opt to follow the national definition, while recognizing that an institution with a certain level of autonomy might be classified

as “public” in one country but would be considered “private” in another country. In a few cases, in order to generate more complete data, it was necessary to include institutions with a claim to being private (and indeed that might be considered private in national data) as public.

For purposes of geographic comparison, a two-level geographic system is used. At the first level, the HESA database divides the world geographically into a “Global North” and a “Global South”. Because higher education is usually a lagging indicator of economic development, it made sense not to group countries by *current* economic conditions or by GDP but rather by *historical* ones. For that reason, the Global South and Global North categories more or less line up with what used to be called the “developing world” or the “Third World” on the one hand and the “developed world” or the “First/Second World” on the other. The Global North is essentially those countries that were part of what was known as the Warsaw Pact (including Kazakhstan, which is usually considered part of the South) plus those countries that were OECD members in 1992 (minus Turkey, which for geographical reasons was placed in the South in the MENA region) plus South Korea, Taiwan and Singapore.

The second level divides each of these two super-regions into a small number of more geographically compact units, which are shown in Appendix A. The Global North is divided into four sub-regions: Western Europe, “Canzaus” (that is, Canada, Australia, New Zealand and the United States), Advanced Asia (a group of five east-Asian jurisdictions plus Israel) and finally the East (Former Socialist) Bloc, which includes Poland, Romania, Ukraine, the Russian Federation and Kazakhstan.

### 3 System Size

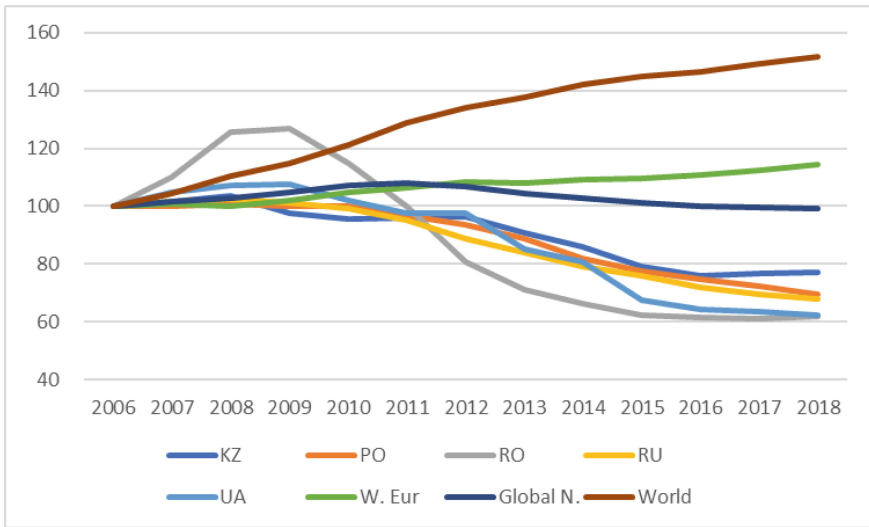
Table 1 in Appendix B shows the most recent (2018) student numbers across our five comparator countries and three larger aggregate comparators. Figure 1 shows that globally, student numbers increased by over 50% between 2006 and 2018. There was also a growth in enrolment of about 20% in Western Europe. In the Global North as a whole, enrolments rose briefly until about 2011, before falling back to 2006 levels again by 2015 and remaining at this lower level thereafter. This was partly due to a fall in enrolments, particularly in private universities, in the United States; but it was also due to the demographic transition in the former socialist countries.

As Fig. 1 clearly shows, all of the regional comparator countries saw declines in enrolment starting in about 2009 and lasting until about 2015. In no case was the decline in enrolment less than 20%. But the decline in Romanian enrolments was by far the sharpest and fiercest of any country: over 50% just between 2009 and 2014. It may have been the sharpest decline anywhere in the world, ever, outside of wartime. The demographic transition had a role to play here, but so too did the collapse in enrolments at the private Spiru Haret University following its blacklisting in 2010;



**Table 1** Number of students by country, 2018

	Total student no
Kazakhstan	985,546
Poland	1,492,897
Romania	538,871
Russia	6,549,272
Ukraine	1,482,594
Western Europe	14,238,299
Global North	58,219,954
World	208,439,689



**Fig. 1** Change in total enrolments, 2006–2018, (2006 = 100)

at one point, the institution constituted roughly a third of registered students in the country.<sup>1</sup>

<sup>1</sup>Spiru Haret University was founded in 1991 as a private university based in Bucharest. In the 2000s, the institution began to expand with astounding speed, mainly due to distance education programs which, in the main, were not accredited by the national quality assurance agency, ARACIS. By 2008-09, the institution enrolled over 300,000 students, or roughly half of the entire private sector and a quarter of the country’s total enrolment. In the summer of 2009, the Ministry of education declared 100,000 degrees from Spiru Haret University “illegal” (i.e. the degrees were effectively revoked). Enrolments at Spiru Haret University subsequently fell precipitously as the perception took hold that the university resembled a diploma mill. The institution is still in existence with an enrolment in the high thousands and has regained some of its legal status, but its scope is now vastly reduced from what it was fifteen years ago. See Cum a aiuns Spiru Haret să aibă 300.000 de studenți-sub-ochii autorităților statului, Ziariul Financiar, 20.07.2009, retrieved on 10 September

## 4 Institutions and Institution Types

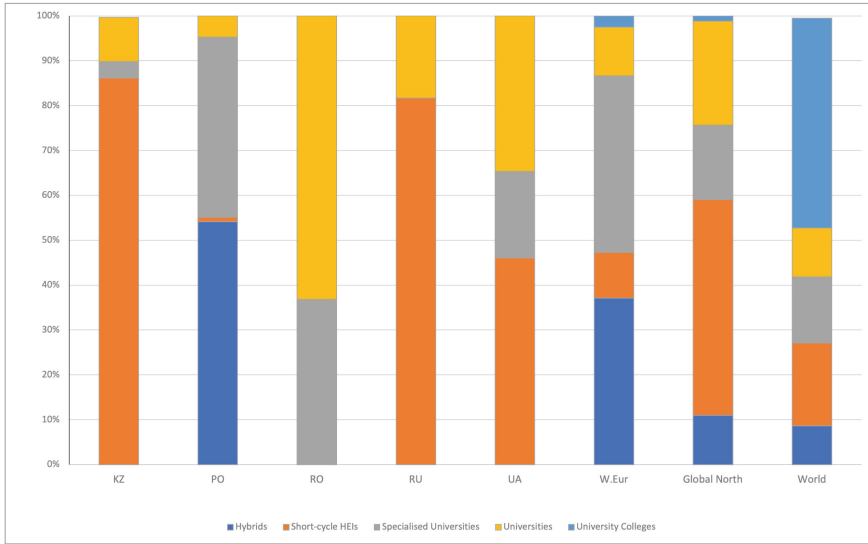
Table 2 in Appendix B shows the number of institutions by country and type in 2018. Different countries have different implicit policies with respect to institutional size: some prefer having a large number of small institutions; others prefer a smaller number of large institutions. In Fig. 2, we look not at the number of institutions but at the shape of the systems and the distribution of institutions across the five types, for all our regional and global comparators. It shows a number of important patterns. The first is that the “global” pattern of institutional distribution looks nothing like that of any country among the regional comparators, Europe, or even the global north as a whole. This is because the global total is vastly influenced by the structure in India, which has over 25,000 institutions, most of them university colleges. The second identifiable pattern is that Kazakhstan, Russia and Ukraine have similar institutional distributions, with very large numbers of short-cycle higher education institutions (known in Russia as “secondary professional education”) and universities. Of the regional systems, Poland is the one closest to European norms; that is, a large number of “hybrid institutions” and specialized universities, with short-cycle institutions and general-purpose universities being the minority.

Romania represents a different kind of system altogether. It is made up entirely of universities and specialized universities—no short-cycle education (which distinguishes it from the countries of the ex-Soviet region), and no hybrids (which distinguishes it from Poland). Very few higher education systems in the world have this kind of distribution, and it certainly makes Romania stand out within Europe.

Table 3 in Appendix B shows the number of students across institutional types for 2018. Figure 3 shows the distribution of students across types of higher education institutions in percentage terms for the same year. It is worth comparing this figure

**Table 2** Number of institutions by country and type, 2018

	Hybrids	Short-cycle HEIs	Specialised universities	Universities	University colleges
Kazakhstan		779	33	89	
Poland	217	4	161	19	
Romania			35	60	
Russia		3,316	–	741	
Ukraine		247	103	186	
Western Europe	1,918	527	2,034	560	129
Global North	2,258	9,907	3,413	4,773	236
World	7,666	16,388	13,076	9,677	41,467



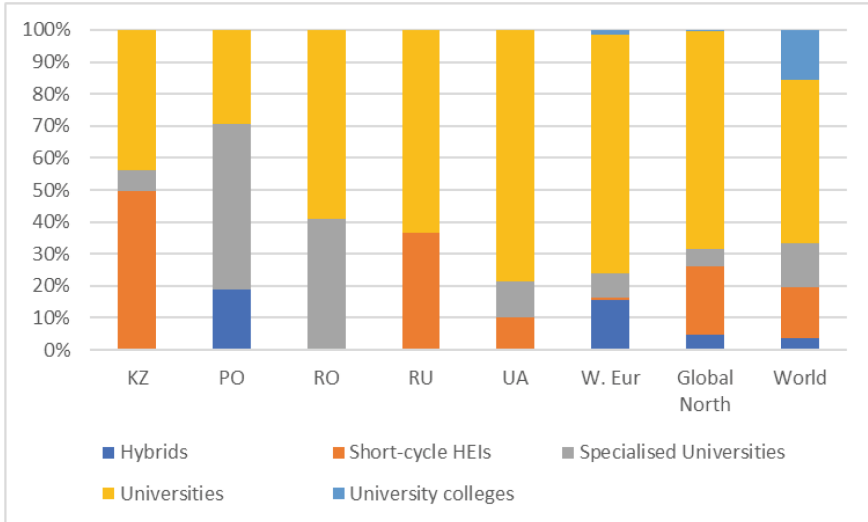
**Fig. 2** Distribution of institutions by institutional type, 2018

**Table 3** Number of students in thousands by country and institutional type, 2018

	Hybrids	Short-cycle HEIs	Specialised universities	Universities	University colleges
Kazakhstan		489	62	434	
Poland	275	>1	758	429	
Romania			221	318	
Russia		2388	–	4162	
Ukraine		153	166	1164	
Western Europe	2,001	98	1,010	9,910	204
Global North	2,757	12,040	3,067	28,738	239
World	7188	33263	27713	104922	32065

with Fig. 2 because it shows some common patterns. In all countries except Romania, the percentage of students enrolled in comprehensive universities far outstrips the comprehensive universities’ share of total HEIs; generally speaking, these institutions are larger than other types of institutions. In this comparison, Romania looks to be closest to Poland, which similarly has a relatively large and technically-oriented group of specialized universities.

Table 4 in Appendix B shows the number of institutions by ownership (i.e. private versus public). Figure 4 shows the proportional distribution of public and private institutions for all of our comparators. Globally, roughly two thirds of all higher education institutions are private in nature. The proportion is somewhat higher in



**Fig. 3** Distribution of students by institutional type, 2018

**Table 4** Number of institutions by country and ownership, 2018

	Private	Public
Kazakhstan	400	501
Poland	233	168
Romania	39	56
Russia	562	3,495
Ukraine	119	417
Western Europe	2,448	2,720
Global North	10,826	9,761
World	59,196	29,167

the Global South than in the Global North. Interestingly, despite the explosion of private institutions in the post-socialist countries in the 1990s, the region actually has relatively fewer private institutions than other parts of Europe. Indeed, when it comes to the public-private split in institutions, Romania is the closest to the European average of all the post-socialist countries.

Figure 5 shows the proportion of students enrolled in private higher education institutions. Here we see a fairly mixed picture. Globally, the proportion of students in private institutions rose very slightly over the period 2006–2018, from 27 to 30%. In Western Europe, the proportion grew more significantly from 7 to 12%, but across the Global North, the proportion stayed relatively constant at 26%. This was because the growth in Western Europe was offset by falls in private-sector universities in both the United States and, to a much lesser extent, in the former socialist countries. Not

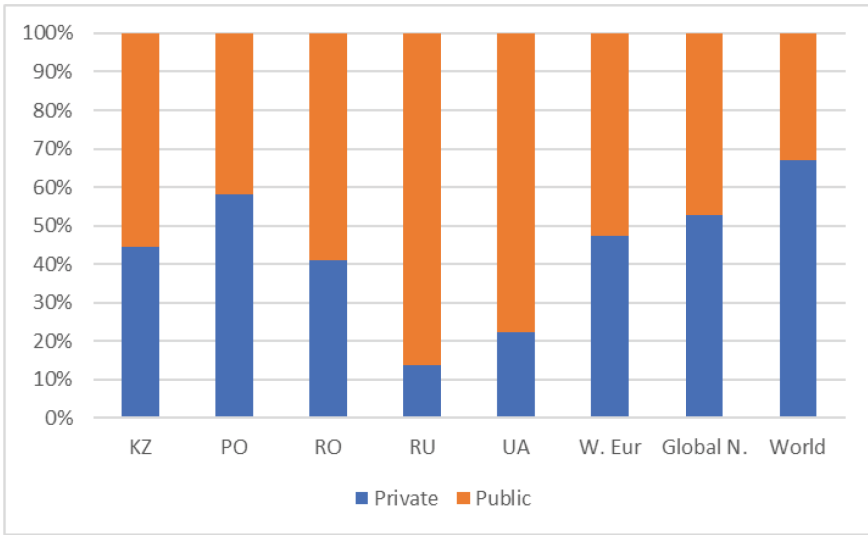


Fig. 4 Distribution of institutions by ownership, 2018

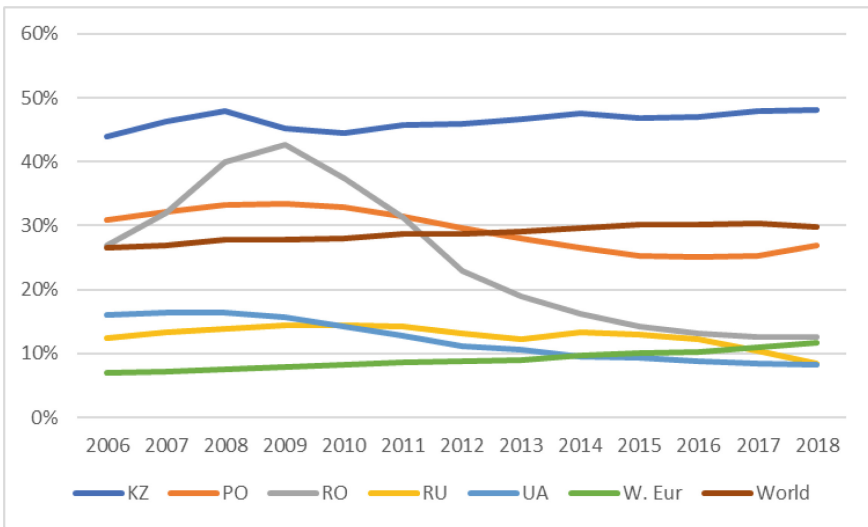


Fig. 5 Proportion of students in private higher education institutions, 2006–18

all countries in the sector saw declining private enrolments: both Kazakhstan and Ukraine saw small rises. However, in Poland, Russia and, above all, Romania, the declines in the private sector were significant. This decrease was largely concentrated at a single institution, Spiru Haret University. However, even without this event, the Romanian pattern would have been similar to that of Poland and Russia, where the enrolment impact of the demographic transition fell disproportionately on the private sector.

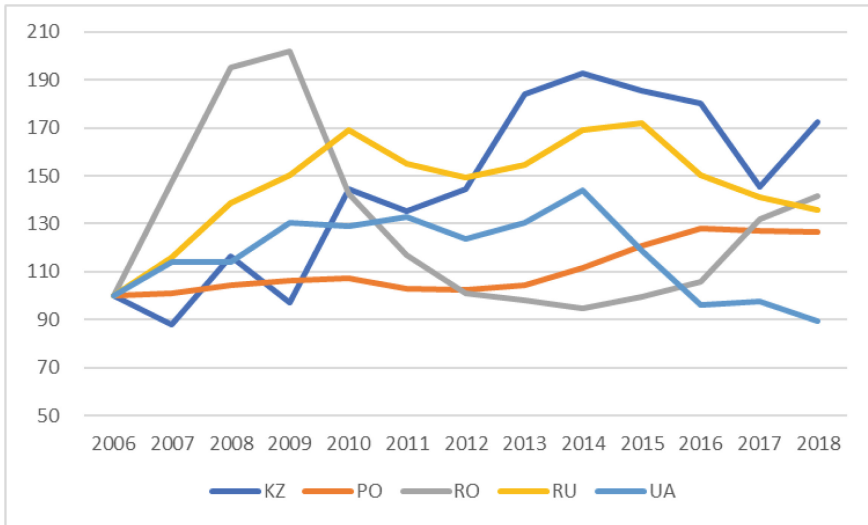
## 5 Finances

Another major area of possible comparison between national higher education systems is financial resources. In many countries, it is possible to compare total revenues and expenditures by institutions; however, in Romania, as well as Ukraine and Kazakhstan, there is no centralized data on institutional income and expenditures, even among public institutions. In these three countries, only government expenditures are recorded centrally: while institutions may individually publish their income and expenditures, as a matter of public policy, none of these three countries bothers to aggregate or publish what institutions are doing with money received from non-governmental sources.

