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ONE YEAR AFTER REFORM: EXPECTATIONS AND OUTCOMES OF HIGHER EDUCATION TRANSFORMATION IN THE REPUBLIC OF MOLDOVA

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The article aims to evaluate the effects of Moldova's higher education reform one year post-implementation, focusing on public university consolidation, international rankings, budget allocations, and student numbers, as well as alignment with EU practices.

The study employs a mixed-methods approach, collecting data from institutional reports, government publications, and international databases. Key performance indicators and comparative analysis with EU countries are used for assessment. The research finds that the reform succeeded in streamlining the higher education sector but failed to improve international rankings or budget allocations. Notably, it exacerbated declining student enrollments.

The paper uniquely offers a one-year post-reform evaluation, considering both domestic impacts and broader European implications, thereby filling a gap in the existing literature.

Keywords: *Higher education reform, University consolidation, ranking, budget, Republic of Moldova.*

LA UN AN DUPĂ REFORMĂ: AȘTEPTĂRI ȘI REZULTATELE TRANSFORMĂRII ÎNVĂȚĂMÂNTULUI SUPERIOR ÎN REPUBLICA MOLDOVA

Articolul își propune să evalueze efectele reformei învățământului superior din Moldova la un an de la punerea în aplicare, concentrându-se pe consolidarea universităților publice, clasamentele internaționale, alocările bugetare și numărul de studenți, precum și alinierea la practicile UE.

Studiul utilizează o abordare bazată pe metode mixte, colectând date din rapoartele instituționale, publicațiile guvernamentale și bazele de date internaționale. Pentru evaluare sunt utilizați indicatori-cheie de performanță și analize comparative cu țările UE. Cercetarea constată că reforma a reușit să raționalizeze sectorul învățământului superior, dar nu a reușit să îmbunătățească clasamentele internaționale sau alocările bugetare. În special, aceasta a exacerbat scăderea numărului de înscrieri ale studenților.

Lucrarea oferă în mod unic o evaluare la un an după reformă, luând în considerare atât impactul intern, cât și implicațiile europene mai largi, umplând astfel o lacună în literatura de specialitate existentă.

Cuvinte-cheie: *reforma învățământului superior, consolidarea universităților, clasament, buget, Republica Moldova.*

Introduction

In the contemporary era characterized by rapid technological advances and global interconnectedness, the quest for an educational framework that is simultaneously modern, adaptable, and inclusive has become an urgent imperative. This universal aspiration is manifestly acute in the domain of higher education, traditionally regarded as a bastion for knowledge dissemination and intellectual development. The paradigm is shifting, and higher education is now considered a catalyst for not just scholastic achievements, but also for broader societal transformation. Evidently, the ascendance of technology and information is not only supplementing the existing pedagogical approaches but is radically reconfiguring the very architecture of higher educational systems. Such a metamorphosis compels nations to initiate reforms aimed at aligning their academic institutions with these transformative trends.

In this volatile landscape, the Republic of Moldova is no exception. In 2022, the Moldovan government undertook an ambitious overhaul of its higher education system. However, the reform transcends conventional academic objectives; it embodies a multi-dimensional endeavor to fortify educational standards vis-a-vis international criteria and to address intricate socio-economic requisites. This reform is also anticipated to serve as an instrument for social unity and long-term societal resilience, facilitating not only the needs of

today's labor market but also pre-empting the impending challenges and opportunities that the 21st century inevitably presents.

The problem under investigation in this research paper is multifaceted: it seeks to understand the effectiveness of Moldova's higher education reform in achieving its stated objectives of modernization, international alignment, and societal integration. Given the complex interplay of factors affecting higher education and its broader implications for economic and social development, such an evaluation is both timely and relevant. The rationale for conducting this research stems from the paucity of comprehensive studies exploring the impacts and implications of such a reform within a year of its initiation. This work aims to fill that gap and is therefore of substantial importance to policymakers, educators, and scholars engaged in the complex field of higher education and societal development.

Thus, this research serves as a critical examination of the Republic of Moldova's higher education reform, offering insights that could be instrumental not only for Moldova but also for other nations navigating the convoluted pathway of educational modernization in an ever-changing world.

Literature review

The transformation of higher education in Moldova has been a subject of intense discussion and analysis over the past years. As this paper seeks to evaluate the expectations and outcomes post-reform, it is imperative to situate our discussion within the context of existing literature.

