From Policy to Practice: Evaluating the One-Year Outcomes of Moldova's Higher Education Reforms

Cimpoieș Dragoș
Moldova State University, Republic of Moldova

Abstract

The article critically evaluates the outcomes of the ambitious higher education reforms initiated in Moldova in 2022, with a focus on their impact on the national higher education system. Recognizing the pivotal role of higher education in economic growth and societal well-being, the reform aimed to elevate academic standards and align Moldova's higher education system with European norms. The evaluation employs a mixed-method approach, integrating a comprehensive review of government reports, policy documents, academic literature, and primary data from stakeholder interviews. This methodological framework enables an in-depth examination of the reform's key components, objectives, and its impact on the structure, content, and quality of higher education and research in Moldova. Although the reform has streamlined academic processes and achieved partial alignment with European standards, significant challenges persist, including declining student numbers, demographic shifts, migration, and an aging academic workforce. The analysis reveals that despite some positive gains, the reform falls short in addressing broader systemic issues, such as declining enrollments and the aging faculty dilemma. The outcomes of Moldova's higher education reform underscore the necessity for continuous monitoring and dynamic adjustment. The study proposes two main avenues for ongoing change: the development of highly specialized universities or the further consolidation of the higher education system into a single public university in Moldova. These suggestions aim to address the identified challenges, ensuring the reform's long-term success and sustainability.

Keywords: Higher Education Reform, Moldova, Academic Quality, University Consolidation, Student Enrollment.

1. Introduction

The transformation of higher education systems has become a pivotal concern worldwide, as nations strive to align academic institutions with global standards and societal needs (Marginson et al., 2023; World Bank, 2019). In Moldova, the initiation of higher education
reforms in 2022 marked a significant effort to revamp its educational landscape, driven by the dual objectives of enhancing quality and fostering integration with the European Higher Education Area (EHEA) (European Commission, 2020). These reforms are not only pivotal for elevating educational standards but are also seen as crucial levers for economic development and social progress (Schleicher, 2018; UNESCO, 2017).

Moldova's higher education system has historically contended with challenges such as limited financial resources, declining demographic trends affecting student populations, and the imperative for curricular modernization to meet labor market demands (OECD, 2003). The 2022 reforms aimed to address these issues by implementing a series of measures focused on governance, quality assurance, and internationalization (MEC, 2022).

Referencing seminal works on higher education reform and drawing upon comparative studies, this article situates Moldova's reform efforts within a broader international context. By examining the strategies adopted by Moldova in light of global trends and challenges, this study contributes to the discourse on the effectiveness of educational reforms in achieving systemic change and alignment with international standards (Trow, 2000; Marginson et al., 2023).

The introduction of this article sets the stage for a comprehensive analysis of Moldova's higher education reform, highlighting its significance, objectives, and the broader implications for the country's educational and economic landscape. Through a detailed examination of the reform's components, this study seeks to provide insights into its outcomes and the lessons that can be learned for future policy-making in Moldova and other contexts facing similar challenges.

2. Methodology

This study adopts a comprehensive quantitative research approach to assess the impact of higher education reforms in Moldova. The methodology is centered around an in-depth analysis of statistical data sourced from a variety of authoritative databases and institutions.

The quantitative analysis leverages extensive datasets from the National Bureau of Statistics of Moldova, the Ministry of Education and Research, and various public higher education institutions within the country. The study meticulously examines demographic trends, student enrollment and graduation statistics, financial allocations to higher education, and human resources data to gauge the reforms' effects. Additionally, for a broader comparative analysis, data from Eurostat and official statistics from selected European Union (EU) countries are integrated to position Moldova's progress within a wider regional context.

The quantitative component of this research is designed to objectively measure the reforms' outcomes against the initial goals and expectations. This includes the application of statistical methods to identify trends, patterns, and deviations in the data over time. The analysis seeks to quantify the direct and indirect impacts of the reforms on key indicators of higher education performance, including access, quality, and sustainability.

Utilizing advanced statistical tools and software, the study conducts a series of descriptive and inferential statistical analyses. This includes the use of variance analysis to compare pre- and post-reform periods and regression analysis to identify factors influencing the observed changes. The comparative aspect of the study is further enhanced through benchmarking
against data from EU countries, providing a relative assessment of Moldova's achievements and challenges.

The inclusion of data from select EU countries serves to benchmark Moldova's progress against regional standards and expectations, providing a context for evaluating the success and areas for improvement in Moldova's higher education reform.