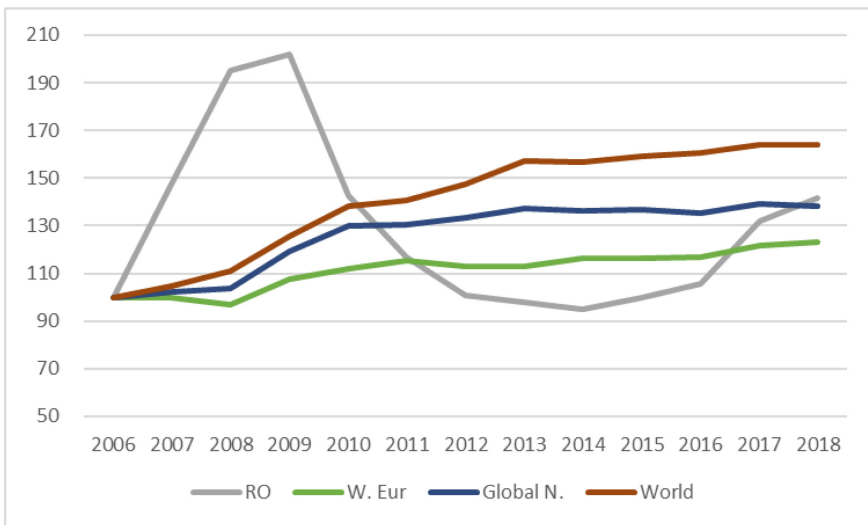
It can also be difficult to capture all of public higher expenditures effectively. Operating budgets are often recorded quite separately from capital budgets, research monies sometimes come from a different ministry, and money for student assistance (where such programs exist) may come from another budget altogether. “Public funding of higher education” means more than just transfers to institutions and indeed are frequently much more volatile, as well as prone to large year-on-year swings.

Figure 6 contrasts changes in real (that is, inflation-adjusted) Romanian public spending on higher education to that of its regional comparators. Again, the Romanian experience is quite different from others in the region. Expenditures rose dramatically in Romania in the years 2007–2009, mainly due to an enormous expansion of spending on capital equipment (“*obiective de capital si alte dotări*” in government accounts) as well as, to a lesser extent, on new construction (“*investii si RK*”). After the financial crisis, spending on these areas shrank to almost nil, while operating budgets were slimmed as much as 15% so that by 2012, the real spending was below where it was six years earlier. From 2015 onwards, however, spending began to recover so that total public spending on higher education was 40% higher than it was, in real terms, in 2006. Other countries in the region also have seen public expenditures on higher education fluctuate significantly, none more so than Ukraine, where spending began falling after the start of the conflict with Russia in 2014.

Wider global averages are less volatile, in part, because as aggregates they smooth changes across countries, with spikes in one country cancelling out valleys in another, but also because wider averages are dominated by large, wealthy countries where spending tends to be more consistent. As Fig. 7 shows, the Romanian experience over the past fifteen years has been more volatile than others, but at the end of the



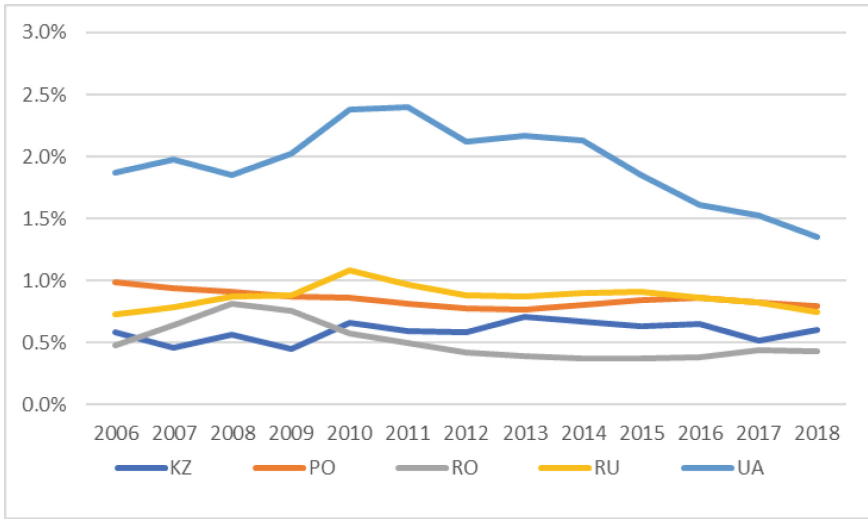
**Fig. 6** Change in real public expenditures on higher education, former socialist countries, 2006–18 (2006 = 100)



**Fig. 7** Change in real public expenditures on higher education, Romania versus select global averages, 2006–18 (2006 = 100)

day, the country’s spending levels have actually risen more quickly than both the West European average and the average of the developed world as a whole.

Of course, public higher education expenditures are not simply a function of governments’ desire to pay: they are also a function of governments’ *ability* to pay.



**Fig. 8** Public expenditures on higher education as a percentage of gross domestic product, former socialist countries, 2006–18

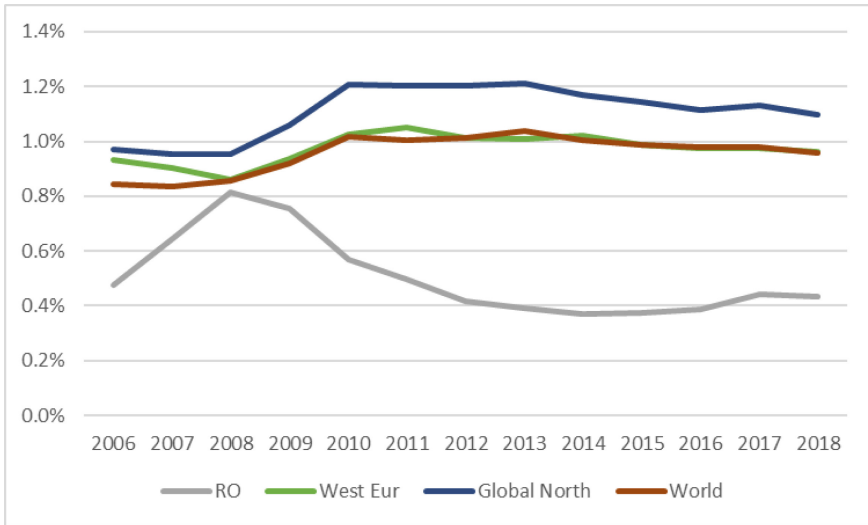
Particularly in countries where growth has been consistent and rapid—as it has been in Romania for much of the post-accession period—growing expenditure may simply reflect a growing economy, not a growing commitment to the sector. Comparing what governments spend as a percentage of their economy is, therefore, the subject of both Figs. 8 and 9.

Figure 8 shows that most post-socialist countries usually tend to spend between 0.5 and 1% of their GDP on higher education. Ukraine was a very big exception to this rule, but since the onset of the conflict with Russia, it is now being dragged back towards the regional average. Romania’s post-2015 growth in higher education expenditure looks much less impressive in GDP terms: measured as a function of the size of the economy, Romania remains the lowest-spending country in the region.

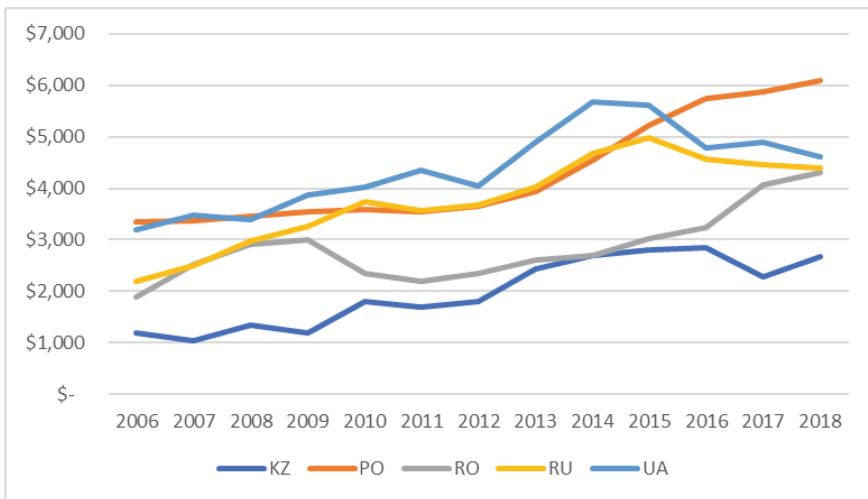
Figure 9 shows Romania in a wider comparative perspective, and it is not a flattering one. Romania’s current level of public expenditure is only 40% that of Western Europe and barely more than a third of the world average. For a country trying to lift itself into competition with the rest of the EU-27, this is almost certainly a major brake on long-term economic growth.

A final way to look at spending data is to examine it on a per-student basis. This shows the former socialist countries in a very different light because, unlike the rest of the world, they are in a demographic decline, meaning that even stagnant spending can result in rising per-student expenditures. Figure 10 shows a very different picture than Figs. 6 and 8 in the sense that it shows more relatively uninterrupted growth across countries rather than volatility. In Romania, for example, per-student expenditures in 2018 were almost twice what they were in 2011, almost in equal measure due to economic growth and demographic decline. That said, a good amount of this increase



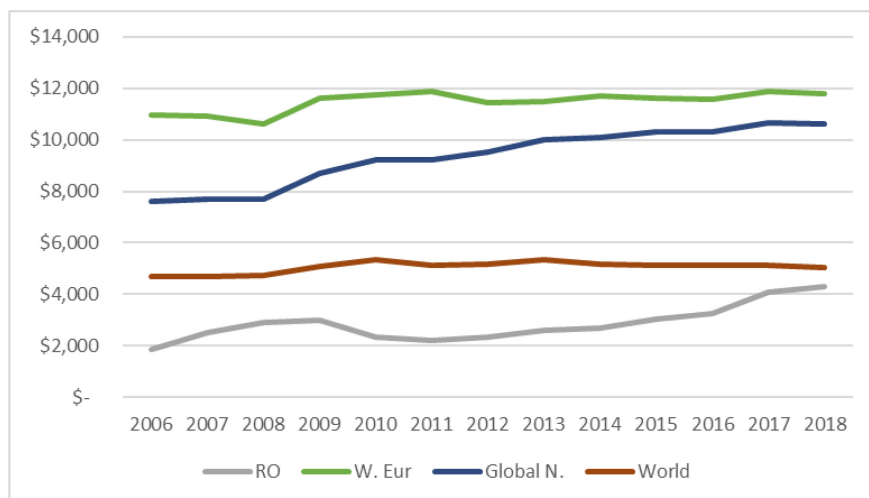


**Fig. 9** Public expenditures on higher education as a percentage of gross domestic product, Romania versus select global averages 2006–18



**Fig. 10** Per-Student public expenditures on higher education in constant 2018 USD at PPP, former socialist countries, 2006–18

might be chimerical because so much of the decline in student numbers occurred in institutions that did not receive public subsidies in the first place. When considering public expenditures per student in public institutions, the increase looks substantially less impressive.

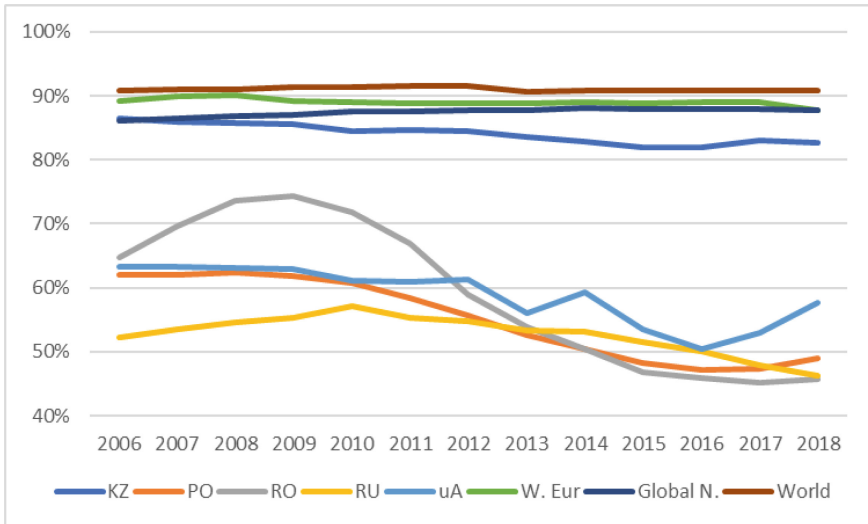


**Fig. 11** Per-student public expenditures on higher education in constant 2018 USD at PPP, Romania versus select global averages, 2006–18

Turning to wider comparisons, Fig. 11 shows Romania's per-student public expenditures against averages for Western Europe, the Global North and the global average. As is plain from the graph, Romania's per-student expenditures are actually rising more or less in line with expenditures across the Global North; in absolute terms they remain well short of global averages. It is below the world average for expenditures, and is only about a third of what it is in Western Europe.

## 6 Student Finances

Data on student finance is scarce in Romania, partly because of data lacunae, but partly also because Romania has chosen to do very little in terms of developing a centralized policy on student assistance. There is very little data collected on tuition fees charged in either public or private institutions, which means we know little about student payments beyond the simple number and proportion of students who pay fees. To the extent that there is grant-based student aid, it is distributed via a block per-student grant from the government to institutions, with the institutions responsible for identifying recipients and distributing the aid. However, there does not appear to be any centralized reporting on recipients (Proteasa and Miroiu 2015), so there are no national statistics on student grants (though Alexe, Haj and Murgescu 2015 is a valiant expert to show light on what is known about these awards). And, since the state has chosen not to implement a program of student loans, there is no data to use for international comparative purposes.



**Fig. 12** Percentage of students paying tuition fees, 2006–2018

However, the one set of comparisons we can make with respect to student finances is the proportion of students required to pay at least some fees. And here again, we see that Romania is an outlier, due mainly to the collapse in the private higher education sector.

Globally, including in Western Europe, the norm is for 85% or more of students to have to pay some sort of tuition fee. But, post-socialist countries are moving in a different direction. Right across the region, Fig. 12 shows a trend where the share of students paying fees is declining. They did not all start or finish at the same level—most began the period with 50–60% of students paying fees, whereas Kazakhstan began the period nearer the global average at 90%. In all four comparator countries, the proportion paying fees fell by about 10%. In some cases, this was due to a declining share of students enrolled in private universities; in others, it had to do with governments making a greater share of spaces in public universities free-of-charge, while in still others, it was a mix of the two. As usual, Romania's path was unique. At the outset of the period, the proportion of Romania's students paying fees was rising and heading towards the global average. And then, post-2009, with the collapse of private student numbers, Romania quickly settled to the bottom of the regional average, with just 46% of students paying fees.

## 7 Conclusion

The data in this paper has demonstrated a number of facts about Romania's higher education system. First, Romania's higher education system is structured quite differently from most European systems, lacking as it is in either hybrids or short-cycle institutions. This does not necessarily mean that Romania is deficient or that it is in need of new types of institution, though it might behoove Romanian policy-makers to ask what is it about these other types of institutions that makes so many other governments see value in them. It does, however, mean that comparisons with other European countries need perhaps to be somewhat more nuanced than it is at present. Yes, other systems manage to educate more students, but they tend to do so in a set of institutions that are somewhat cheaper and with missions that are somewhat more applied than those of universities.

Second, between 2009 and 2013, enrolments in Romanian higher education underwent one of the largest collapses ever seen in peacetime anywhere in the world. In terms of enrolments, the fall was over 50% in just four years (a product of both demographic transition and the aftermath of the Spiru Haret University affair). To the extent that enrolments at Spiru Haret University were fictitious, to begin with, the collapse of enrolments at this institution could be seen as just a return to a previous "normal". But, the effects of the demographic changes were equally serious, if not perhaps so unique, as most regional comparator countries saw something similar. It was the confluence of those two events that made the resulting fall so dramatic. The effects of this double collapse were felt much more seriously among private institutions than public ones: enrolments in private universities have fallen by nearly 85% since 2009, while the drop in public university enrolment has "merely" been around 25%. The decline in public enrolments alone would be a trauma in most countries; combined with the near-collapse of the private sector, the damage to higher education and indeed to the broader economy was immense. The loss of such a large amount of potentially skilled labour at exactly the time that the Romanian economy was beginning to grow quickly in the late 2000s is only one of the casualties of this phenomenon.

Third, and related to the demographics issue, is the fact that the Romanian system of higher education went from being one in which private funding has almost disappeared from the system. In this, Romania is similar to other countries in the East (former Socialist) Bloc, which—Kazakhstan excepted—have always had much lower percentages of fee-paying students than the rest of the world. Romania, like Ukraine, Russia and Poland, has seen a significant fall in the share of students paying tuition—but as was the case with enrolments, this drop was much more exaggerated in Romania than elsewhere. Partly this was a matter of simply having fewer students in the private sector, but it was also a consequence of the way Romania and other countries in the region finance public higher education, on the basis of a limited number of "free" (that is, fully-financed) spaces rather than based on total student numbers. In Romania, the number of free-fee spaces stayed roughly constant at just under 300,000 over the period in question; as total student numbers fell, that meant

that the proportion of students that were fee-paying dropped inexorably. In theory, these policies of reducing the number of students paying fees are promoting an access goal; in practice, it is also reducing the amount of total funding available to institutions.

The final key finding here has to do with public funding. Here the longer-term picture is somewhat opaque. Funding went into long-term decline after 2009, but this was partially offset by the drop in student numbers, so that in public universities at least, the longer-term picture is one of very slight growth in per-student income (provided one ignores the sharp spike and then fall in various types of capital spending in the years just before 2009). However, more important than per-student expenditures are expenditures as a percentage of Gross Domestic Product. Here, Romania finds itself well below global standards, with public expenditures totalling only 40% of the West European and World averages. Coupled with the low rates of fee-paying students, this makes Romanian higher education one of the most poorly-funded systems in the entire world.