Historically, Eastern Europe has undergone significant changes in its higher education landscape. Wetzinger (2019) provides a comprehensive overview of these shifts, discussing the various reform movements and their implications for countries in the region. For Moldova, particularly, Lipcean and Țurcan (2019) offers an essential account of the education system's evolution over the last few decades, setting the stage for the latest reforms.

Cimpoies and Resitca's work (2022) is particularly noteworthy for its focus on the catalysts driving the need for reform in Moldova. They present a case for change, drawing from a range of socioeconomic, global, and academic factors that highlight the imperative for an updated higher education framework.

Of course, any reform movement is as much about its vision as it is about its motivating factors. The Ministry of Education, Culture and Research (MECC) in its 2021 blueprint elucidates the government's perspective on this. Their document outlines a clear path forward, complete with the desired outcomes and milestones. Complementing this, it offers a qualitative look into the expectations of various stakeholders—students, faculty, and policymakers—thus painting a holistic picture of the reform's anticipated benefits.

To truly understand Moldova's journey, however, it's essential to position it within the broader Eastern European context. The study of Vasilache et al (2012) and exploration of Romania and Moldova's paths provide such a perspective. They shed light on how neighboring countries have approached similar challenges, offering both contrasts and parallels.

As we dive into the reform's tangible impacts, Cimpoies and Resitca (2023) emerges as a pivotal voice. Their empirical study, conducted a year after the reform's implementation, examines the actual changes on the ground.

Nevertheless, any major change is accompanied by critiques. Popovici (2023) plays this role within the existing literature, pointing out potential oversights and challenges that have emerged. His critical perspectives are crucial to a balanced understanding of the reform's outcomes.

In essence, the literature surrounding Moldova's higher education reform presents a nuanced tapestry of anticipation, vision, achievements, and challenges. Through this synthesis, we aim to engage deeply with these diverse voices to offer a comprehensive analysis of the reform's expectations and outcomes.

Materials and methods

This research leverages a comprehensive array of data sources to evaluate the impact of higher education reform in the Republic of Moldova. Statistical information was derived from the National Bureau of Statistics' database, public disclosures by the Ministry of Education and Research, and data collected directly from public higher education institutions within Moldova. Additionally, Eurostat data and official statistics

from selected European Union countries were included in the study, obtained from their respective national statistical offices.

The datasets encompass a range of variables such as demographic characteristics, enrollment and graduation rates, funding levels, and human resource metrics within universities. Official documents related to the educational reform, including pertinent legislation, were also examined to provide context to the collected data.

In terms of methodology, the study employed quantitative analysis techniques to scrutinize the gathered information. Emphasis was placed on performance indicators like student numbers, faculty counts, and funding per student, among others. Statistical analyses were performed to distill meaningful insights from these data points, contributing to an empirical understanding of the reform's outcomes.

To maintain academic rigor, this study adhered to methodological best practices in higher education research. For example, specialized statistical software was utilized for data analysis to ensure accuracy and reliability of the findings.

By triangulating data from diverse sources and applying robust statistical methodologies, this research aims to offer an informed and comprehensive evaluation of the higher education reform in Moldova, potentially informing policy considerations for future educational initiatives.

Results and discussions

The 2022 higher education reform in Moldova aimed for a comprehensive modernization to meet international standards. The reform consolidated smaller universities into 11 public institutions to optimize resources and quality. It also integrated research institutes into universities to foster a synergy between research and education. Increased public funding targeted faculty salaries and international standing, aiming to retain quality staff. The reform also set goals like boosting faculty qualifications to 80% by 2030 and increasing participation in national and international research projects. The Ministry of Education expected that the reform would benefit students, faculty, and researchers by improving educational quality, career options, and research opportunities.

Assessing the impact of the university reform would entail not only achieving the reform's goals but also realizing the expected benefits for key stakeholders. Among the primary aims of the reform was the strengthening of the public university network. A key metric suggested for gauging the success of this objective is the number of smaller universities that have been absorbed. This is in line with the government directive that specifically mentioned the aim of "consolidating the network of universities by absorbing smaller ones while retaining 11 public higher education institutions." Data shown in the table below supports the notion that this objective has been met.

Table 1. Number of Public Higher Education Institutions and their Student Population Over Academic Years 2015/16-2022/23 in the Republic of Moldova.

| | Academic year | | | | | | | |
|---------------------|---------------|---------|---------|---------|---------|---------|---------|---------|
| | 2015/16 | 2016/17 | 2017/18 | 2018/19 | 2019/20 | 2020/21 | 2021/22 | 2022/23 |
| Universities | 31 | 30 | 29 | 29 | 27 | 24 | 24 | 21 |
| Students | 66,938 | 62,108 | 55,341 | 50,620 | 47,745 | 49,549 | 50,197 | 47,942 |

Source: National Bureau of Statistics.

