Trends in defending doctoral theses in the Republic of Moldova

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Methodological aspects of research

- Period - 2014-2016 (until June);
- Decisions of CNAA Attestation Commission on Specialized Scientific Councils (defending commissions), published on the official website of CNAA;
- Statistical analysis in conferring scientific degrees, according to various parameters;
- Comparative analysis with the past and benchmarking;
- Analysis of degrees on the following levels: scientific fields (6), scientific branches (37), scientific profiles (110) and scientific specialties (399).
The doctorate in the Rep. of Moldova... in figures

Number of PhD students – 1,7 thousands (in addition about 3,5 thousands people work on theses outside the studies);

Number of doctoral schools – 48;

Number of persons authorized with the right of PhD supervisor – 1,2 thousands;

Number of scientific degrees awarded in 2014-2016 (June) - 493;

During 1993-2015 there were awarded 540 degrees of Doctor Habilitat (former Doctor nauk) and 3887 degrees of Doctor of Science (former Kandidat nauk), plus 599 scientific degrees awarded abroad have been recognized in MD.

Distribution of awarded degrees by scientific fields
Number of scientific degrees awarded annually
(per 100 thousand inhabitants)

- Switzerland
- Sweden
- Germany
- Slovakia
- Finland
- United Kingdom
- Austria
- Ireland
- Norway
- Slovenia
- Czech Republic
- Netherlands
- United States
- Denmark
- Romania
- Italy
- France
- Spain
- Belgium
- Greece
- Poland
- Japan
- Croatia
- Hungary
- Lithuania
- Portugal
- Estonia
- Bulgaria
- Latvia
- Iceland
- Moldova
- FYR of Macedonia
- Turkey
- Malta
- Cyprus

Graph shows the number of scientific degrees awarded annually per 100 thousand inhabitants for various countries, with Switzerland having the highest number, followed by several other countries including Sweden, Germany, and others.
Thematic distribution of doctoral theses in 2014-2016

- Social and Economic Sciences: 54%
- Juridical Sciences: 19%
- Education Sciences: 15%
- Medical Sciences: 16%
- Economic Sciences: 13%
- Other social sciences: 7%
- Natural Sciences: 15%
- Humanities: 9%
- Agricultural Science: 3%
- Engineering Sciences and Technologies: 3%
Causes of differences on areas:

- **Different difficulty of doing research in various fields** (ex., agriculture versus pedagogy);
- **Different requirements for quality of dissertations** applied in some areas and thus easier ways to get degrees (ex., juridical versus mathematical sciences);
- **Different perspectives after graduation and obtaining scientific degree** (ex., engineering versus medicine);

General problems of R&D system which determine acceptance of low quality theses in some areas:

- **The lack of meritocracy** in a post-Soviet and post-socialist state (e.g., reputational mechanisms do not work usually);
- **Small scientific communities** (close relations of a limited number of available experts);
- **Limited supply of the system with resources** (lack of attractiveness, possibility of corruption).
Distribution of theses by scientific branches, in% of total

- Medicine
- Technical sciences
- Physics-Mathematics
- Biology
- Agriculture
- Economy
- Chemistry
- Philology
- History
- Pedagogy
- Philosophy
- Law
- The study of arts
- Veterinary medicine
- Geography
- Pharmacy
- Sociology
- Politology
- Psychology

- until 1995
- 1995-2013
- 2014-2016
The reproduction of human scientific potential (with scientific degrees) in the Republic of Moldova
Distribution of PhD students and researchers in Moldova
Competitiveness of areas versus number of awarded degrees

Publication in Scopus:

- In the first four areas according to the number of awarded degrees (medicine, economics, law, education): 58% of awarded degrees and only 5% of the number of articles of Moldovan researchers
- The most competitive four areas (physics-mathematics, engineering, chemistry, biology): 72% of the number of articles of Moldovan researchers and only 21% of awarded degrees.

(Scopus, 1996-2014)
Distribution of doctoral theses by institutions, in 2014-2016

<table>
<thead>
<tr>
<th>Institution</th>
<th>Theses</th>
</tr>
</thead>
<tbody>
<tr>
<td>State University of Moldova</td>
<td>109</td>
</tr>
<tr>
<td>State University of Medicine and Pharmacy &quot;N.Testemiteanu&quot;</td>
<td>56</td>
</tr>
<tr>
<td>Legal and Political Research Institute of the ASM</td>
<td>34</td>
</tr>
<tr>
<td>Free International University of Moldova</td>
<td>34</td>
</tr>
<tr>
<td>State Pedagogical University &quot;I.Creanga&quot;</td>
<td>31</td>
</tr>
</tbody>
</table>
The proportion of habilitated persons of all people with scientific degree

<table>
<thead>
<tr>
<th>Field</th>
<th>Number of people with habilitation</th>
<th>Number of people with scientific degree without habilitation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural Sciences</td>
<td>223</td>
<td>1450</td>
</tr>
<tr>
<td>Engineering Sciences and Technologies</td>
<td>107</td>
<td>601</td>
</tr>
<tr>
<td>Medical Sciences</td>
<td>232</td>
<td>1227</td>
</tr>
<tr>
<td>Agricultural Science</td>
<td>49</td>
<td>434</td>
</tr>
<tr>
<td>Social and Economic Sciences</td>
<td>491</td>
<td>1864</td>
</tr>
<tr>
<td>Humanities</td>
<td>174</td>
<td>780</td>
</tr>
</tbody>
</table>
Findings:

Confirmed trends:

- Low numbers of PhD theses defending in Moldova in regional and international context;
- Predominance of the social and economic sciences by the number of theses;
- Further reducing of the importance of branches of some natural and engineering sciences, previously well-developed.

New elements identified by our study:

- Trend of juridical and education sciences to be placed on top by number of defending theses to the detriment of medicine and economics;
- Rapid growth in the last period of theses in some small scientific branches such as psychology or the study of the arts;
- Relatively low use of PhD holders in training doctoral students.
THANK YOU FOR YOUR ATTENTION!

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