In total, this is not a pretty picture. When it joined the European Union, Romania joined a common economic area, which contains some of the world's most advanced and technologically sophisticated economies in the world. There has always been the possibility that late-accession countries, including Romania, would end up as technological backwaters within the Union, forced to specialize in low-value-added activities such as agriculture and primary resources. The only way that Romania could converge towards EU-wide standards of living would be to converge with the rest of the Union in the development of knowledge-based industries. For a time, between 2006 and 2009, it seemed that Romania might do exactly that, with a growing student population and rapidly increasing expenditures on higher education. During this period, Romania was converging towards European and global norms. Not all of this convergence was real—the story of Spiru Haret University confuses the picture substantially—but some of it was, and that was a cause for hope. Since 2009, however, the story has been one of almost unremitting stagnation and decline.

The path of developing a knowledge-based economy is still open to Romania, but the sums being invested in higher education—both public and private—are simply nowhere near enough to allow the country to pursue it. A return to the ambition of the pre-2010 years is urgently needed if Romania is to avoid being locked into a low-innovation, low-income position within the European Union.

## Appendix 1: List of Countries included in HESA Database

Global North (25)		Global South (31)	
CANZAUS	Australia, Canada, New Zealand, the United States	Latin America	Argentina, Brasil, Chile, Colombia, Mexico, Peru
Advanced Asia	Hong Kong, Israel, Japan, Singapore, South Korea, Taiwan	East Asia	China, Indonesia, Malaysia, Philippines, Thailand, Vietnam
Western Europe	Finland, France, Germany, Ireland, Italy, the Netherlands, Spain, Sweden, Switzerland, the United Kingdom	MENA	Algeria, Egypt, Iran, Morocco, Saudi Arabia, Turkey
		South Asia	Bangladesh, India, Pakistan
Former East Bloc	Kazakhstan, Poland, Romania, Russia, Ukraine	Sub-Saharan Africa	Bénin, Burkina Faso, Cameroon, Côte-d'Ivoire, Ethiopia, Ghana, Kenya, Nigeria, South Africa, Tanzania

## Appendix 2: Tables

See Tables 1, 2, 3 and 4.

## References

- Alexe, D., Haj, C. M. & Murgescu, B. (2015). Struggling with social polarization. student financial support in Romania in the framework of the bologna process. In A. Curaj, L. Matei, R. Pricopie, J. Salmi, & P. Scott (Eds.), *The European higher education area: Between critical reflections and future policies*. Springer: Dordrecht.
- Curaj, A., Deca, L., & Haj, C. M. (2015). Romanian Higher Education in 2009–2013. The Bologna process and Romanian priorities in the search for an active European and global presence. In A. Curaj, L. Deca, E. Egron-Polak, & J. Salmi (Eds.), *Higher education reforms in Romania: Between the Bologna process and national challenges*. Springer: Dordrecht.
- Proteasa, V., & Miroiu, A. (2015). Are the talents wisely spent? The case of student subsidies in Romanian higher education. In A. Curaj, L. Deca, E. Egron-Polak, & J. Salmi (Eds.), *Higher education reforms in Romania: Between the Bologna process and national challenges*. Springer: Dordrecht.
- World Bank. (2011). *Romania: Functional review*. Higher Education Sector Bucharest.

**Alex Usher** is President of Higher Education Strategy Associates, a sectoral consultancy based in Toronto, Canada which advises governments, institutions, and corporations in the higher education sector on policy and strategy. In addition to being Canada's most-recognized expert on higher education, his policy work spans issues such as access to education, higher education finance and measurement of institutional performance. His works span six continents, and he works frequently for the European Commission, World Bank, and other development agencies in Asia and Africa. Mr. Usher also writes a popular daily commentary on Canadian higher education called *One Thought to Start Your Day*.

**Jonathan Williams** is Vice President and Director of Research at Higher Education Strategy Associates, a sectoral consultancy based in Toronto, Canada. He has conducted higher education policy research with clients or partners in over 25 countries, including on behalf of the OECD and the World Bank. Jonathan is a Knox Fellow and a graduate of the Harvard Kennedy School of Government.

**Open Access** This chapter is licensed under the terms of the Creative Commons Attribution 4.0 International License (<http://creativecommons.org/licenses/by/4.0/>), which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.



# Performance-Based Funding—The Romanian Experience of the Last Five Years (2016–2020)



Mihai Păunescu, Andreea Gheba, and Gabriela Jitaru

**Abstract** Performance-based funding has a long experience of debates and implementation in Romania, distinguishing three main stages of refinement in its implementation, starting with 2002. The actual form is similar starting with 2016, an important share of Romanian higher education funding for teaching activities in public universities (26.5%) being distributed according to quality indicators (applied by field of study). Given that the main objective of this mechanism is to reward performance, as well as to assure a more transparent and predictable resource allocation, the aim of this paper is to identify how this allocation mechanism actually worked over the past five years. The performance-based criteria employed in the supplementary funding component cover four main categories: teaching/learning, scientific research/artistic creation, international orientation, regional orientation & social equity. According to the national funding allocation mechanism, each quality indicator is assigned a share of the total funding, with the final distribution being determined by each institution's performance score relative to the others in the same scientific field. The paper unfolds the evolution of this system's implementation in the five years since its adoption (2016–2020) and presents the main results of a preliminary analysis. We also explore the extent to which certain characteristics of universities, such as their size or their dominant field of study, impact the resulting distribution of funds. This paper results may enrich and contribute to the larger national and international debate on performance-based funding and quality assurance in higher education.

**Keywords** Romanian higher education · Performance-based funding · Quality indicators · Funding mechanism

---

M. Păunescu (✉) · A. Gheba · G. Jitaru

National University of Political Studies and Public Administration & Executive Agency for Higher Education, Research, Development and Innovation Funding, Bucharest, Romania  
e-mail: [mihai.paunescu@politice.ro](mailto:mihai.paunescu@politice.ro)

A. Gheba  
e-mail: [andreea.gheba@uefiscdi.ro](mailto:andreea.gheba@uefiscdi.ro)

G. Jitaru  
e-mail: [gabriela.jitaru@uefiscdi.ro](mailto:gabriela.jitaru@uefiscdi.ro)

© The Author(s) 2022

A. Curaj et al. (eds.), *Higher Education in Romania: Overcoming Challenges and Embracing Opportunities*, [https://doi.org/10.1007/978-3-030-94496-4\\_12](https://doi.org/10.1007/978-3-030-94496-4_12)



# 1 Introduction

Globalisation, the constant transformation of the labour market, the process of masculification of higher education, the rising costs of the educational process, coupled with the limited resources from public funds, as well as the increasing demands for accountability and the need to generate immediate, measurable and quality results, are just some of the elements that shape the national and international context in which higher education institutions (HEIs) are functioning (Herbst 2020, Herbst 2020). The interdependence between the current social, economic and political system and the tertiary education system is acknowledged especially in Western countries. A skilled workforce, as well as an accelerated process of knowledge and innovation, are necessary elements for economic progress that fall within the competence of universities (Jongbloed 2020). The higher education system is considered a public good (Marginson 2014), which in many cases is supported by the allocation of public funds in order to operate optimally and sustainably. The latter is evidenced by the fact that, at least in the case of European countries, “public funding represents between 50 and 90% of the universities’ income structure” (Pruvot, Claeys-Kulik and Estermann 2015, 155).

Given the significant share of the public funds in university funding, one aspect that becomes relevant to explore is how public funds are allocated among universities. The funding systems are quite diverse, being based on the characteristics of each country’s specific political and economic institutional systems but also on the needs identified at a national and international level (Jongbloed 2020).

In order to guide the actions and behaviour of universities to achieve their public objectives, policymakers use various steering methods, with the funding mechanism being one of the most important tools. Thus, in order to stimulate universities to act in a certain direction to achieve common nationally agreed objectives, practices such as regulations or financial restrictions imposed by governments have become the norm (Jongbloed 2008). At the European level, we can discuss about funding systems where the distribution of public financial resources is based either on the distribution of funds using formulas (applying input or output indicators) or by negotiation or contract with the state (Pruvot, Claeys-Kulik and Estermann 2015).

In the case of Romania, the institutional funding mechanism for higher education is a mixed one, mainly based on formulas, with two dimensions covering about 97% of the allocated funds: basic funding (BF), including the fund for doctoral grants, allocated according to the number of students, i.e. doctoral grants, by fields of study at university level (72%) and supplementary funding (SF) which is distributed according to the results obtained by universities on a series of performance indicators (26.5%), weighed with the financial-budgetary dimension of the university in terms of the number of budgeted students the university enrolls. The main role of the SF is linked to boosting performance in several major areas: education, research, internationalisation, community engagement of the university.

The main objective of this paper is to analyse the progress of this scheme implementation in the five years since its adoption (2016–2020) and assess its impact.

We also try to identify some possible challenges and risks and explore the extent to which certain characteristics of universities, such as their size or dominant field of study, have an impact on the distribution of the resulting funds.

The analysis makes use of the preliminary results of an ongoing study of the POCU 126766 project “Quality in higher education: internationalisation and databases for the development of Romanian education”.

## 2 Funding Systems in Higher Education and the Performance-Based Mechanisms

Jongbloed (2008) discusses funding mechanisms that involve the distribution of public funds according to the input recorded or the output achieved by universities (it is also possible to combine the two types of methodologies).

In the case of **input-based** funding schemes, the distributed funds are intended “to cover distinct costs such as staff salaries, material means, building maintenance costs, investment” (Jongbloed 2008, 3). Essentially, through these funds, the states provide universities with the basic resources needed to carry out their activities. In most cases, the amount of funding universities receive depends on the number of students enrolled, as well as their fields of study, and is distributed according to a formula. This type of funding mechanism is recommended because it ensures a transparent and predictable process for universities: you get money according to how many students you enrol. Such an approach also reflects, to some extent, the objectives assumed at the state level regarding the role of the university system, namely to increase the number of graduates (Teixeira et al. 2014, 224).

In terms of **output** funding schemes, universities’ “budgets depend on performance measures, and there is reason to believe that those who receive the budgets will pay more attention to their performance” (Jongbloed 2008, 3). For this type of system, funds are distributed according to a series of “teaching and research outcomes of the institutions’ activities” (Jongbloed 2008, 3). This category of indicators focuses on “progress to or completion of final outputs (e.g. study credits, number of degrees awarded, publications, competitive research funding awarded, citations, patents, amount of competitive/external research funding, student satisfaction)” (Kivisto and Kohtamaki 2016).

This type of mechanism is called performance-based funding, and its adoption indicates that the state has intended a distribution of limited resources to universities based on principles of competitiveness and performance (Orr 2005).

**Performance-based funding** for universities has become popular since the 1980s, especially in Western countries (Orr 2005; Sorlin 2007). The appeal of this mechanism is explained by the fact that it would imply a financial reward only for a certain type of behaviour and results (pre-determined by the funder), and implicitly a more efficient use of budgetary financial resources, because “the weakest institutions in the system are penalised” (Teixeira et al. 2014). However, Orr (2005, 34) points out

that “it is difficult to design funding methods, which accurately reflect the plethora of activities carried out in a university”. Thus, the process of identifying a set of standards/common indicators that provide comparable results across the higher education system is a complex one, based on trade-offs between policymakers and universities. This process includes determining the data set gathered, as well as how to calculate the indicator, which in turn is a challenging and potentially problematic dimension of indicator implementation. An example in this regard can be the criticism of the mechanism with which the JCR ranking of Web of Science indexed journals is carried out, an indicator used to measure the relevance and quality of research activity, including the case of Romania (Vîiu and Păunescu 2021).

As mentioned above, at the European level, there is a great diversity of funding systems and indicators used. An important contribution to this issue is the study carried out as part of the DEFINE project (European University Association) in 2015 on the funding mechanisms implemented by European countries.

The report systematically presents performance indicators as follows:

- *“Teaching: BA/MA degrees obtained; degree completion in the standard time of study*
- *Research: Doctoral degrees/theses completed; research evaluation; successful patent applications; external research funding obtained; scientific activities; research contracts obtained; publications/citations; income from science and technology transfers; publishing researchers*
- *Other: External funding obtained; EU/international funding obtained (can be linked to teaching and research); rankings outcomes”* (Claeys-Kulik and Estermann 2015, p. 26)

While researchers recognise the important role that quality indicators play in the distribution of public funds, they have also identified a number of challenges and risks. One such risk is the ‘Matthew-effect’ which has the potential to create inequalities between universities. Given that output indicators take into account past performance, financial rewards for good performers will have the effect of increasing their performance, leading to a virtuous spiral. On the other hand, universities with lower performance, which receive less funding, will be less likely to develop positively in the future (given their limited resources), and they enter a spiral of mediocrity which leads to underfunding. This is more evident in the case of research indicators (Claeys-Kulik and Estermann 2015).

In addition to this ‘Matthew-effect’, another aspect to consider is that the way universities react and change their institutional behaviour and strategies may be influenced by variables such as ‘their reputation, their size, their disciplinary profile, their location or their mission orientation’ (Teixeira et al. 2014, 218), all of which are more difficult for universities to control in certain institutional contexts.

## ***2.1 Funding System and Performance-Indicators in Romanias' Higher Education***

The transformations of the funding system are relevant to understanding the evolving objectives concerning the role of the higher education system but also relevant to learning how universities respond to the various incentives applied to achieve the established objectives. In the case of Romania, over the last three decades, the funding system has undergone important changes, the funding mechanism (the distribution of budget allocations to universities) representing the main strategic instrument for the operationalisation and implementation of the objectives assumed at a system level, especially in the last 20 years.

Following an initial period of expansion and structural reform of higher education after 1990, in which the funding system was essentially a result of the pre-'89 funding system based on the level of personnel costs and administrative and teaching space, the beginning of the millennium was marked by the shift to global funding, which was a way to achieve a better performance in education and research through a better management of financial resources (CNFIS, 2007).

In addition, the introduction of per-student funding, starting with 1999, represented a major change for the distributing budget allocations<sup>1</sup> to universities for their core activity. It was followed, since 2002, by the introduction of a differentiated funding, based on quality indicators, distributed at institutional level, with successive refinements (both in terms of indicators' definition, but also in terms of the share they had in the total core funding, until 2012<sup>2</sup>).

Since 2012, a new component has been introduced distinctly to provide additional funding to stimulate the excellence of institutions and study programmes (based on quality criteria and standards applied at study programme level<sup>3</sup>), which was essentially a more complex mechanism corresponding to the institutional quality component applied in the previous period. Even if the basic principles of the budget allocations distribution for this supplementary funding component (SF) have been maintained since then, there have nevertheless been two distinct periods of implementation: the 2012–2015 timeframe, in which the results of the ranking of study programmes were applied separately, by study cycle, and the 2016–present period, in which a specific, complex set of quality indicators was adopted and applied mainly at the level of the branch of science. The second period, between 2016 and 2020, is the subject of a detailed analysis,<sup>4</sup> with some of its main preliminary results being presented in this article.

---

<sup>1</sup>Previously, financing was done on the basis of needs, by budget chapter, input-based budgeting (or line budgeting).

<sup>2</sup>Teca (2011) presents in detail the mathematical model applied for the period 2003–2011.

<sup>3</sup>According to art.223, paragraph 3 of Law no. 1/2011.

<sup>4</sup>The detailed analysis is being carried out as part of a more comprehensive study on the impact of the supplementary funding implementation in the period 2016–2020, conducted in the framework of as part of the project “Quality in higher education: internationalization and databases for the development of Romanian education (POCU INTL)”, coordinated by UEFISCDI and MED.

Studies and analyses of the Romanian funding system, based on quality indicators, have not been few, especially in the last ten years. Particularly noteworthy are the studies and analyses that conducted an assessment of the funding policies operational at that time (and/or compared to the one that had been implemented previously), emphasising the ongoing challenges caused by the chronic underfunding of Romanian higher education system, the need for predictability in funding policies, and the need to improve and strengthen institutional mechanisms focused on quality assurance in the education and research process (CNFIS 2015, CNFIS 2016, 2017, CNFIS 2015, CNFIS 2019) (Miroiu and Vlasceanu 2012), (Miroiu et al. 2015) (Vişu et al. 2016).

For the period 2003–2011, an important overview and general analysis of the results of the influences determined by the quality indicators application can be found in Vişu (2015). The researcher mentions that the impact of this funding model is rather weak (at a global, summative level, for all nine years) and can be influenced both by the homogeneity of higher education institutions in Romania, as well as by a possible mutual cancellation of the influences determined by certain indicators (G. A. Vişu 2015).

The significant changes that have taken place in the implementation of the performance-based funding model, through the supplementary funding subcomponent (SF), as well as the annual adjustments and refinements, are detailed in the annual public reports on the State of Higher Education and the Optimisation Measures Needed, produced by the National Council for Higher Education Funding (CNFIS).<sup>5</sup>

Proposals to adapt, improve and add to the system of quality indicators are periodically formulated both within CNFIS and by the academic community while the Ministry of Education annually debates the funding allocation mechanism. During the period under review, supplementary funding was allocated on the basis of 15 quality indicators grouped into four classes,<sup>6</sup> described briefly below:

**Class 1. Teaching/Learning**—The indicators in this class aim to measure the dynamics of the educational process carried out in universities, the potential for development, as well as the preparedness of the human resources involved in the educational process. The following indicators were selected as being representative: the ratio of the students' number to the teaching staff number (IC1. 1), the ratio of the master's degree students to undergraduate students (IC1.2), the ratio of the teaching staff under 40 to the teaching staff (IC1.3), and the ratio of the Ph.D. supervisors to the teaching staff (IC1.4);

**Class 2. Scientific Research/Artistic Creation/Performance in sports**—The indicators have as their main objective the systematic and multidimensional assessment

---

<sup>5</sup>ME advisory council, which has the role of annually proposing the Methodology for allocating budgetary funds for state universities. All reports published annually by CNFIS are available at the following link: (<http://www.cnfis.ro/rapoarte-cnfis/>).