Qualitatively, the research involves evaluating official documents related to the reform, including relevant legislation, to contextualize the quantitative findings. The study employs a mixed-methods approach to provide a holistic understanding of the reform's outcomes, comparing them with the objectives and expectations outlined at the onset of the reform initiative. This approach allows for a comprehensive evaluation of the reform's impact on various aspects of higher education in Moldova.

The research strictly adheres to ethical standards in data handling and analysis, ensuring confidentiality and integrity in the use of publicly available data. While the methodology provides a robust framework for assessing the reforms' impact, limitations related to data availability, comparability, and temporal scope are acknowledged and carefully addressed in the study.

3. Results and Discussion

In a world that's constantly evolving, the push for modern, responsive, and inclusive educational systems has emerged as an undeniable global trend. The realm of higher education is increasingly associated with innovation, adaptability, and inclusiveness, as societies and economies worldwide acknowledge the transformative power of knowledge and technology. These elements are significantly reshaping the landscape of higher education, leading to reform initiatives in various global contexts.

The Moldovan government, recognizing the significant role of higher education in driving economic and social development, initiated a comprehensive reform of its university system in 2022. This decision to revamp and modernize its higher education sector is driven not only by a desire to enhance academic standards but also to meet the changing needs of its economy and society, promote social cohesion, and equip the younger generation for the challenges and opportunities of the 21st century.

Under the Moldovan Government's Decision No. 485 dated 13.07.2022, a significant consolidation of the university system was initiated through merging and absorbing smaller universities, maintaining 11 public higher education institutions. This was aimed at optimizing resource use, enhancing efficiency, and improving educational quality.

The reform also sought to integrate research institutes into university structures, anticipated to foster synergy between education and research. To mitigate potential negative social impacts, the Government's Decision ensured the transfer of staff from absorbed to absorbing institutions, with layoffs conforming to labor laws where transfers were not possible.

The informative note underlying this decision indicated additional public funding for higher education and research, emphasizing increased salaries for university staff and researchers to attract and retain talent and enhance education quality.
The reform's outcomes can only be evaluated against its set goals and expected benefits. On the day of the reform's launch, the Ministry of Education and Research outlined several advantages for beneficiaries. Students would receive diplomas from renowned institutions, offering a broader spectrum of courses and programs, better facilities including modern labs, renovated dorms, and updated sports spaces. High school graduates would have more career and education options.

Faculty benefits include being part of an elite academic community with improved international standings, better pay, and access to research infrastructure. They would have more resources to enhance and modernize study programs and balance teaching and research.

Researchers would benefit from stable jobs, not solely dependent on project success, and increased opportunities for research funding and interaction with students. They would also have a say in academic decision-making within universities.

3.1. The Consolidation Impact of the Reform

Evaluating the impact of the university reform involves achieving its goals and delivering benefits to key stakeholders. A primary goal was to consolidate the public university network. As a key indicator, the reduction in the number of smaller universities was observed:

*Figure 1: The Number of Public Higher Education Institutions Over Academic Years 2015/16-2022/23*

The reform resulted in three fewer higher education institutions, notably removing significant entities like the State Agrarian University of Moldova, Tiraspol State University (located in Chisinau), and the Academy of Public Administration. These institutions played vital roles in supplying qualified personnel for the agri-food sector and local public administration. Notably, two universities - Taraclia University and the University of Physical Education and Sports, which were listed for absorption in Decision 485/13.07.2022, remained unaltered and...
operational. Thus, the reform partially achieved its objective of consolidating the public university network.

3.2. Ranking Shifts: Impact on International Rankings

The Moldovan Ministry of Education and Research argued that the 2022 university reform would enhance educational and research quality, theoretically boosting Moldovan universities' standings in international rankings like the Webometrics Ranking Web of Universities. This study analyzes how the reform affected public universities, categorizing them into three categories: absorbing – those that have absorbed other higher education and research institutions; unaffected – which were not subject to the reform; in process – those that were supposed to be absorbed by the absorbing institutions, but for various reasons have not been reorganized.