As a direct consequence of the recent educational reform initiatives, there was a notable reduction in the total number of institutions dedicated to higher education, with three significant academic entities being completely dissolved and thus removed from the country's educational landscape. The institutions in question are the State Agricultural University of Moldova (SAUM), the State University of Tiraspol, which is strategically located in the capital city of Chisinau, and the Academy of Public Administration (APA). Each one of these now-disbanded academic establishments had been fulfilling a crucial, distinct role in satisfying the specialized professional requirements of the nation. Specifically, SAUM was instrumental in producing highly qualified, skilled professionals who were pivotal for the agri-food sector, itself a vital

pillar sustaining the national economy. On the other hand, the Academy of Public Administration (APA) was responsible for training and preparing the human capital required for effective governance in local public administration sectors.

One of the key arguments put forth by the Ministry of Education and Research was that the reform would enhance the quality of both education and research. This improvement was expected to directly result in the ascent of reformed universities in the Republic of Moldova in various international university rankings. The Ministry strongly believes that enhancing these aspects would give Moldovan institutions greater visibility and credibility on the global stage.

Among the most frequently cited rankings that universities in the country refer to is the Webometrics Ranking Web of Universities, accessible at <https://www.webometrics.info/en>. Over the years, this particular ranking system has been positioned and widely accepted as a benchmark indicator for the progress and standing of the nation’s educational institutions (Turcan et al., 2022). It has become something of a touchstone for assessing the evolution and performance of universities within the country.

Going forward, we will delve deeper into the progress of the public universities that were part of the absorption process during the reform, as well as examine those institutions that remained unaffected by the 2022 educational reform in the Republic of Moldova. By doing so, we aim to provide a comprehensive analysis that evaluates the effectiveness of the reform in reaching its stated goals and its impact on the broader educational landscape.

The 2022 Moldovan higher education reform aimed to boost university efficiency and performance. Post-reform, institutions were categorized into three groups: absorptive, unaffected, and in-process.

The 2023 Webometrics Ranking revealed significant shifts among Moldovan universities. Absorptive ones - like Moldova State University, Technical University of Moldova, and Academy of Economic Studies - saw ranking declines. Specifically, State University dropped 475 places, the Academy 168, and the Technical University 63. Only Ion Creangă State Pedagogical University improved its ranking.

Universities unaffected by the reform, like Nicolae Testemițeanu State University of Medicine and Pharmacy and the Police Academy, saw significant improvements, dropping 2865 and 13421 places in rankings, respectively. Conversely, Bogdan Petriceicu Hasdeu State University of Cahul and Alecu Russo State University of Balti experienced performance declines, rising 963 and 1766 places, respectively.

Table 2. Evolution of Public Universities in the Republic of Moldova in the „Webometrics Ranking Web of Universities” Framework

| | 2019 | 2020 | 2021 | 2022 | 2023 | 2023 față de 2022, +/- | Status ¹ |
|--|-------|-------|-------|-------|-------|------------------------|---------------------|
| Moldova State University | 3129 | 3414 | 3838 | 3612 | 4087 | +475 | absorbing |
| Technical University of Moldova | 3430 | 3116 | 3404 | 3762 | 3825 | +63 | absorbing |
| Academy of Economic Studies | 7844 | 8302 | 10613 | 7855 | 8023 | +168 | absorbing |
| Pedagogical State University „I. Creanga” | 9282 | 11002 | 12190 | 13413 | 13030 | -383 | absorbing |
| State University of Medicine and Pharmacy „Nicolae Testemițeanu” | 7135 | 6875 | 7069 | 6569 | 3704 | -2865 | unaffected |
| Alecu Russo State University of Bălți | 16425 | 16095 | 16986 | 16109 | 15146 | -963 | unaffected |
| USB „A. Russo” | 9303 | 8047 | 7638 | 8549 | 6783 | -1766 | unaffected |
| Police Academy | 21059 | 20948 | 19254 | 21163 | 7742 | -13421 | unaffected |

¹ The institutions in the table have been grouped into two categories: absorbing – those that have absorbed other higher education and research institutions; unaffected – which were not subject to the reform; in process – which were supposed to be absorbed by the absorbing institutions, but for various reasons have not been reorganized.