<sup>6</sup>OMENCS nr. 3530/29.03.2016, OMENCS nr. 3279/20.02.2017, OM 3047/15.01.2018, OM 3128/05.02.2019, OM 3116/27.01.2020, OM 3321/24.02.2021.

of the university performance in terms of scientific output and its impact on the quality of the teaching process, through the following indicators: IC2.1. *The quality of human resources in universities*, assessed in an overall sense through the CNATDCU<sup>7</sup> score of each faculty member; IC2.2. *The impact of scientific activity/artistic creation*, assessed through a scientometric index - the Hirsch index of the faculty members; IC2.3, the performance of scientific activity/artistic creation, which is selectively quantified by counting only the papers defined as most important and relevant in terms of international visibility; IC2.4, the funding for scientific research/artistic creation, which is an indicator aimed at measuring institutional success in attracting financial support for specific scientific research activities;

**Class 3. Internationalisation Performance**—Quality indicators associated with class C3. **Internationalisation Performance** are a direct measure of the universities' capacity to support student mobility, as well as to sustain study programmes in international languages. Thus, indicator IC3.1 measures the share of student mobility, while indicator IC3.2 reflects the share of international students enrolled at universities;

**Class 4. Regional focus & social equity**—The quality indicators associated with class C4 focus on measuring activities such as integration of people from disadvantaged backgrounds (IC41), the university's contribution to the scholarship fund (IC42); internship activity for undergraduate studies (IC43); capacity for provision of student accommodation (IC44); grant funds attracted by universities (IC44)". (CNFIS 2017)

The formula operates by generating independent rankings of universities on each of the quality indicators, mostly by fields of study,<sup>8</sup> which are determined by the universities' scores on these indicators. In fact, there are nine indicators operating at the field of study level (for each of the 40 fields of study<sup>9</sup>), as well as six indicators at the institutional level. One of the stated aims of the funding allocation mechanism was to make comparisons between similar university domains, and therefore, the option was made to consider the indicators at the level of field of study, where possible, an innovative approach compared to the overall institutional quality indicators that were used before 2011. From a methodological point of view, based on data reported by universities and checked by Executive Unit for Financing Higher Education, Research, Development and Innovation (UEFISCDI), a set of independent university rankings is generated for each indicator in each field of study, plus institutional rankings for each institutional indicator. It is important to note that the intention has not been to generate rankings, but only partial operational hierarchies for each indicator within each study field for the purpose of budget allocation. Thus, being

---

<sup>7</sup>CNATDCU—National Council for Attestation of University Degrees, Diplomas and Certificates.

<sup>8</sup>Most of the indicators operate at the field of study level, while some indicators do operate at the university level.

<sup>9</sup>OMENCS nr. 3530/29.03.2016, OMENCS nr. 3279/20.02.2017, OM 3047/15.01.2018, OM 3128/05.02.2019, OM 3116/27.01.2020, OM 3321/24.02.2021.

contingent on a single indicator and a single field, the rankings have no significance beyond the purpose of allocating the funds corresponding to the share of the respective indicator in supplementary funding subcomponent.

Thus, the logic of this subcomponent is to differentiate the core funding based on the universities' performance in terms of the indicators previously agreed on.

Globally, at the level of higher education budget, SF represents 26.5% of the institutional funding.<sup>10</sup> However, this funding is also distributed, the same as the basic funding (BF), per student, and it is thus not only a function of the university performance but also of its size in terms of the number of students. The formula also considers the different costs of study programmes per fields of study, so it employs the concept of unitary equivalent student to weigh the different study programmes and university degree level. A student in social sciences at bachelor level is equal to a unitary equivalent student, whereas a student at master level in social sciences equals two unitary equivalent students or a student at bachelor level in engineering equals 1.75 unitary equivalent students and so on. Thus, a neutral allocation would distribute the 26.5% equally to all institutions merely on the basis of the number of students in various programmes (weighted as unitary equivalent students). From this 26.5% allocation, a lower percentage is equivalent to a gradual loss up to a theoretical 0 if it is last ranked. Going above the 26.5% threshold means gradually gaining up to approximately double the basic funding equivalent, which reflects the university's top position of the indicators by which it is ranked. The hypothetical range is between 0 and 53% (due to the formula that takes into account the number of students, the extremes are practically excluded).

However, the allocations are cumulative, being grouped into four categories of indicators, each with a different share, as it follows in Table 1.

According to the funding allocation mechanism, supplementary funding is a zero-sum game: for each indicator, for each field of study, the gains of the universities are reflected in the losses of the others. Thus, the allocations of supplementary funding are determined by the relative quality of a university based on an indicator, on a field

**Table 1** Share of indicator categories from the institutional funding

Indicator categories (Classes)	2016–2019 (%)	2020 (%)
Class 1. Teaching/Learning (C1)	7.95	5.83
Class 2. Scientific Research/Artistic Creation/Performance in sport(C2)	10.60	12.19
Class 3. <b>Internationalisation performance</b> (C3)	2.65	3.18
Class 4. Regional orientation & social equity (C4)	5.30	

<sup>10</sup>Without a doctoral grant and the other subcomponents funds distributed based on projects (institutional development fund) or minister decision (fund for special situations, not covered by formula).

of study, compared to the other universities in the same field of study and also taking into account their relative size in terms of the number of state-funded students.<sup>11</sup>

### 3 Research Design

In this article, we will present the allocation of financial resources for supplementary funding, received by each university, as a share of institutional funding (IF), both by indicator classes and university categories. As we are referring to percentages of financial allocation (and not amounts) for each indicator class, the data presented are comparable between universities and not affected by their size.

Indicators are calculated by CNFIS in order to distribute financial allocations for additional funding. The results are obtained from the data reported annually or bi-annually by the state universities, according to the funding allocation mechanism for state universities in use.

Although allocations are made by fields of study, with each being allocated an amount proportional to the number of state-funded students enrolled, we believe that, for a better global understanding of the dynamics of budget allocations,<sup>12</sup> it is appropriate to present aggregate data per category of universities and class of indicators. The method is particularly useful to compare the rankings of universities with the same general profile and to observe whether there are notable differences between university categories. The classification is based on the university's main fields of study (even if most universities also have educational programs in other fields of study/domains). For example, we have considered a university as 'comprehensive', taking into account the diversity of study programmes offered by the university, or as 'specialised' such as medical or technical, based on its dominant field of study. Thus, in presenting the data, a classification of 47 Romanian state universities financed by the Ministry of Education<sup>13</sup> under six main categories was used: agronomic-veterinary, medical, technical, comprehensive, social & economic sciences and arts. It is important to mention that these categories are used only to allow an easier presentation and understanding of the data, but they did not play any role in the funding allocation process, which only followed relevant data at a field of study and institutional level. At the same time, in the analysis, we also took into account the size of universities according to the total number of students enrolled at Bachelor, Master and Ph.D. level. Therefore, we have decided to split the 47 universities into three categories,<sup>14</sup> considering the concentration of students as follows: large (with

---

<sup>11</sup>“According to the Education Law, higher university education is free for the enrolment number approved annually by the Government or is paid for by the students, in conditions set by the law.” (UEFISCDI 2014, 41).

<sup>12</sup>And also for a simplifying visualisation of the data.

<sup>13</sup>Military universities are excluded from the analysis.

<sup>14</sup>The number of universities in each of the categories is specified in the annex.



more than 19,000 students), medium (between 7,000 and 19,000 students) and small universities (with less than 7,000 students).

### 3.1 Analysis

In order to highlight the dynamics of the financial allocations across the four indicator classes, in the table below, we present some descriptive data and the central trend, i.e. minimum, maximum, median and standard deviation percentages for each indicator class over the five years of implementation (presented in Tables 2 and 3). Also, the column “Formula” in Table 2 shows the theoretical minima, maxima, and median that can be achieved through the overall performance-based formula application, when compared with the core funding formula results, based on students number. Obviously, the Romanian higher education institutions are quite diverse as regards their size in terms of number of enrolled students. The size of the competing universities within a field of study (or at the institutional level for some indicators) affects the granularity or the increments of percentage variation from one university to another for each class of indicators, as well as for the overall allocation; thus, the variation in percentages is not uniform, nor similar from one ranking to another, the increment varying according to the size of the universities compared, more precisely the number of their students. However, the median calculation relates to the value that includes 50% of the universities in one field of study, regardless of their size. Thus, a lower median than the theoretical one (which is the neutral level of the respective indicator weighed within the total supplementary funding of 26.5%) reveals that, in general, large universities (relative to the number of students) have higher indicator values than small universities. This is particularly noticeable in the case of Class 2, the research performance indicators, where the median is considerably lower than the theoretical median for each year. For Classes 1 and 3, the actual medians are similar to the theoretical ones indicating a size-independent distribution, while Class 4 also shows slightly lower annual medians than the theoretical one.

At the same time, the standard deviation calculated overall, between or within universities (across the five-year period), indicates that universities tend to have stable results over time (the standard deviation being lower within universities), but there are higher standard deviation scores between universities, which may indicate that these indicators (regardless of class) tend to differentiate more between universities rather than within universities<sup>15</sup> across time, as shown in Table 3. Looking at the level of indicator classes, it can be seen that the differentiation between universities is more significant at classes 2–4 than at class 1, as can also be concluded from Table 2.

---

<sup>15</sup>When we mention ‘within’ universities’ variation, we refer to the variation of the global supplementary funding allocations for a university across time and not to the variation between fields of study within the university. The latter does not constitute the objective of the current paper that only looks at the global performance of the universities across the established time period.

**Table 2** The descriptive data and central trend for each class of indicators

		Formula	2016 (%)	2017 (%)	2018 (%)	2019 (%)	2020 (%)
SF Total	Min.	0	12.7	12.2	11.0	14.0	14.9
	Max.	53.0	38.4	38.1	38.7	39.1	38.8
	Median	26.5	24.4	25.5	24.6	24.7	24.7
Class 1	Min.	0	2.2	1.8	1.6	1.7	2.5
	Max.	15.9*/11.7**	11.3	11.8	11.4	11.7	8.4
	Median	7.95*/5.83**	8.0	7.9	8.0	7.8	5.7
Class 2	Min.	0	3.4	3.5	2.8	4.2	3.7
	Max.	21.2*/24.4**	17.9	17.5	17.1	16.9	19.7
	Median	10.6*/12.2**	9.4	9.6	9.9	9.5	10.8
Class 3	Min.	0	0.4	0.5	0.5	0.5	0.6
	Max.	5.3*/6.4**	4.9	5.0	4.8	4.8	5.8
	Median	2.65*/3.2**	2.5	2.7	2.7	2.7	3.2
Class 4	Min.	0	2.0	1.6	1.0	0.9	1.3
	Max.	10.6	8.5	8.6	8.8	9.1	8.5
	Median	5.3	4.6	4.5	4.6	4.8	4.9

Notes: \*2016–2019; \*\*2020

**Table 3** Standard deviation for each class of indicators (2016–2020)

Std. dev. (2016–2020)	Total	Class 1	Class C2	Class C3	Class C4
overall	5.41	1.97	3.58	1.17	1.56
between	5.26	1.73	3.33	1.11	1.48
within	1.43	0.96	1.38	0.40	0.51

In addition, to identify an annual dynamic of the financial allocations received by universities, we used a dichotomous variable for each year, with the following values: value 1, if the university obtained more than 26.5% for SF in FI, and value 0 if they received less than 26.5%. The tables below show (per total and separately, by the two main categories of universities: according to the main field of study or domain, and size of the university) what is the share of universities that from year “T” (regardless of year) to year “T+1” (next year) are likely to win (1) or lose (0). Therefore, per total, approx. 91% of universities that lost in the year “T” tend to lose in the following year, and only approx. 8% of universities that lost in the year “T” tend to gain more than 26.5% in the next year. Regarding the categories of universities (by the main field of study), the lowest dynamics are observed among Comprehensive and Technical universities, while the highest dynamics (a higher share of universities tending to gain in the next year) are observed among Agronomic-veterinary and Humanities and Social Science universities. Taking into account the other category, based on the size of the university, we observe a low dynamic of annual gains among medium and small universities and a relatively higher dynamics among the large universities.

Also, the large universities are in the winning positions for approx. 75% of the occasions, while the medium and small universities only 37% and respectively 32% of the occasions are net winners (Table 4).

By analysing the results at the level of universities and types of universities, the graphs below show the results-based allocations of financial resources to quality indicators as a share of institutional funding (IF) for all 47 state universities in Romania for a period of five years, starting with 2016 (which was the first year of implementation of these indicators). Universities are divided a) into six categories based on their main fields of study and b) in three categories considering their student population, as mentioned above.<sup>16</sup> The data are presented at the overall level of application of the SF (Figs. 1 and 2), as well as at the level of indicator classes (Figs. 3, 4, 5, 6, 7, 8, 9 and 10). At the same time, by discussing financial allocation percentages, it is easier to see the “gains/losses” achieved by universities and their evolution over the period analysed.

**Table 4** The dynamics of gains/losses in the share of SF in IF

Total	0	1					
0	91.23	8.77					
1	13.51	86.49					
Total	60.64	39.36					
Domain category	←	0	1	0	1	→	Domain category
Agronomic-veterinary	0	71.43	28.57	84.62	15.38	0	Medicine
	1	33.33	66.67	9.09	90.91	1	
	Total	50.00	50.00	50.00	50.00	Total	
Arts, Sports	0	90.00	10.00	57.14	42.86	0	Humanities and Social Science
	1	12.50	87.50	11.76	88.24	1	
	Total	55.56	44.44	25.00	75.00	Total	
Comprehensive	0	98.28	1.72	100.00	0.00	0	Technic
	1	16.67	83.33	6.67	93.33	1	
	Total	90.63	9.38	41.67	58.33	Total	
Size category							
Total	Large univ.		Medium univ.		Small univ.		
	0	1	0	1	0	1	
0	75.00	25.00	92.86	7.14	91.18	8.82	30164
1	15.00	85.00	4.55	95.45	18.75	81.25	
Total	25.00	75.00	62.50	37.50	68.00	32.00	

<sup>16</sup>According to the number of students reported by universities for 2019/2020 academic year.

According to Fig. 1, which shows the overall allocations of the SF (cumulated across all four classes of indicators), one can observe a relatively weak dynamic in terms of the annual results obtained by universities, and higher variations from year to year are found in the case of a small number of universities, most of which obtain similar annual values (they do not change their earnings significantly as a share of the IF).

An important point to note is that there are 11 institutions (from all university categories, the majority of them being located in the major Romanian university centres such as Iasi, Bucharest or Cluj-Napoca) that maintain a competitive advantage each year, managing to obtain allocations higher than 26.5% of the IF (over the five-year period). From this group of universities, technical, socio-humanities or architecture/art/sports universities stand out, which implicitly also indicates high results on performance indicators, at least in relation to other universities enrolling students in the same fields of science. At the same time, of the universities that fail to exceed the 26.5% threshold in all of the five years, we find a significant number of higher education institutions, most of which are in the comprehensive category. A noteworthy observation concerning these universities is that they do not manage to approach the 26.5% threshold, in practice obtaining lower financial allocations than they would have obtained in a performance neutral “per capita” only mechanism of allocation.

It can also be noted that variations are higher at smaller universities, while larger universities tend to have more stable “winning” allocations (Fig. 2).

As a general conclusion, we can state that more specialised universities, with fewer fields of study tend to be more competitive than comprehensive universities.

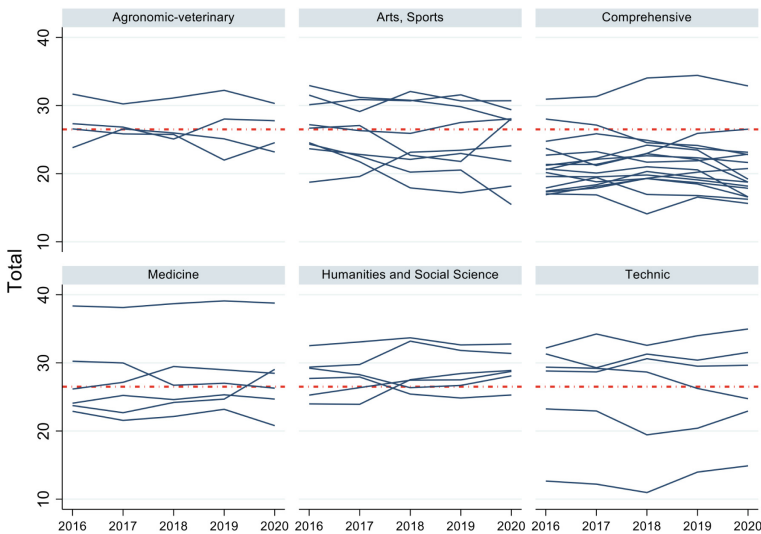
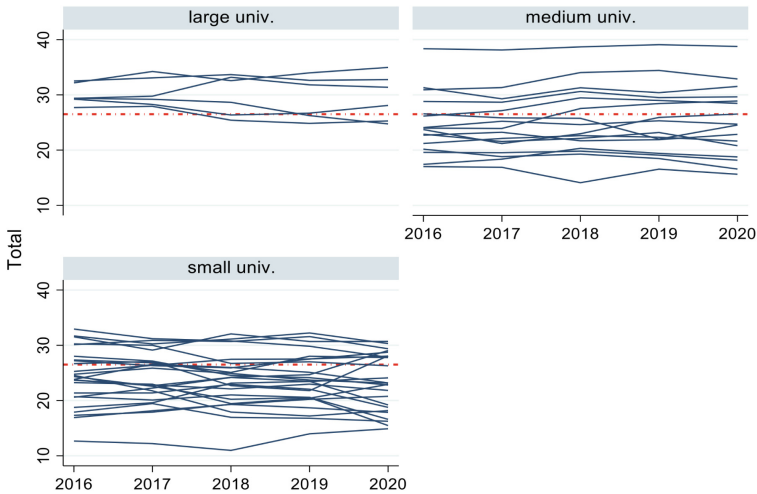


Fig. 1 % of SF from institutional funding, by category of universities (2016–2020)



**Fig. 2** % of SF from institutional funding, by university size (2016–2020)

The latter compete in more study fields, but with lower overall results. Also, the size of universities (especially if we refer to large universities compared to the rest) tends to be an important characteristic that can indicate their winning/losing position (as can be seen in Fig. 2).