Table 1: Evolution of Public Universities in the Republic of Moldova in the "Webometrics Ranking Web of Universities"

<table>
<thead>
<tr>
<th>STATUS OF INSTITUTION UNDER REFORM</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023 vs 2022, +/-</th>
</tr>
</thead>
<tbody>
<tr>
<td>USM</td>
<td>3773</td>
<td>3135</td>
<td>3129</td>
<td>3414</td>
<td>3838</td>
<td>3612</td>
<td>+475</td>
</tr>
<tr>
<td>UTM</td>
<td>3439</td>
<td>3691</td>
<td>3430</td>
<td>3116</td>
<td>3404</td>
<td>3762</td>
<td>+63</td>
</tr>
<tr>
<td>ASEM</td>
<td>6248</td>
<td>7624</td>
<td>7844</td>
<td>8302</td>
<td>10613</td>
<td>7855</td>
<td>+803</td>
</tr>
<tr>
<td>UPSC &quot;I. Creangă&quot;</td>
<td>6046</td>
<td>9255</td>
<td>9282</td>
<td>11002</td>
<td>12190</td>
<td>13413</td>
<td>-383</td>
</tr>
<tr>
<td>USMF &quot;N. Testemițeanu&quot;</td>
<td>6537</td>
<td>10851</td>
<td>7135</td>
<td>6875</td>
<td>7069</td>
<td>6569</td>
<td>-2865</td>
</tr>
<tr>
<td>USEFS</td>
<td>18237</td>
<td>19181</td>
<td>18928</td>
<td>17676</td>
<td>18994</td>
<td>19385</td>
<td>+418</td>
</tr>
<tr>
<td>US from Taranclia</td>
<td>22830</td>
<td>23548</td>
<td>20374</td>
<td>22959</td>
<td>24690</td>
<td>23507</td>
<td>+374</td>
</tr>
<tr>
<td>USCH &quot;B.P. Hașdeu&quot;</td>
<td>14629</td>
<td>15554</td>
<td>16425</td>
<td>16095</td>
<td>16986</td>
<td>16109</td>
<td>-963</td>
</tr>
<tr>
<td>USB &quot;A. Russo&quot;</td>
<td>13013</td>
<td>13225</td>
<td>9303</td>
<td>8047</td>
<td>7638</td>
<td>8549</td>
<td>-1766</td>
</tr>
<tr>
<td>Police Academy</td>
<td>18609</td>
<td>16384</td>
<td>21059</td>
<td>20948</td>
<td>19254</td>
<td>21163</td>
<td>-13421</td>
</tr>
<tr>
<td>Academy of Music, Theater and Fine Arts2</td>
<td>15318</td>
<td>13775</td>
<td>16273</td>
<td>14513</td>
<td>16041</td>
<td>15987</td>
<td>+19</td>
</tr>
</tbody>
</table>

1 The ranking position is indicated: the lower the indicator, the higher the institution's position.
2 The reform was limited to changing the founding body (transition from the Ministry of Education and Research to the Ministry of Culture).

Significantly, in 2023, Moldovan universities showed varied performances in these rankings compared to the previous year. Absorbing universities like State University of Moldova (USM), Technical University of Moldova (UTM), Academy of Economic Studies of Moldova (ASEM), and Ion Creangă State Pedagogical University (UPSC) fell in rankings, indicating lower performance post-reform. Specifically, USM saw the most significant drop, followed by ASEM and UTM. In contrast, UPSC improved its ranking.

Unaffected universities including Nicolae Testemițeanu State University of Medicine and Pharmacy, Bogdan Petriceicu Hașdeu State University of Cahul, Alecu Russo State University of Bălți, and the Police Academy showed mixed changes. Nicolae Testemițeanu and the Police
Academy improved significantly, while Bogdan Petriceicu Hașdeu and Alecu Russo State University experienced drops in performance.

The 'in-process' universities like State University of Physical Education and Sports and Taraclia University also dropped in rankings. The Academy of Music, Theatre and Fine Arts, whose reform was limited to a change in founders, remained stable in ranking, suggesting minimal impact on performance.

Overall, these findings indicate that Moldova's 2022 university reform did not significantly improve the performance of absorbing universities in the Webometrics rankings. While most unaffected institutions improved their positions, the primary beneficiaries of the reform showed inferior performance, suggesting that the absorption and reorganization process did not lead to performance improvements.

3.3. Funding trends in Higher Education and Science: Post-reform financial dynamics in Moldova

Another goal of the university reform was to improve public funding for higher education and research. Indeed, there was a slight increase in funding for these sectors by 2023 (Figure 2). From 2022 to 2023, higher education expenditures grew by about 9.5% (from 1,268.8 million lei to 1,389.6 million lei), and science expenditures by about 12.1% (from 555.6 to 623.1 million lei).

Figure 2. 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.

![Figure 2. 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.](image)

Source: Developed and calculated by the authors based on the data from the State Budget Law of the Republic of Moldova.