| | | | | | | | |
|--|-------|-------|-------|-------|-------|------|-----------------------------|
| State University of Physical Education and Sport | 18928 | 17676 | 18994 | 18967 | 19385 | +418 | <i>in process</i> |
| State University of Taraclia | 20374 | 22959 | 24690 | 23133 | 23507 | +374 | <i>in process</i> |
| Academy of Music, Theater, and Fine Arts | 16273 | 14513 | 16041 | 15987 | 16006 | +19 | <i>reformed²</i> |

Source: <https://www.webometrics.info/en>³

Overall, the data indicates that Moldova's 2022 educational reform did not boost university performance in the Webometrics rankings. While most unaffected institutions improved, the absorptive ones, who should benefit most from the reform, experienced weaker performances. This suggests that the absorption and reorganization process did not necessarily lead to immediate improvements in these rankings.

Another aim of the university reform is to enhance funding for higher education and research.

Table 3. The value of budget allocations for higher education and science and the size of budget expenditures in accordance with the state budget law of the Republic of Moldova for the years 2017-2023.

| | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|--|-------|-------|-------|--------|--------|--------|--------|
| Higher Education, millions of lei | 714,2 | 858,5 | 944,1 | 1030,3 | 1012,2 | 1268,8 | 1389,6 |
| Science, millions of lei | 481,1 | 467,8 | 444,9 | 540,4 | 545,4 | 555,6 | 623,1 |
| Total budget allocations, billions of lei | 36,9 | 41,3 | 47,7 | 51,6 | 55,4 | 65,2 | 83,2 |

Source: *State Budget Law of the Republic of Moldova*.

While data indicates a slight increase in funding for 2023, this isn't necessarily due to the reform. From 2022 to 2023, the budget for education rose by 9.5% and for science by 12.1%. However, a historical review shows that funding has been generally rising over the years, sometimes even more substantially before the reform. For instance, from 2021 to 2022, education funding increased by 25.3%. In total, since 2017, the budget for education has nearly doubled, and for science has increased by about 30%. The total value of expenditures increased over 2.2 times. Thus, the reform has not had a significant impact on funding.

A key factor in higher education development is student number, as they are essential stakeholders for universities. However, expectations that consolidating the university network would increase attractiveness weren't met: public higher education enrollments continue to decline. Data from 2017/18 to 2019/20 shows a consistent decline in both bachelor and master's students in Moldova, potentially due to demographic trends and increased interest in studying abroad. Yet, during the 2020/21 COVID-19 pandemic, enrollments rose, possibly due to travel restrictions and pandemic uncertainties deterring overseas study. Also, allowing high school graduates to attend university without the BAC might have influenced this increase.

Table 4. Trends in student enrollment in higher education institutions in the Republic of Moldova from 2017 to 2022 by study cycles.

| | Academic year | | | | | |
|-----------------------|---------------|---------|---------|---------|---------|---------|
| | 2017/18 | 2018/19 | 2019/20 | 2020/21 | 2021/22 | 2022/23 |
| Bachelor | 49112 | 45466 | 41771 | 43257 | 43621 | 42056 |
| Master | 12074 | 10947 | 10968 | 11504 | 11594 | 10093 |
| Integrated HE studies | 4357 | 4195 | 4101 | 4272 | 4432 | 4609 |
| Total | 65543 | 60608 | 56840 | 59033 | 59647 | 56758 |

Source: *National Bureau of Statistics*.

² The reform was limited to changing the founding body (switching from the Ministry of Education and Research to the Ministry of Culture).

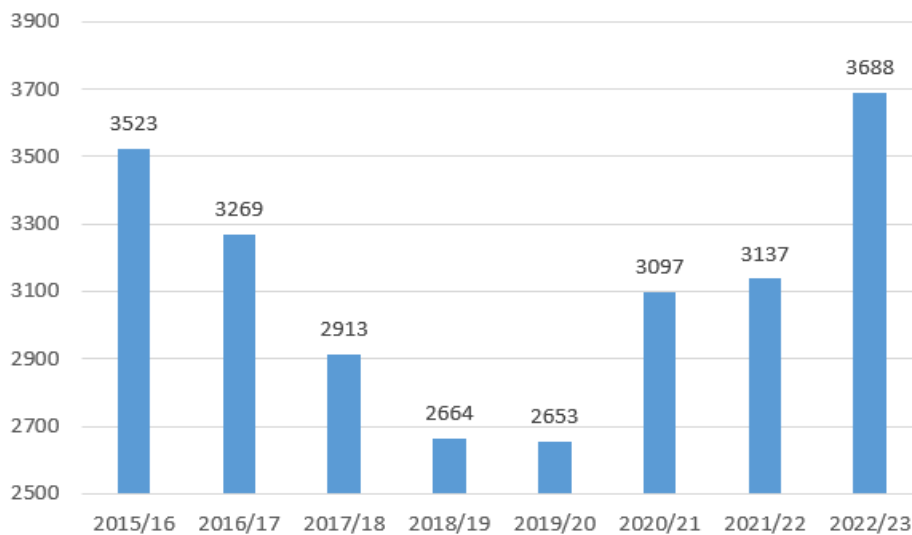
³ The last ranking of July for each of the years of analysis is presented.