As regards the distribution of funds on the basis of Class 1—Teaching/Learning indicators (shown in Fig. 3), we note that there are no significant changes at the university level in terms of the percentages obtained from IF across the five years. Actually, in this class more than any, the rankings of universities do not register any important variation from one year to another. This is explainable as this class includes, more than any other, indicators that refer to the institutional capacity, such as staffing indicators, as well as other human resources or students indicators (share of teaching staff under 40 years of age or of Ph.D. coordinators). These indicators have greater stability and do not significantly change from one year to another, so as to be reflected in the quality indicators<sup>17</sup> and thus alter the rankings. Among the universities that manage to obtain annual allocations higher than the weight of this class (16 in total), institutions in the arts category stand out (more than half of them—5—are constant in terms of their share in this class of indicators<sup>18</sup>). In the case of Class 1, the size of universities (Fig. 4) does not seem to be relevant in explaining the dynamics of the results obtained by universities.

<sup>17</sup>With the exception of 2020 when the weight of indicators in this class decreased compared to previous years, which is why the graph shows, with one exception, decreases at all universities in 2020 compared to previous values.

<sup>18</sup>This is also due to the fact that, also by various regulations, student/teacher ratios are considerably smaller for this field of study.

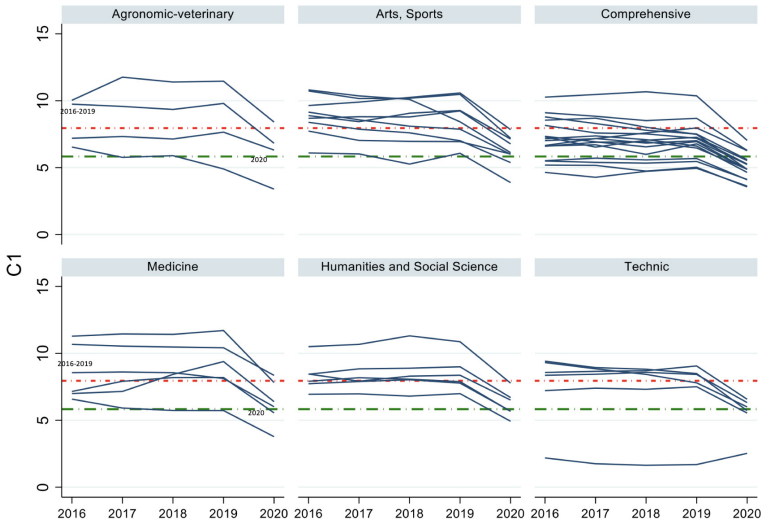


Fig. 3 % of C1—SF from institutional funding, by categories of universities (2016–2020)

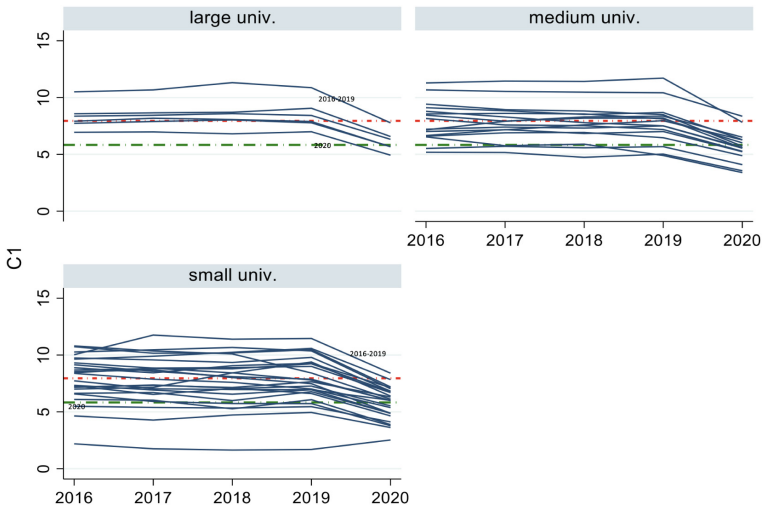
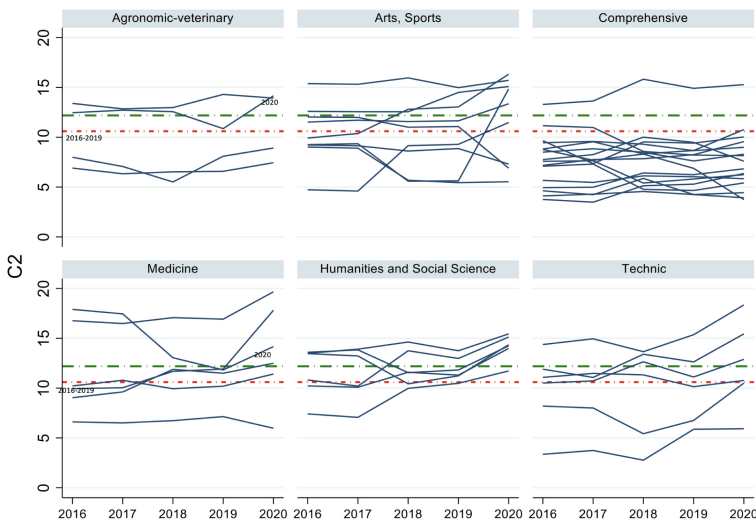


Fig. 4 % of C1—SF from institutional funding, by university size (2016–2020)

The financial allocations to **Class 2** Scientific Research/Artistic Creation/ Performance in sports (shown in Fig. 5) seem to indicate the most marked differences,<sup>19</sup> both between and within universities, over the period analysed. Compared to the results obtained by universities in Class 1, these indicators show a smaller number of universities (11) that manage to maintain their competitive advantage over the five years. More specialised higher education institutions perform significantly better in attracting funding for indicators measuring the scholarly activity of university teaching staff compared with comprehensive universities. Thus, for this important set of indicators, comprehensive universities appear to be less competitive than more specialised universities (whether agricultural, technical, medical, socio-humanities or arts). Also, large universities tend to benefit more from this class of indicators, as they obtain values above the neutral allocation almost every year (as can be seen in Fig. 6).



**Fig. 5** % of C2—SF from institutional funding, by categories of universities (2016–2020)

<sup>19</sup>It should also be noted that the weights of the indicators in this class increased in 2020 compared to previous years, which is why the graph shows increases at most universities in 2020 compared to previous values.

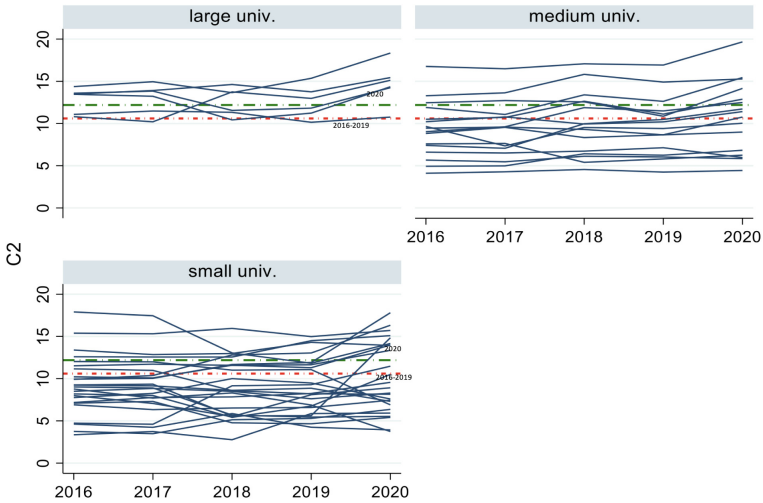


Fig. 6 % of C2—SF from institutional funding, by university size (2016–2020)

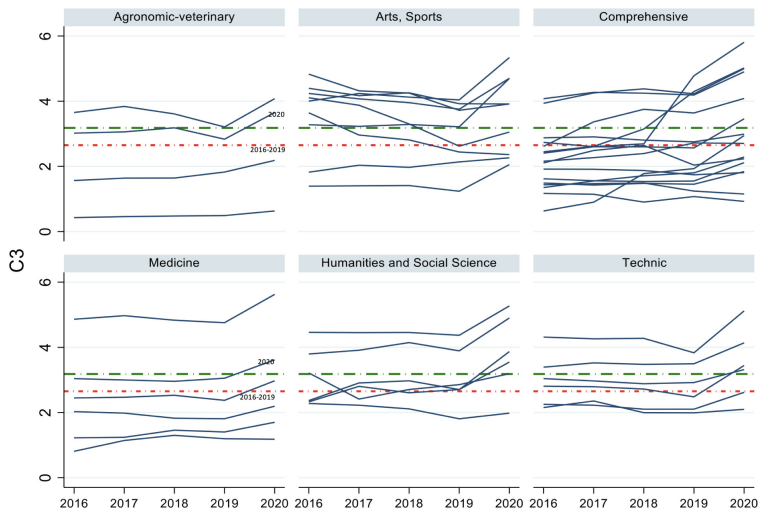
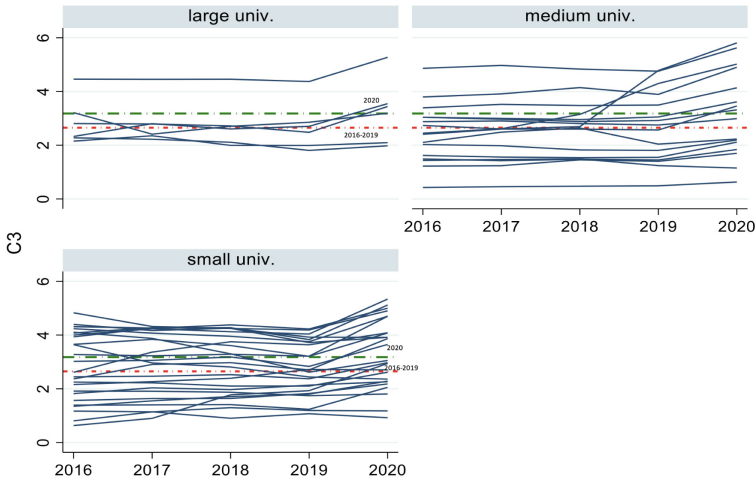


Fig. 7 % of C3—SF from institutional funding, by categories of universities (2016–2020)

The set of indicators measuring the degree of internationalisation of universities (**Class 3—International Performance, Fig. 7**) have a positive impact on a larger number of universities, including comprehensive or art universities (although there are important differences between universities within this class). At the level of universities grouped by their size, there are no significant developments in this class of indicators during the reference period, the results being rather stable. (as shown in Fig. 8).





**Fig. 8** % of C3—SF from institutional funding, by university size (2016–2020)

Universities largely benefiting from indicators focused on measuring regional orientation and community engagement (Class 4, Fig. 9) are those with technical and agronomic-veterinary profiles. This class of indicators has minor budget allocation effects for comprehensive universities, as well as architecture, arts and sports universities. In the case of the latter, in addition to the fact that they did not perform good/well enough to attract additional financial resources (with very few exceptions) during the period under review, significant annual variations were also observed. Also, taking into account the size of universities (Fig. 10), there are no significant changes at the university level during the reference period, and small universities tend to lose quite a lot from the available allocations almost every year.

## 4 Discussion and Conclusion

There is clearly a differentiation between the universities' budget allocations, in terms of percentages related to each class of indicators (IF), as well as overall. This result suggests that the implementation of performance indicators leads to a differentiation between higher education institutions according to their relative performance, even if, in some cases, this is based on minor differences in the quality indicators. This is also a consequence of the formula that actually conceals the real differences in quality indicators by using a simple hierarchical ordering of the universities for each respective indicator. The allocations are then a function where the number of enrolled students in the competing universities is also an important variable.

The longitudinal distribution of percentages for the quality indicators also shows important stability of results over time (as in the case of Class 1), most of them

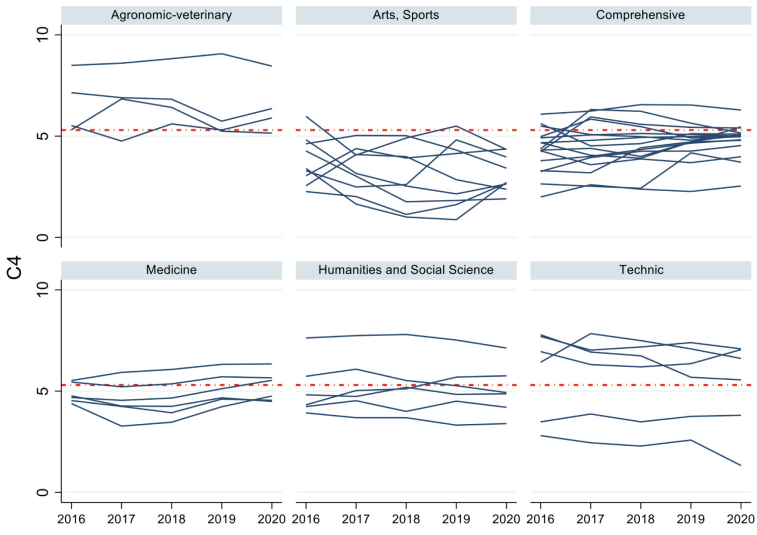


Fig. 9 % of C4—SF from institutional funding, by categories of universities (2016–2020)

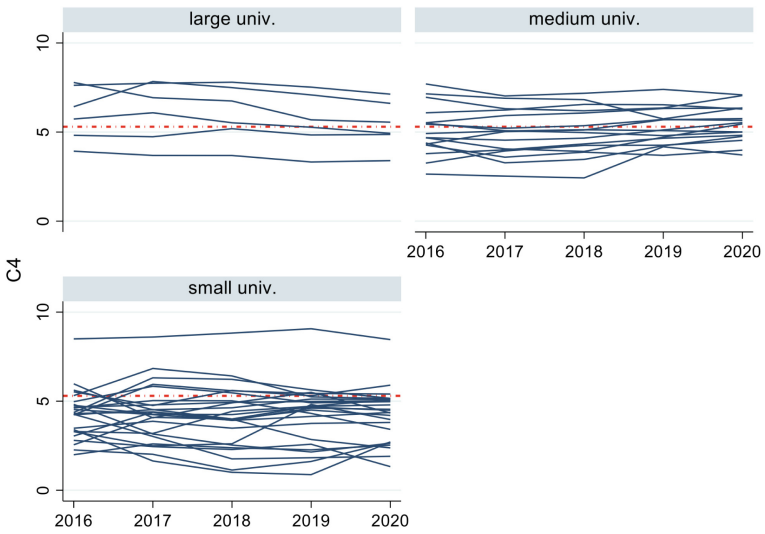


Fig. 10 % of C4—SF from institutional funding, by university size (2016–2020)

being dependent on more structural aspects, such as the number of teachers or the volume of facilities, which are related to institutional capacity and are not only more difficult to change, but some are not fully within the universities' decision (as the state investments for instance). Also, due to regulations, especially those related to quality assurance (that do impose specific standards related to student/teacher ratio, for instance), the differences between universities, especially within the same field of study, could not be very large and are rather stable.

Indicator Class 2. Scientific Research/Artistic Creation/Scientific Performance seems to discriminate stronger between universities in terms of their research performance. Not only is it the most competitive indicator class, but it also has the highest weight among performance indicators and is therefore responsible to a greater extent for the differences in financial allocations between universities. For this class of indicators, the variance of the allocation percentages between universities is greatest.

Furthermore, particularly within the Class 2 of indicators, the median is below the theoretical value, which indicates that larger universities tend to be more competitive.<sup>20</sup> Although, in general, the size of the university (in the sense of the number of students enrolled in a field of study) does not seem to have an impact on financial allocations in indicator classes 1 and 3, the size of the university appears to be an important factor in indicator class 2 and partly in indicator class 4. Taking into account that research indicators (class 2) discriminate the strongest, we can say that, eventually, university size has impact on the overall financial allocations.

In addition to aspects related to the size of the university, the profile of the university can also prove to be relevant, strongly highlighting certain categories of universities in a positive sense (the example of class 4 for technical and agronomic-veterinary universities) or in a negative sense, if we analyse the situation of comprehensive universities, which seem to be the most disadvantaged by the implementation of these indicators. Comprehensive universities systematically have poorer relative results for all classes of indicators than more specialised ones (one of the possible explanations for this could be the 'Matthew-effect', universities that consistently underperform are less likely to break out of this circle in the future). Also, relatively younger universities compared to more established ones have a disadvantage when it comes to endowments and capacity in general, and this is also reflected in the indicators from Classes 1 and 4. In general, comprehensive universities are relatively newer compared, for example, to technical or medical schools. However, it should be considered that these are aggregated results for all fields of study, making it more difficult for a comprehensive university to be equally competitive across all fields of study compared to more specialised universities.