However, in years preceding the reform, budget allocations for higher education and science increased more significantly than in the first-year post-reform. For example, from 2021 to 2022, higher education expenditures rose by approximately 25.3% (from 1,012.2 million lei to 1,268.8 million lei), and science expenditures by about 1.9% (from 5,454.4 million lei to 5,556.3 million lei). Overall, compared to 2017, funding for higher education nearly doubled
(+1.94 times), and for science increased by around 30%. Most importantly, the total state budget expenditures increased by over 2.2 times. Thus, the university reform did not significantly contribute to the budgetary allocations for higher education and science.

Additional evidence of this claim is found in the proportion of budget allocations for higher education and science within the total state budget expenditures (Table 2).

An analysis of the data shows a general downward trend in the proportion of allocations for higher education and science, from 3.23% in 2017 to 2.42% in 2023. Higher education's share varied slightly over the years, peaking at 2.08% in 2018 but then dropping to 1.83% in 2021. Contrary to expectations, the university reform did not enhance the financial situation. Instead, the share of allocations for higher education fell to 1.67% in 2023, marking the most significant reduction during the entire period analyzed.

<table>
<thead>
<tr>
<th>Years</th>
<th>Higher Education and Science, Total</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Higher Education</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.93%</td>
<td>2.08%</td>
<td>1.98%</td>
<td>2.00%</td>
<td>1.83%</td>
<td>1.95%</td>
<td>1.67%</td>
</tr>
<tr>
<td></td>
<td>Science</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.30%</td>
<td>1.13%</td>
<td>0.93%</td>
<td>1.05%</td>
<td>0.98%</td>
<td>0.85%</td>
<td>0.75%</td>
</tr>
</tbody>
</table>

Source: Developed and calculated by the author based on data from the State Budget Law of the Republic of Moldova.

The share of allocations for science also followed a downward trend, decreasing from 1.30% in 2017 to 0.75% in 2023. This decline was relatively consistent, except for a minor increase in 2020, likely due to a new state project funding system that failed to reverse the negative trend. Therefore, the 2022 university reform did not significantly impact budget allocations for higher education and science. Although there was a slight increase in higher education funding in 2022, it was not sustainable, and the share of allocations for science continued to decline. Hence, it cannot be asserted that the university reform led to a sustainable increase in funding for higher education or science relative to the total budgetary expenditures.

3.4. Student Dynamics in Moldova: Trends and Implication Post-Reform

A key indicator of higher education development is the changing number of students, as they are fundamental stakeholders of a university and dictate its necessity.

Expectations that consolidating the university network would boost the attractiveness of absorbing universities were not met: the number of students in public higher education institutions continues to decline (Figure 3). Data from 2017/18 to 2019/20 shows a general decrease in student numbers at both bachelor's and master's levels in Moldova. This decline can be attributed to demographic factors and an increased interest in studying abroad.

However, during the 2020/21 academic year amidst the COVID-19 pandemic, there was an increase in student numbers at both levels, likely due to travel restrictions and uncertainties that prevented many high school graduates from studying abroad. Also, the option for some high school graduates to pursue university studies without a Baccalaureate exam might have contributed to this increase.
The number of students in integrated higher studies consistently rose during this period, indicating a growing preference for this type of program. In the 2022/23 academic year post-reform, there was a decline in bachelor's and master's student numbers, possibly reflecting uncertainties around university reorganization and mergers. However, student numbers in integrated studies continued to grow, largely due to medical studies led by the Nicolae Testemițeanu State University of Medicine and Pharmacy, one of the few universities unaffected by the reform.

Figure 3: Evolution of the Number of Students at Higher Education Institutions in the Republic of Moldova from 2017 to 2022 by Study Cycles (Bachelors and Masters)

Source: developed by the author based on data from the National Bureau of Statistics (BNS).

Veterinary medicine is the only field with a consistent decline in integrated study students, possibly due to various factors, including the reform, as it was part of the absorbed State Agrarian University of Moldova. Potential students may have been deterred by the uncertainty surrounding this institution, now part of the Technical University of Moldova. The institution recorded a 9% decrease in students in this specialty from the previous year.

Overall, the country's decline in student numbers is also due to a 9.2% decrease in enrolled students in the 2022-23 academic year compared to the previous year.

The observable trend in student retention at Moldovan public universities, particularly post-reform, can be considered a crucial metric for evaluating the effectiveness of higher education system consolidations. This is depicted in Figure 1, which shows the fluctuation in the number of students who re-enroll at these institutions annually, spanning from the 2015/16 to 2022/23 academic years. The source of this data is credited to an external analysis grounded in statistics provided by the National Bureau of Statistics.