Integrated higher studies have consistently grown in enrollment over this period, indicating an increasing preference for such programs. However, in the 2022/23 academic year post-reform, bachelor's and master's enrollments declined, likely reflecting uncertainties from university restructurings. Still, integrated studies, primarily medical studies at the ‘Nicolae Testemițeanu’ State University of Medicine and Pharmacy – untouched by the reform – continued to rise.

Veterinary medicine, a field from the absorbed State Agrarian University of Moldova, saw a consistent decrease in students. The uncertainty surrounding its future under the Technical University of Moldova (UTM) may have deterred potential students. Overall, this resulted in a 9% drop in students for that specialty from the previous year.

A potential indicator of public university network consolidation could be the number of students returning to a university, which has shown an increase post-reform (Figure 1).

Figure 1. Returning student numbers at public higher education institutions in Moldova from academic years 2015/16 to 2022/23.



Source: elaborated by others based on National Bureau of Statistics data.

The data suggests a direct relationship between the reduction in the number of universities and an increase in the average number of returning students per institution. For instance, in the academic year 2020-21, this number rose by 16.7% due to the absorption of ASM University “Dmitrie Cantemir” and the Institute of International Relations of Moldova (IRIM) by USM. The current reform caused a similar 17.5% rise. Although appearing positive, this might only slow the decline caused by demographic factors. With many students studying part-time, the number of full-time students returning to a single university is even lower.

This situation appears more concerning when compared to EU member states' figures[1]. It's clear that the average number of students per university in Moldova is significantly lower than that of EU countries. For instance, in 2020, an average Moldovan university had 3097 students. Despite rising to 3068 in 2023 due to reforms, it remains notably less than European counterparts. As an example, in 2020, Germany, with 240 public higher education institutions and 2,605.4 thousand undergraduate and master students, had an average of 10,856 students per university. Denmark, which inspired Moldova's university reform, with only 8 institutions and a total of 297.4 thousand students, had an average of 37,175 students per university – the highest among analyzed countries.

In response to Moldova's academic reform, there was a brief upsurge in the typical student count per university, yet it still falls behind many EU nations. This highlights the urgency for additional changes, better accessibility to tertiary education, and plans to address the falling population numbers. The results of the academic restructuring, with the intent to bolster the state university system and elevate the student count at each institution, have been underwhelming.

A key insight is the persistent call for revisiting the structure by decreasing the total of state-run higher education establishments. The ambition is to near the European base average of about 8,000 scholars per academic institution, with intentions for a steady escalation.

In light of the unrelenting drop in student figures, policymakers might evaluate the European notion of a „city as a university,” picturing a unified academic institution in Chisinau. The prospect of a singular university encompassing all of Moldova could be on the cards. Given projections indicating a student populace between 13 and 18 thousand by the year 2030, the idea of unifying higher academic learning within a single institution resonating with European models is an avenue to consider. It's evident that the moves toward academic institution amalgamation will surpass the present reform, necessitating well-grounded reasoning over mere populist rhetoric.

Conclusions

1. The study critically assesses Moldova's 2022 higher education reform, highlighting its multi-faceted goals and implications for broader educational and societal contexts.

2. Employing quantitative methods and diverse data, the research offers valuable insights for future educational policy initiatives.

3. The reform effectively streamlined Moldova's higher education landscape but raised concerns about the dissolution of specialized institutions.

4. Webometrics rankings in 2023 reveal that the reform did not improve Moldova's global educational standing, questioning the efficacy of the consolidation strategy.

5. Incremental funding increases in 2023 could not be conclusively linked to the 2022 reform, as similar trends existed previously.

6. The reform did not reverse declining student enrollments in traditional programs, while integrated studies saw a rise, suggesting mixed effectiveness.

7. Despite minor improvements in student retention rates, Moldova still lags behind EU averages, indicating the need for further structural changes.

8. The ongoing decline in student numbers suggests that a more radical consolidation model aligned with European standards may better address the challenges facing Moldova's higher education system.

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