Nevertheless, a detailed longitudinal analysis of fields of science level and quality indicators is needed in order to highlight the competitive advantages of universities in certain fields and on certain indicators, but also whether there are particular trends

---

<sup>20</sup>A lower actual median than the theoretical median means that more students are enrolled in as many universities above the median than in as many universities below the median, indicating that universities with a higher number of students (by those fields of study, not in absolute numbers) are generally ranked higher than those with a lower number of students.

at university level, both in terms of fields of science (thematic specialisation) and indicators (specialisation in terms of types of services offered). At the same time, such a detailed analysis would indicate the extent to which there might be mutually cancelling influences driven by certain indicators (as observed by Viu (2015) for the 2003–2011 allocation period), with the university “gaining” on certain indicators in a specific class, but at the same time “losing” on the total class.

Also, it should be taken into account that the implementation period is relatively short, as universities need more time and stability to “react” to these incentives. Due to how indicators are calculated and to their changing weights over time, a longitudinal analysis proves difficult. Also, the incentives that universities had also changed, which makes it difficult to analyse trends at a system level. There is certainly a need for more stability in the application of indicators and for a more detailed impact analysis to reveal more subtle trends in the response of the higher education system to this type of funding policy. Our analysis reveals, based on the available data, that the degree of university specialisation (comprehensive or more specialised) and the relative size of universities within a field of study have an impact on performance-based funding allocations.

At the same time, one of the recent studies regarding the effect of performance-based funding in two states of United States, Ohio and Tennessee, mentions that even if “there is clear financial incentive to improve outcomes in response to these policies, it is worth considering theoretical reasons why outcomes may not improve” (Ward and Ost 2021). And their arguments are related to the effect of the principal–agent model that motivates the performance-based funding (when the state and university have very different objectives, these incentives should alter university behaviour, and when the universities share the same objectives as the state, then theoretically the incentives will not have their intended effects) or to the university capacity to (re)allocate resources for improving their outcomes.

The policies pursued by the performance-based funding must be seen in a broader context and cannot be isolated from other measures applied at a national level (e.g. some of the measures to increase equity and access to university education are part of the National Strategy for Tertiary Education and are tracked not only through the PBF model, but also through FDI or other national strategic programmes). Future research will also consider qualitative analysis in the form of institutional feedback. The perception and institutional responses to performance-based funding model are important and may not be obvious where the university follows the implementation

of national strategic measures anyway, without additional financial incentives or with some internal constraints.

## Annex

Categories of universities	N	Universities size	N
Agronomic-veterinary	4	Large	6
Arts, Sports	9	Medium	17
Comprehensive	16	Small	24
Medicine	6		
Humanities and Social Science	6		
Technic	6		
<b>Total</b>	47		

Note: N is the number of universities

## References

- Claeys-Kulik, A.-L., & Estermann, T. (2015). *DEFINE thematic report: Performance-based funding of universities in Europe*. Brussels: European University Association.
- CNFIS. (2008). *Analiza evoluției indicatorului de calitate IC6 privind “nivelul performanțelor în cercetarea științifică din universități” și*. Bucuresti: CNFIS-UEFISCDI. Retrieved from [http://vechi.cnfis.ro/index\\_d.html](http://vechi.cnfis.ro/index_d.html).
- CNFIS. (2016). *Raport public anual—2015. Starea finanțării învățământului superior și măsurile de optimizare ce se impun*. Bucuresti: CNFIS-UEFISCDI.
- CNFIS. (2017). *Raport public anual—2016. Starea finanțării învățământului superior și măsurile de optimizare ce se impun*. Bucuresti: CNFIS-UEFISCDI.
- CNFIS. (2019). *Raport public 2017 și 2018. Starea finanțării învățământului superior*. Bucuresti: CNFIS-UEFISCDI.
- CNFIS. (2020). *Raport public 2019. Starea finanțării învățământului superior*. Bucuresti: CNFIS-UEFISCDI.
- Herbst, M. (2020). Performance-based funding, higher education in Europe. In P. N. Teixeira, & J. C. Shin, *The international encyclopedia of higher education systems and institutions* (pp. 2227–2231). Springer.
- Jongbloed, B. (2008). Performance-oriented budgeting in Europe: Trends. *Effects and Consequences. Zeitschrift für Hochschulentwicklung*, 3(1), 1–18.
- Jongbloed, B. (2020). Public funding of higher education, Europe. In P. N. Teixeira, & J. C. Shin, *The international encyclopedia of higher education systems and institutions* (pp. 2354–2364). Springer.
- Kivisto, J., & Kohtamaki, V. (2016). Does performance-based funding work? Reviewing the impacts of performance-based funding on higher education institutions. In R. M. Pritchard, A. Pausits, & J. Williams, *Positioning higher education institutions: From here to there* (pp. 215–226). Sense Publishers.

- Marginson, S. (2014). Higher education and public good: A global study. In G. Goastellec, & F. Picard, *Higher education in societies: Higher education research in the 21st century series* (pp. 51–71). Rotterdam: SensePublishers.
- Miroiu, A., & Vlasceanu, L. (2012). Relating quality and funding: The Romanian case. In A. E. Curaj, *European higher education at the crossroads: Between the Bologna process and national reforms* (vol. 2). Dordrech: Springer.
- Miroiu, A., Păunescu, M., & Viiu, G.-A. (2015). Ranking Romanian academic departments in three fields of study using the g-index. *Quality in Higher Education*, 21(2), 189–212.
- Orr, D. (2005). Can performance-based funding and quality assurance solve the state versus market conundrum? *Higher Education Policy*, 18, 31–50.
- Pruvot, E. B., Claeys-Kulik, A. -L. C., & Estermann, T. (2015). Strategies for efficient funding of universities in Europe. In A. Curaj, L. Matei, R. Pricopie, J. Salmi, & P. Scott, *The European higher education area: Between critical reflections and future policies* (pp. 153–168). Springer.
- Sorlin, S. (2007). Funding diversity: Performance-based funding regimes as drivers of differentiation in higher education systems. *Higher Education Policy*, 20, 413–440.
- Teca, M. (2011). Reprezentări numerice constructive pentru relațiile de preferință incomplete și intrazitive: Aplicații în finanțarea învățământului superior. *Studii și Cercetări de Calcul Economic și Cibernetică Economică*, 45(1/2), 139–152.
- Teixeira, P., Biscaia, R., & Rocha, V. (2014). Competition and performance in European higher education: The role of founding instruments. *Páginas de Educación*, 7(2), 217–233.
- UEFISCDI. (2014). Equity in the Romanian higher education system. <https://uefiscdi.gov.ro/resource-824566-6-equity-in-the-romanian-higher-education-system-en.pdf>.
- Viiu, G.-A. (2015). Quality-related funding in Romanian higher education throughout 2003–2011: A global assessment. *The Romanian Journal of Society and Politics*.
- Viuu, G. -A., & Miroiu, A. (2015). Evaluarea cercetării universitare din România: Abordări metodologice alternative. In A. Miroiu, & B. Florian, *Universitatea românească azi*. București: Editura Titron.
- Viuu, G.-A., & Păunescu, M. (2021). The lack of meaningful boundary differences between journal impact factor quartiles undermines their independent use in research evaluation. *Scientometrics*, 126, 1495–1525.
- Viuu, G.-A., Păunescu, M., & Miroiu, A. (2016). Research-driven classification and ranking in higher education: An empirical appraisal of a Romanian policy experience. *Scientometrics*, 107, 785–805.
- Ward, J., & Ost, B. (2021). The effect of large-scale performance-based funding in higher education. *Education Finance and Policy*, 16(1), 92–124.

**Mihai Păunescu** is a Professor at the National School of Political and Administrative Studies in Bucharest. He holds a Ph.D. in sociology at the University of Bucharest. He has been an active scholar of higher education in Romania and, more generally, educational policy. His writings span topics such as science policies, quality assurance, and financing in higher education as well as research methodology. He has also published in fields such as sociology of organizations and public management.

**Andreea Gheba** holds a Ph.D. in political science, focusing on educational policies in the pre-university education system. She is an expert in the Higher Education Department (UEFISCDI) and an adjunct professor at the Faculty of Political Science, SNSPA. Her main research interests are educational policy, social policy, and social research methodology.

**Gabriela Jitaru** coordinates the Higher Education Department at UEFISCDI and is a Ph.D. Candidate in Political Science at the National School of Political and Administrative Studies, in Bucharest, Romania. She has more than 20 years of experience in the implementation and analysis of higher education funding policies in Romania and significant expertise in public policies for higher education.

**Open Access** This chapter is licensed under the terms of the Creative Commons Attribution 4.0 International License (<http://creativecommons.org/licenses/by/4.0/>), which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.



# Competitive Funding for Institutional Development. The Romanian Experience Between 2016–2020



Remus Nica and Gabriela Jitaru

**Abstract** The Institutional Development Fund (FDI) is a newly introduced component of Romanian institutional funding with the purpose of supporting public higher education institutions (HEIs) in their pursuit of the national strategic objectives for higher education. This policy aims to encourage universities to formulate their own answers (through institutional projects) to current higher education challenges such as equity and access for students, internationalisation, regional development, improving the quality of teaching, supporting the entrepreneurial and practical activities developed for the benefit of students, etc. Given its current form as a simple combination between objective-based funding and competitive funding, and its recent implementation at a national level, we propose an in-depth exploration of the policy's results focusing on institutional activities and targeted objectives. To this aim, the paper presents the relevant results obtained by universities in the last five years of FDI implementation, the trends of HEIs institutional development (measured at the university level), as well as the direct and indirect influence these might have over the overall quality of the Romanian higher education system. At the same time, we look to identify new institutional measures in response to the actual needs of universities (in accordance with university autonomy) in order to underline new implementation directions in accordance with national policies and strategies, both in relation to funding and in relation to national goals, as well as to explore the potential of FDI funding for quality enhancement in higher education.

**Keywords** Romanian higher education · Competitive funding · Institutional development · Strategic objectives · Funding mechanism

---

R. Nica (✉)

Executive Agency for Higher Education, Research, Development and Innovation Funding & University of Bucharest, Bucharest, Romania  
e-mail: [remus.nica@uefiscdi.ro](mailto:remus.nica@uefiscdi.ro)

G. Jitaru

Executive Agency for Higher Education, Research, Development and Innovation Funding & National University of Political Studies and Public Administration, Bucharest, Romania  
e-mail: [gabriela.jitaru@uefiscdi.ro](mailto:gabriela.jitaru@uefiscdi.ro)

© The Author(s) 2022

A. Curaj et al. (eds.), *Higher Education in Romania: Overcoming Challenges and Embracing Opportunities*, [https://doi.org/10.1007/978-3-030-94496-4\\_13](https://doi.org/10.1007/978-3-030-94496-4_13)

255



# 1 Framework Setting and Methodological Considerations

## 1.1 Introduction

The Institutional Development Fund (*FDI*) is a recently introduced component of Romanian higher education institutional state funding with the declared and assumed purpose of “supporting institutional development projects at public university level (...) in order to increase institutional capacity and improve the quality of the national higher education system”.<sup>1</sup> As such, the policy was designed to subsidise public Higher Education Institutions (*HEI*) in their endeavour of implementing the national strategic objectives defined by the Ministry of Education (*MEd*). It therefore aims to encourage universities to identify their answers (through institutional projects) to current higher education challenges, such as equity and access for students, internationalisation and regional development, improving the quality of teaching, supporting the entrepreneurial and practical activities developed for the benefit of students, etc.

What makes this particular component of public funding stand out is its design as a project-based competition for the distribution of funds, which is a combination between two traditionally established models: objective oriented financing (the so-called “targeted funding for specific objectives”), in this particular case represented by the strategic financing guidelines established on a yearly basis by the Ministry of Education, and competitive financing (Estermann et al. 2013). This last model is increasingly common and utilised at the national level in various forms (*OECD, 2020*<sup>2</sup>). Even though, usually, the project-based financing comes as an addition to the basic funding (block grant), according to the *OECD 2020* report, the Romanian *FDI* is an integral part of institutional funding (the so-called “block grant”), and its implementation must accommodate some financial restrictions (e.g. the limitation imposed to some types of spending).

Because the *FDI* is a newly implemented policy mechanism, and given its particularities, the aim of the current paper is to assess the relevant results attained by universities through the projects funded using this instrument, to identify the tendencies and the main institutional development trends that can be connected to its implementation, as well as to explore its potential for quality enhancement in higher education. The article presents the preliminary conclusions of an impact analysis of the first five years of *FDI* implementation, using data obtained during an ongoing study conducted through the POCU126766 “Quality in higher education: internationalization and databases for the development of Romanian education” project. Based on these insights, we aim to identify and propose new institutional measures that could improve funding policy, taking into account the real needs of the universities while respecting their institutional autonomy. This undertaking should also offer

---

<sup>1</sup>In accordance with the Information Dataset for *FDI-2021*, p. 1, [http://www.cnfis.ro/wp-content/uploads/2021/03/Pachet-informatii-FDI-2021\\_15032021.pdf](http://www.cnfis.ro/wp-content/uploads/2021/03/Pachet-informatii-FDI-2021_15032021.pdf), accessed at 08.05.2021.

<sup>2</sup>Organisation for Economic Co-operation and Development.

useful information regarding the way in which HEIs adapt to national policies and strategies and the extent to which the FDI improves their ability to do so.

## 1.2 Historical Overview

Although the current structure of Romanian higher education public institutional funding (core funding) was adopted and calibrated beginning with 2012 in accordance with the general principles promoted by the National Education Law (*LEN nr.1/2011*), the specific competition-based model of distributing the Institutional Development Fund (*FDI*) was only adopted beginning with 2016 in accordance with the Ministerial Order nr.3632 (*OM nr.36320*).

Percentage-wise, in 2016 and 2017, the Institutional Development Fund covered 1% of the total yearly institutional funding<sup>3</sup> (in line with Appendix 1 of *OM nr.3530/2016*) and starting with 2018, the percentage has been increased to 1.5%. This value is still in use at the time in which this article was written (in line with Appendix 1 of *OM nr.3116/2020*). While the 50% increase in value is not to be neglected, the significance of the measure is more important than the actual financial sum: it highlights a progressive openness to resource distribution on a competitive basis, with a stated purpose of increasing the quality of the higher education system. In absolute terms, a significant increase of funds allocated to FDI competitions can be easily observed, beginning with 2018 (see Table 1).

Regarding the national strategic priorities and their reflection through the FDI mechanism, in the first year of implementation, the competition featured four main funding areas for project applications. In 2017, the number of funded areas expanded to eight, but in the following years, the number stabilised following a process of elim-

**Table 1** FDI Progress for the 2016–2020 period

FDI progress for the period 2016–2020

Year	Assigned amount	No. submitted projects	No. financed projects
2016	19,459,872	127	107
2017	24,186,700	305	150
2018	45,360,600	239	181
2019	58,293,600	253	230
2020	68,922,000	263	243
<b>Total</b>	<b>216,222,772</b>	<b>1,187</b>	<b>911</b>

<sup>3</sup>After the subtraction of the amounts allocated to the special situation fund and of the doctoral grants, in line with the specific annual MO (<http://www.cnfis.ro/finantare/finantarea-de-baza/>).

ination and/or mutual consolidation. Currently, the format is considered adequate<sup>4</sup> for the needs of this stage of development, according to the existent strategic priorities at the national level stated through The National Strategy for Tertiary Education 2015–2020 (TER2020) and, annually, through National Reform Program (PNR).

2018 is the reference year when the current financing areas were formalised in six strategic directions, which are still used in 2021. These areas include:

- Area 1: equity in higher education, for raising social inclusion and increasing the access to higher education, linking the educational offer with the labour market demand (including those related to career counselling and career guidance);
- Area 2: internationalisation of higher education;
- Area 3: supporting the maintenance of university botanical gardens, educational resorts, practice facilities and other infrastructures designated to support teaching activities;
- Area 4: ensuring the activities of the student entrepreneurial societies (SAS), operating within universities;
- Area 5: improving the quality of pedagogical activities, including compliance to deontological requirements and academic ethical standards;
- Area 6: the development of the institutional research capacity at the university level.

The six areas seek to include as much of the academic, social and economic life of any given university, with the only existing limitations being those imposed by the national legislation on the types of eligible expenditure, as well as the guidelines/priorities set at the level of university Senate and executive management of each higher education institution. Based on these arguments, we can infer that, while complying with the above-mentioned requirements, universities could apply for funding that can be used in almost any direction established internally and in line with the national strategic directions. The following figures highlight the scope of governmental financial and administrative involvement for the last six years:

- 9 financing areas;
- 47 participating universities;
- 1,187 submitted projects;
- 911 financed projects;
- 216,222,772 RON as the total funds allocated.

The initial main enquiry, which constituted the basis for this analysis, concerned the relationship between the amount of funding provided by the Government and the results achieved by universities that participated in the competitions.

---

<sup>4</sup>As specified in the ministerial order, where the general funding areas are listed and, among them, the annual ones are mentioned separately.

### ***1.3 Methodological Framework***

In order to analyse the implications and results of implementing the novel FDI distribution model in Romania, the participating experts employed a variety of research methods. In the first stage of the analysis, an examination of the projects' outputs was carried out. This examination proceeded on two separate fronts: a financial-administrative assessment and a project content assessment. This article focuses mainly on the second perspective.

The financial-administrative assessment focused on HEI's level of participation and subsequent access to funds. To this aim, the experts involved examined the trends regarding the number of submitted projects, the number of funded projects, the categories of expenditures and their prevalence (staff, material, other expenses), the amount of co-funding provided by universities and the efficiency of spending.