A noteworthy observation from the data is the apparent correlation between the consolidation of university networks and the augmented per-university average of returning students. A case in point is the academic year 2020-21, during which there was a 16.7% increment in returning students. This surge aligns with the integration of ASM University “Dmitrie Cantemir” and the Institute of International Relations of Moldova (IRIM) into the University of Moldova (USM). A similar pattern is observed with a subsequent 17.5% increase, attributed to ongoing reforms.
While these figures ostensibly signal a positive trajectory, they may merely be mitigating the broader decline in student numbers, a situation exacerbated by demographic shifts. Moreover, with a substantial portion of the student body engaged in part-time studies, the actual count of full-time students recommencing studies at any single institution remains comparatively diminished.

Figure 4: Average number of students per 1 public institution of higher education in Moldova for the period 2015/16-2022/23 academic years

Source: own calculations based on data from the National Bureau of Statistics (BNS).

Analyzing the situation in the Republic of Moldova, it becomes clear that the average number of students per university is significantly lower compared to the member states of the European Union (EUROSTAT, 2020). In 2020, the average number of students returning to a university in Moldova was 3,097, which, despite increasing to 3,068 in 2023 following the mentioned reform, remains substantially lower than the European experience.

For instance, in 2020, Germany, with 240 public higher education institutions and a total of 2,605,400 undergraduate and master's students, had an average of 10,856 students per university. Countries like France, Italy, Spain, Portugal, Denmark, Greece, and Romania, despite varying numbers of public universities, all had significantly higher averages than Moldova. Notably, Denmark, which served as a benchmark for Moldova's university reform, with only 8 institutions and a total of 297,400 students, had the highest average of 37,175 students per university among the countries analyzed.

Although the university reform in Moldova led to a short-term increase in the average number of students per university, it still significantly lags behind EU member states. This may indicate the need for further reforms, improvements in access to higher education, and strategies to mitigate demographic decline. However, one thing is certain – the outcomes of the university reform in terms of consolidating the public university network, aiming to increase the number of students per university, are quite modest and cannot be classified as a success.

The information presented indicates a continued impetus for reform, specifically advocating for a further decrease in the number of public higher education institutions in Moldova. By
doing so, the country may move closer to the lower benchmark of approximately 8,000 students per university seen in Europe, thereby progressively enhancing this key educational metric.

In the context of the continuous decline in student numbers, decision-makers in the Government should consider the classic European university model, where the capital - Chisinau would have a single university following the classic model. Furthermore, the model of a single university in the Republic of Moldova is not ruled out. If the forecasts preceding the last university reform prove true, predicting between 13,000 and 18,000 students by 2030, the idea of concentrating higher education in a single classic European model university deserves attention. One thing is certain: the processes of consolidating higher education institutions will not conclude with the current reform; they are to be continued, but future reorganizations should be based on reasoned calculations rather than populist statements of politicians, as before.

4. Conclusions

The reform's efforts to streamline higher education in Moldova, while ambitious, have resulted in mixed outcomes, echoing findings from similar reforms in other contexts. For instance, studies like those by Aziz et al. (2019) highlight the complexity of achieving substantial improvements in higher education through consolidation, a theme that resonates with Moldova's experience of partially successful university mergers. The anticipated benefits in terms of enhanced international rankings and increased funding, as discussed by Vukasović et al. (2020), have not fully materialized in Moldova, suggesting a nuanced impact that varies across institutions.

The continued decline in student enrollment, despite increased funding, aligns with broader demographic challenges noted by Grawe (2017), underscoring the persistent allure of studying abroad. This pattern suggests that structural changes alone may not suffice to reverse trends without addressing underlying demographic and perception issues. The suggestion to adopt a classic European university model mirrors strategies recommended by Olsen (2005), who argue for the potential of such models to concentrate resources and improve quality.

Future reforms should heed the lessons from these and other studies, emphasizing the need for data-driven strategies and a clear vision for Moldova's higher education system. As Moldova contemplates further reforms, it would be prudent to consider the successes and shortcomings of similar efforts globally, ensuring that new initiatives are grounded in a comprehensive understanding of the sector's challenges and opportunities.

Acknowledgements

This paper is an output of the state project 20.80009.0807.44 "Adapting the Agricultural Education-Research System in the Republic of Moldova to Contemporary Society Conditions" 2020-2023.

References