The content analysis focused on the general and specific objectives and on the results the HEIs committed to in their applications (as presented by HEIs in the preliminary reports submitted in the competition management system for each project). In order to better quantify and compare the project objectives and results, a classification system was devised, with specific entries for categories of general and specific objectives, as well as the type of results and quantitative results. These were based on the examples provided by CNFIS in the FDI implementation information package. This standardised and predefined structure has been used individually for each analysed project since the first competition in 2016. The data was aggregated following the domain and competition year level, depending on the stage of analysis.

In order to improve the methodological instruments, it was decided to divide the analysis period into two stages: 2016–2018 and 2019–2020. The conclusions obtained were comparatively presented and correlated within the analysis, by types of objectives and results, but also by competition years, and then aggregated at the funding area level.

In this paper, we present the results of the afore-mentioned content analysis (correlated with some financial-administrative insights), focusing on the 2016–2018 period and outlining a series of observations concerning the current and future directions of FDI management and implementation.

These observations permit us to assess, in an integrated manner, the contribution that adopting the FDI funding mechanism<sup>5</sup> has had to increase the quality of the Romanian higher education system. At the same time, we use the results obtained from the interpretative analysis of the data to recommend new modalities and/or directions of allocation for the FDI.

---

<sup>5</sup>Based on project competitions between universities, on certain predefined priority directions.

## 2 A Concise Presentation and Analysis of the Finalised FDI Competitions

In order to provide an integrated overview of the results achieved by universities through the FDI funding mechanism, we start by providing the administrative-financial context.

We have chosen to highlight the results of our analysis for three funding areas, namely Equity & Labour Market, Internationalisation and Botanical Gardens & Didactic Research Parks and Facilities, for the 2016–2018 period. This choice was motivated by the fact that these are the only areas funded in each of the three FDI project competitions, cumulating 242 projects, to which a total amount of 55,296,500 RON was allocated. The relative stability of the three funding areas and the strategic objectives they respond to make them suited for the stated purposes of our research.

The legitimacy of the selection of case study areas is also given by the percentage of total funding received, which represents almost 2/3 (62.12%) of the FDI value for the three competitive years presented. This is important because the three competitions are different in terms of financial allocations and in terms of the period of the competition.

Thus, for the Equity and Labour Market area, the amount of 20,488,500 RON allocated for 103 projects, represents 23.02% (89,019,068 RON) of the total amount spent on all FDI funding directions over the 2016–2018 (the average budget per project was 198 thousand RON). For the Internationalisation area, the amount of 18,496,000 RON was allocated for 85 projects (20.78% of FDI funding allotted and 217 thousand RON as the average budget per project), and for the Botanical Gardens & Didactic Research Parks and Facilities area, the allocated amount reaches 16,312,000 RON (54 projects, representing 18.32% of the total amount spent for the three FDI competitions and 302,000 RON as the average budget per project).

The following subsections will comprise a presentation of the main objectives and results assumed at the HEI institutional level for each of the three financing areas presented as case studies.

### 2.1 Case Study: Equity and Labour Market Area

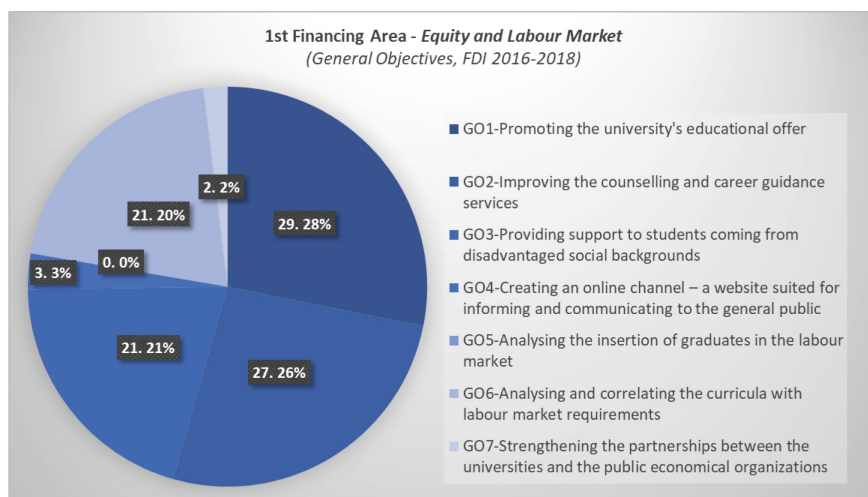
The stated aims of the Equity & Labour Market funding area were to increase social equity in order to achieve social inclusion, as well as access to higher education, and to match educational provision with labour market demand (including career counselling and guidance). This section concerns the main results achieved in terms of the objectives pursued and the results obtained, as revealed by the detailed analysis carried out within the project.

For the 103 analysed projects (three FDI competitions, 2016–2018), we established seven possible general objectives (GOs) pursued at the national level, objectives that are in line with the examples given by CNFIS in the annex to the competition information package, as follows:

- Promoting the universities' educational offer (GO1);
- Improving the counselling and career guidance services (GO2);
- Providing support to students coming from disadvantaged social backgrounds (GO3);
- Creating an online platform suited for providing information to and communicating with the general public (GO4);
- Analysing the insertion of graduates in the labour market (GO5);
- Analysing and correlating the curricula with labour market requirements (GO6);
- Strengthening the partnerships between the universities and the public economic organisations (GO7).

Among these, the most important general objectives that universities have taken into account for the project implementation were: promoting their educational offer (GO1), which appears in 29.28% of projects; counselling and career guidance (GO2), in 27.26% of projects; support for students from disadvantaged social backgrounds (GO3), in 21.21% of projects, and the correlation of curricula with labour market requirements (GO6), in 21.20% of projects (see Fig. 1).

In terms of specific objectives (SOs), what is noteworthy is the way in which universities have defined their interest for certain specific objectives within the general ones, which reflects their orientation towards a certain type of development measure, in line with various programmatic documents established by their management.<sup>6</sup>



**Fig. 1** The general objectives pursued in FDI competitions during 2016–2018 (Equity and Labour Market)

<sup>6</sup>It should be mentioned that it was agreed, as a working rule of analysis, in the case of projects that could be interpreted as pursuing more than one of the seven general objectives, to focus on the specific objectives correlated with the most prevalent general objective.

From the detailed analysis of the 35 potential specific objectives (SOs) established for the Equity Area, seven objectives emerge as preferred by universities in their FDI applications in the 2016–2018 timeframe (see Table 2 in the Appendix):

- SO1.1 Organising marketing campaigns in socially disadvantaged areas, 7.73%;
- SO1.6 Supporting a number of students with disadvantaged social backgrounds, 7.18%;
- SO1.5 Organising guidance and career counselling seminars, 6.91%;
- SO2.1 Increasing the level of social inclusion, 6.35%;
- SO2.4 Organising counselling programs, 6.08%;
- SO6.4 Adapting the educational offer to the labour market requirements, 5.80%;
- SO1.4 Facilitating the college enrolment procedure, 5.80%.

The emerging priorities outlined in the two groups of objectives (general and specific) is confirmed by studying the results achieved by universities after they implemented the project. Thus, out of a total of 412 quantified cumulative<sup>7</sup> results (116—FDI2016, 148—FDI2017, 148—FDI2018), of the 15 categories of results defined in the main study, it is noticeable (see Fig. 2) that six of them are significantly better represented (with a minimum 10% of projects mentioning them). Specifically, these are the ones that reflect the choices pursued within the specific objectives:

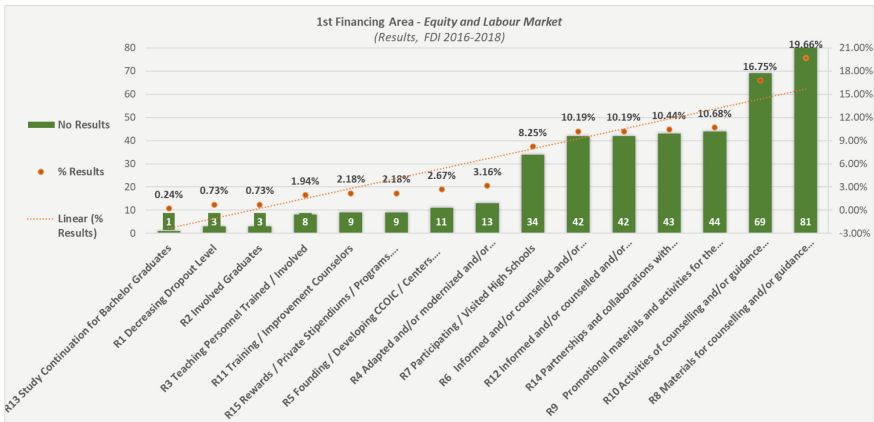


Fig. 2 Results achieved from FDI competitions during 2016–2018 (Equity and Labour Market)

<sup>7</sup>The term “Cumulative results” refers to the total number of results for all projects funded, as each project can outline several prospective results, and every type of result can appear once for a unique project.

- R8 Materials for counselling and/or guidance and/or tutoring or tools (questionnaires, guidebooks, treaties, strategies, studies), 19.66% of options;
- R10 Activities of counselling and/or guidance and/or tutoring (sessions, camps, training meetings, workshops), 16.75% of options;
- R9 Promotional materials and activities for the university, 10.68% of options;
- R14 Partnerships and collaborations with institutions (including from the economic environment), 10.44% of options;
- R12 Informed and/or counselled and/or participating students, 10.19% of options;
- R6 Informed and/or counselled and/or participating pupils, 10.19% of options.

The conclusions drawn from the Equity and Labour Market Area case study must take into account, in addition to the presented data, the administrative and organisational setting in which these competitions took place, as well as other funding and income sources belonging to the university. These additional factors influence in a direct and objective manner the degree of interest shown to certain segments of FDI competitions.

For example, in the case of the area of financing, the merging of the “labour market” priorities with the “equity” area had perceivable influences on how universities chose to establish and present their objectives. In this regard, it is easily noticeable how the 6th general objective is highly represented in 2017 and insignificantly represented for other years.

Consequently, it becomes easy to demonstrate that the main interest areas of higher education institutions have focused on **issues related to providing the necessary framework for counselling and guidance of pupils and students** (both in terms of equipment and didactical tools employed, but also by organising specific activities, including collaborations, partnerships, and adjustments or updates of university spaces). In some cases, career guidance and counselling centres (CCOCs) have been effectively established or developed (the FDI has proved to be a reliable funding source for supporting measures to implement national-level strategic directions—the part belonging to CCOCs to be further sought in the strategy).

## 2.2 Case Study: Internationalisation Area

For the Internationalisation area, which has as a stated goal the improvement of internationalisation of the Romanian higher education system, the main outcomes derived from the pursued objectives and the obtained results, as they emerged from the detailed analysis performed within the project, were as follows:

Within the 85 analysed projects (three FDI competitions, in the 2016–2018 time-frame), four possible general objectives (GOs) were closely monitored, as they were established in line with the examples given by CNFIS in the annex to the competition information package, as we already mentioned above:

- Promoting the educational offer in widespread international languages (GO1);
- Encouraging the international mobility of professors and teaching staff, researchers and students (GO2);



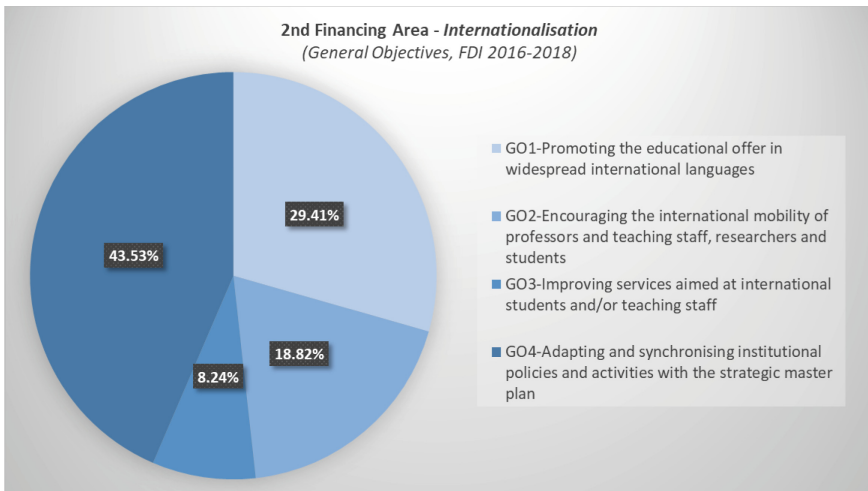
- Improving services aimed at international students and/or teaching staff (GO3);
- Adapting and synchronising institutional policies and activities with the institutional strategic plan (GO4).

Of these, the most common options selected by the universities are: synchronising institutional policies and activities with the institutional strategic plan (GO4)—44% of projects, promoting the educational offer (GO1)—29% of projects, encouraging the international mobility of the teaching staff (GO2)—19% of projects, and the general objective of improving services aimed at international students and/or teaching staff (GO3)—only 8% of projects (Fig. 3).

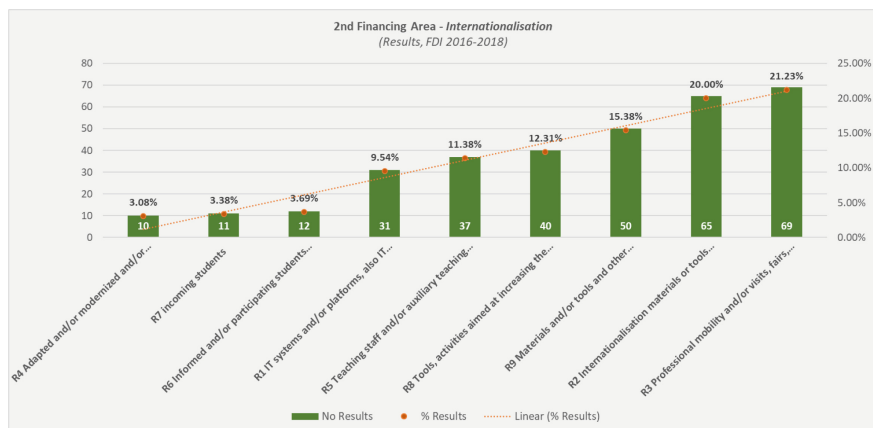
Furthermore, the trend is reflected in the distribution of specific objectives (SOs), as was the case for the Equity and Labour Market area. What emerges from analysing the pursuit of specific objectives is that universities have a better grasp of defining priorities for this specific funding area.

From the detailed analysis of the 12 possible specific objectives established for the Internationalisation area, six stood out as prioritised by a significant number of universities through the FDI projects. In the order of the drafted options (see Table 3 in the Appendix), we have:

- SO4.3 Supporting university promotional activities, 17.82%;
- SO4.1 Adapting the curricula, 17.33%;
- SO1.2 Ensuring visibility for university study programs, 12.38%;
- SO1.1 Participating in educational fairs, 10.40%;
- SO4.2 Carrying out studies and analyses and implementing their results, 9.41%;
- SO2.1 Participating in international conferences and workshops, 7.92%;



**Fig. 3** General objectives pursued in FDI competitions during 2016–2018 (Internationalisation)



**Fig. 4** Results achieved from FDI competitions during 2016–2018 (Internationalisation)

The expected results of project implementation outlined by universities confirm the trend arising from the analysis of the two groups of objectives. Thus, out of a total of 325 quantified cumulative<sup>8</sup> results (100—FDI2016, 78—FDI2017, 147—FDI2018) for the nine types of results established within the working group, it is easily observable (see Fig. 4) that six of them are significantly more popular in the selections made by universities:

- R3 Professional mobility and/or visits, fairs, partnerships, educational projects, 21.23% of options;
- R2 Internationalisation materials or tools (questionnaires, guidebooks, course treatise/syllabus, summer schools, strategies, analysis), 20% of options;
- R9 Materials and/or tools and other activities aimed at promoting the university, 15.38% of options;
- R8 Tools, activities aimed at increasing the academic quality and exposure, 12.31% of options;
- R5 Teaching staff and/or auxiliary teaching personnel trained and/or specialised and/or evaluated, 11.38% of options;
- R1 IT systems and/or platforms, also IT support, 9.54% of options.

The emerging findings highlight the fact that **the main areas of the higher education institutions have interest in concern issues related to promoting their educational offer through various methods** (innovative or traditional) at the international level. To this end, higher education institutions have made use of specific tools, activities and materials, as well as participation in educational fairs, meetings, seminars or other forms of interaction with an international component.

At the same time, in order to facilitate and calibrate the promotion through the afore-mentioned means, as well as to ensure an increased attractiveness for students,

<sup>8</sup>Ibidem note 7.

professors and researchers coming from abroad, a significant percentage of universities undertook the endeavour of adapting the curriculum to the high standards and the fast-paced development of the labour market (as can be shown by the popularity of objective SO4.1).

In the detailed analysis of results specific to the R3 category, particularly when compiling the quantitative prospective results assumed by universities, we could also observe that the following aspects of internationalisation were targeted: the international participation of students, professors and researchers in educational projects (including their design and development); the creation of joint research teams on various topics; participation in exceedingly specific scientific conferences - highly rated in terms of academic impact, as well as in other endeavours, favouring an increase in the quality and visibility of academia. This can be considered as exceeding the scope of the straightforward promotion of their universities.

### ***2.3 Case Study: Botanical Gardens and Didactic Research Parks and Facilities***

The main aim of the Botanical Gardens & Didactic Research Parks and Facilities<sup>9</sup> funding area is to “ensure the proper functioning of university botanical gardens, teaching stations, practice bases and other infrastructures supporting teaching activities in universities”. The main insights of the analysis in terms of the objectives pursued and the results obtained were as follows:

Within the 54 analysed projects (three FDI competitions, during 2016–2018), three possible general objectives (GOs) were pursued, as they were established in line with the examples given by CNFIS:

- Improving the quality of activities and services provided (GO1);
- Promoting the activities and services offered (GO2);
- Professional training of students (GO3).

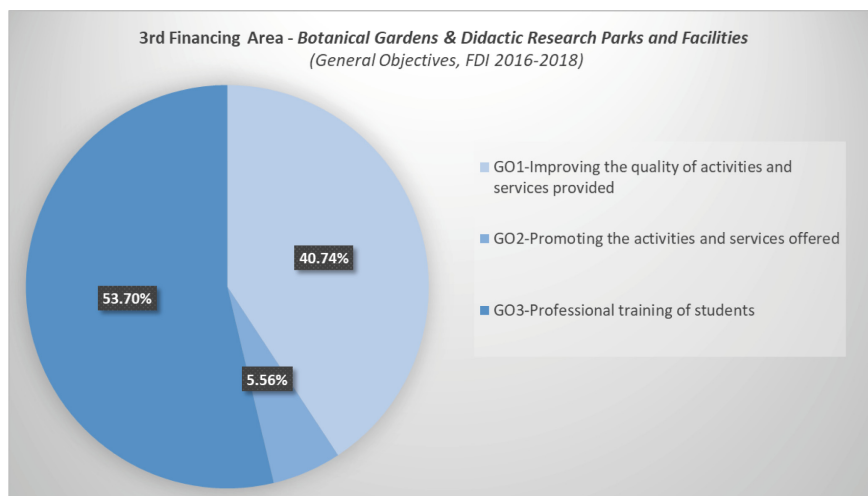
From these, the most recurring ones are: professional training of students (GO3), in 54% of projects, and improving the quality of activities and services provided (GO1), in 41% of projects, the general objective of promoting activities and services offered (GO2) being employed in only 5% of projects (see Fig. 5).

From the detailed analysis of the 19 possible outlined specific objectives, a number of seven objectives stand out. Among the most mentioned specific objectives by universities accessing the FDI (see Table 4 in the Appendix), we find:

- OS3.2 Ensuring the scientific, biological and technological base, 15.30%;
- OS3.3 Assuring the optimal conditions for carrying out student practical activities, 14.75%;

---

<sup>9</sup>The projects eligible for this funding area concern only parks and facilities dedicated to student training.



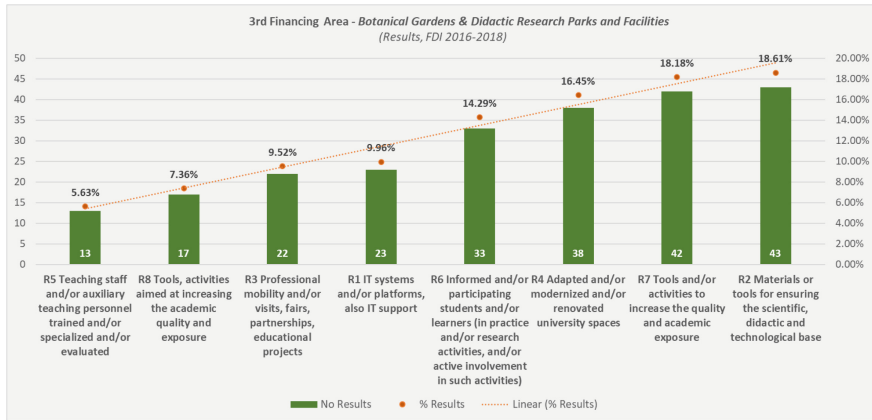
**Fig. 5** General Objectives pursued in FDI competitions during 2016–2018 (Botanical Gardens & Didactic Research Parks and Facilities)

- OS3.1 Development of practical skills, 14.75%;
- OS1.1 Improving technologies, landscaping elements, 7.65%;
- OS1.5 Maintaining and modernising the existing material base, 7.10%;
- OS3.6 Creating modern experimental themes, 6.56%;
- OS1.3 Maintaining equipment, machinery and other specific infrastructure, 6.56%.

The results achieved by universities show the interest areas outlined by the two most popular types of objectives. Thus, from a total of 231 quantified results (32—FDI2016, 79—FDI2017, 120—FDI2018) for the eight types of results defined within the working group (see Fig. 6), four of them are significantly better represented, clearly indicating the interest areas targeted by Romanian higher education institutions:

- R2 Materials or tools for ensuring the scientific, didactic and technological base, 18.61% of options;
- R7 Tools and/or activities to increase quality and academic exposure, 18.18% of options;
- R4 Adapted and/or modernised and/or renovated university spaces, 16.45% of options;
- R6 Informed and/or participating students and/or learners (in practice and/or research activities, and/or active involvement in such activities), 14.29% of options.

Lastly, it can be concluded that the main areas of interest of higher education institutions have been connected to **ensuring the framework necessary for the professional training of students in the best possible learning environment**, as well as a constant concern for the quality of the activities and the services being provided.



**Fig. 6** Results achieved from FDI competitions during 2016–2018 (Botanical Gardens & Didactic Research Parks and Facilities)

What stood out from each individual project, and implicitly, from each university involved, was the way they considered it appropriate to reach the results (in accordance with the individual needs at the institutional level). In some particular situations, it was necessary to focus on measures that would improve the scientific, biological and technological base or to maintain and/or modernise certain equipment, machinery and other technical infrastructure specific for the activity as a whole. In other cases, the preparation and dissemination of informative materials were pursued, or developments of modern experimental themes were considered.

Also, in this particular setting, university spaces were targeted, in which various modernisation, adaptation or renovation activities took place, especially of the spaces that hosted activities related to the field. It is also worth mentioning the fact that IT-specific solutions were employed by means of developing or implementing applications and/or other software tools to facilitate and streamline, and in some cases to optimise, certain processes.

#### **2.4 Some Preliminary Conclusions from the Case Studies**

Analysing the case studies of the three funding areas, we notice the emergence of two types of projects that the universities chose to submit for funding and then decided to implement: individual projects, requesting very specific funding, and which are designed to solve a particular type of problem with the obtained funds, and future-oriented projects, that treated each competitive year as a single phase in implementing a broader strategy, often developed in the first FDI project of the area.

Another way of understanding the projects is from the viewpoint of the applicant, that in some cases chose to implement a project not necessarily for the purpose of

institutional development, in the true meaning of the term, but only to manage some financial issues, either for salary or material expenditures.

Undoubtedly, most of the projects have had as a stated objective the attainment of measurable results, which would benefit at the institutional level, but another element being highlighted is the apparent distinctive way in which each university pursues its priorities and development paths. Although it would be expected for each university to have an original strategy or foresight, in reality the data shows that there is only a low percentage of innovative projects and original strategic approaches, which can form the basis for another segment focused on best practice in a future study.

### 3 Conclusions

Before drawing any general conclusions, when considering the results of the preliminary analysis, one must take into account both the yearly nature of the FDI competitions and the fact that each project (and, implicitly, each university) employed a distinct approach for achieving the chosen objectives (in line with the needs and capabilities present at the institutional level). Some initiatives were consolidated upon, while others were abandoned or thoroughly transformed. At the comparative level, many important details might be overlooked in order to present an integrated, meaningful account of the policy as a whole and its evolution in the last three years. But, while acknowledging these limitations, there are some relevant comments to be made regarding the consequences of its implementation.

In the authors' opinion, this funding mechanism (including its competitive allocation component) encourages higher education institutions to modify their perception of the correlation between funding and the quality of education activities, in general, including the practical ones, regarding student support for career counselling and professional insertion, for international challenges and practical experiences. This change in outlook is already noticeable and can be, in our opinion, quite positive, given the fact that education is a particular public good with significant externalities.

Project-based competitions can stimulate universities to develop strategies and act proactively, moving away from a more reactive, mercantile approach centred on "the price paid for the services offered", which cannot be the foundation for a proper functioning of the educational system. However, as becomes apparent after the analysis presented in this paper, public institutions should focus on allocating resources in line with clearly formulated objectives, precisely planned activities and foreseeable expected results. This remains a progress driver in terms of developing the capacity of institutions to successfully ensure the quality of higher education, and steps should be taken at the national level to encourage this type of approach.

A more efficient monitoring of project implementation and especially the express orientation towards measurable and sustainable results, together with the progressive accommodation of a strategic vision that is in line with the European path of Romanian higher education, are all vectors that can foster the success of policies like the Institutional Development Fund.

## 4 Several Proposals for Possible Implementation Measures

Considering the experience of the competitions carried out until now and the various discussions with the members of the CNFIS - who also ensure the evaluation process of the projects—we will formulate, in the following, some proposals for possible implementation measures. These measures could strengthen the evolution of the application of this competitive funding model and, at the same time, provide the framework for the necessary adaptations towards achieving the best results in order to increase quality in higher education.

Thus, we outline two types of measures: ones regarding monitoring, a kind of constructive, collegial monitoring, where there is support and shared interests for the academic community involved, and others referring to general measures of adjustment for the main directions on which FDI implementation is based, to maintain the funding principles in a context prepared for technological and other perspective changes.

With regard to the measures that can improve the monitoring process, we underline the importance of the online application for the FDI competition implementation that needs to be further adapted to respond to the functionalities required for this stage. Thus, to monitor and measure the proposed indicators through objectives and those achieved through results, we recommend the adaptation or the development of some specific tools of the FDI competition, with the purpose to facilitate the structuring of both objectives and results into classes and/or groups of indicators. Also, for the outcomes monitoring, it can be used another set of national indicators that can be measured at least one year after the end of the project implementation (e.g.: for SAS domain: a possible outcome indicator can be the number of students that started a business after their involvement, of any kind, in the FDI project; for Quality domain: the increasing percentage for anti-plagiarism checks after the implementation of the project or the decreasing percentage of plagiarised works or the significant decrease of the similarity index after the implementation of a project, or, for Research domain: the number of scientific articles that have been written and published after the implementation of a project, etc.).

Also, in the context in which the FDI competition funding model aims to support universities in their institutional strategic plan implementation, the components corresponding to the FDI national priorities, the importance of the project's sustainability is also evident. Therefore, in the same topic of proposals related to the FDI online application, we propose that each project application should contain a segment dedicated to the presentation of sustainability aspect, the follow-up of the results from the previous project (if the project is part of a multi-year concept).

Another significant measure is the one concerning the continuation of the transparency process for the concluding project implementation reports by monitoring their publication on the institutional sites, so that they can be taken into account when evaluating the next project. As well, to increase the transparency and the exchange of institutional experiences and best practices, it could be very useful an electronic register or platform of the (measurable) results achieved by universities. A national

platform with the main FDI project objectives and results will facilitate the selective monitoring of certain results indicators established or of interest at a national level, and not particularly the financial ones, targeting instead the aspects related to the inherent results proposed by the project and those achieved.

In terms of general adjustment measures for the main directions on which FDI implementation is based, we propose, as main measures, to continue the efforts to transform the Institutional Development Fund into a multi-annual fund (not only on the methodological framework, but also regarding the effective financial implementation) and to increase the percentage given to FDI from the institutional funding (with a possible co-financing from the Special Situations Fund, when the national priority of the minister is known before launching the FDI competition, or other co-funds).

Furthermore, in order for the university to benefit from the financial support necessary for the implementation of a project, we propose that the evaluation principles should take into account both the complete funding of the best performing projects (i.e. at least 50% of the funded projects should receive 100% of the requested amount) and the partial funding of the following successful projects, within the limit of the total fund, by limiting the funding percentage to a minimum 85% of the amount requested by the project. This proposal aims to ensure the proper project implementation by limiting the effects of the budget cuts from state funds via university's own funds.

In the same framework of discussion, regarding the role of competitive funding as an instrument for supporting the correlation of the institutional strategy with the national one and in light of the need for increasing the institutional capacity on certain strategic directions declared at a national level, one or two priority areas can be defined out of the six existing funding areas (e.g. for each competitive year, or recommendable for a period of minimum 3–5 years). The allocation of resources could be allocated as a priority to them, with a minimum 50% of the FDI amount.

## **Appendix**

See (Tables 2, 3 and 4).



**Table 2** Nomenclature for equity & labour market—specific objectives

ID_OS	Specific objective
1.1	Marketing campaigns in socially disadvantaged areas
1.2	Involvement of volunteer students
1.3	Creation of promotional materials for the university
1.4	Facilitating the college enrolment procedure
1.5	Organising guidance and career counselling seminars
1.6	Backing a number of students from disadvantaged social backgrounds
2.1	Increasing the level of social inclusion
2.2	Increasing the load of the career counsellors
2.3	Increasing the number of counselled students
2.4	Organising counselling programs
2.5	Developing strategies and plans aimed at improving equity in education
2.6	Developing individualised means of action and report regarding the dropout rate in education
3.1	Reducing the university dropout rate
3.2	Organising tutoring programs
3.3	Increasing the passing rate of the study completion exams
3.4	Internalising the importance of the practice sessions and internships
3.5	Increasing employability
3.6	Organising awareness campaigns
3.7	Adapting the acquired skills and competences to the labour market requirements
3.8	Organising specific courses pertaining to lifelong professional training
3.9	Adapting to the economic and social environment dynamics
4.1	Developing online tools
4.2	Developing a database with pupils, students, teaching staff
5.1	Analysing the professional trajectory of graduates
5.2	Writing and creating studies and analysis
6.1	Implementing studies at the level of the employers
6.2	Implementing studies regarding the technological development tendencies
6.3	Organising workshops and/or meetings
6.4	Adapting the educational offer to the labour market requirements
6.5	Adapting the curricula in order to ensure the acquirement and development of skills and competences
7.1	Organising sectoral (departmental) and intersectoral (interdepartmental) forums
7.2	Involving the socio-economic environment in lifelong training programs
7.3	Supporting the activities of the Career Guidance and Counselling Centres
7.4	Initiating and developing innovative projects
7.5	Ensuring and putting into practice the technological transfer from the academic community to the business environment

**Table 3** Nomenclature for internationalisation—specific objectives

ID_OS	Specific objective
1.1	Participating in educational fairs
1.2	Ensuring a better exposure for the programs provided by the university
1.3	Improving the content and translating the university's website
1.4	Updating the study programs in the platform "studyinromania.ro"
2.1	Participating in international conferences and workshops
2.2	Establishing mixt teams
2.3	Organising foreign languages courses
3.1	Developing an informational kit
3.2	Developing mobile apps, containing relevant information pertaining to the university
4.1	Adapting the curricula
4.2	Carrying out studies and analyses and implementing their results
4.3	Endorsing promotional activities for the universities

**Table 4** Nomenclature for botanical gardens & didactic research parks and facilities—specific objectives

ID_OS	Specific objective
1.1	Improving technologies, landscaping elements
1.2	Establishing and maintaining micro-nurseries and/or didactic and experimental cultures
1.3	Maintaining equipment, machinery and other specific infrastructures
1.4	Developing the database and images
1.5	Maintaining and modernising the existing material base
1.6	Preparing the informative materials and communicating the information
1.7	Establishing collaborations and partnerships
1.8	Professional training for the staff
2.1	Raising the educational, scientific and cultural influence
2.2	Organising educational, scientific and cultural events
2.3	Participating in fairs and expos
2.4	Organising instructive-educational activities
2.5	Organising applied research activities
3.1	Development of practical skills
3.2	Ensuring the scientific, biological and technological base
3.3	Creating the optimal conditions for carrying out activities
3.4	Connecting the spaces to the IT communications network
3.5	Employing the facilities provided by the research-innovation platforms
3.6	Creating modern experimental themes

## References

- Consiliul National pentru Finantarea Învățământului Superior. (2020). *Raportului public CNFIS-2019. Starea finanțării învățământului superior* Bucuresti.
- Consiliul National pentru Finantarea Învățământului Superior. (2021). *Pachetul de informatii pentru alocarea finanțării în anul 2021*. Bucuresti.
- Estermann, T., Pruvot, E. B., & Claeys-Kulik, A. L. (2013). Designing strategies for efficient funding of higher education in Europe. *DEFINE interim report*. Brussels: EUA (European University Association).
- Giddens, A. (2000). *Sociologie (ediția a III-a)*. București: Editura Bic All.
- Legea Educației Nationale 1/2011. / National Education Law no. 1/2011.
- Miroiu, A., Rădoi, M., & Zulean, M. (2002). *Analiza politicilor publice*. București: Politeia-SNSPA.
- OECD. (2020). *Resourcing higher education: Challenges, choices and consequences*. Paris: OECD Publishing.
- Ordinul de ministru nr. 3320/2021. / Ministerial Decree no. 3320/2021.

**Remus Nica** is an expert with seven years of experience working with the members of the National Council for Higher Education Funding (CNFIS) and the team of the Executive Agency for Higher Education, Research, Development and Innovation Funding (UEFISCDI). The area of interest covers the Institutional Development Fund (FDI) and also the Single Matriculation Register of the Romanian Universities (RMUR).

Also, he has been coordinating the Department of curriculum development from the University of Bucharest for two years. He graduated the University of Bucharest in 2007, and he holds a PhD in History obtained at the same University.

**Gabriela Jitaru** coordinates the Higher Education Department at UEFISCDI and is a PhD Candidate in Political Science at the National School of Political and Administrative Studies, in Bucharest, Romania. She has more than 20 years of experience in the implementation and analysis of higher education funding policies in Romania and significant expertise in public policies for higher education.

**Open Access** This chapter is licensed under the terms of the Creative Commons Attribution 4.0 International License (<http://creativecommons.org/licenses/by/4.0/>), which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.

