The 2017 University Metaranking Romanian University Ranking[*]

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Abstract: This article continues the work done for the 2016 University
Metaranking and updates its results for the 2017 edition, with the new data
available for 2017. The 2017 University Metaranking relies on the results of
the performance of Romanian universities in international league tables /
rankings in the field of higher education. The results are discussed from a
qualitative and quantitative point of view; furthermore, a sensitivity analysis is
also applied to them. Moreover, alongside the global results, the article
discusses results on domains and subjects. Starting from the resulting
metaranking, the article proposes a possible classification of Romanian
universities into four classes and also suggests possible future public policies
concerning especially (research) funding of performant universities at
national level. Potential international and national developments are also
discussed, with a view of supporting Romanian universities to improve their
performance at international level.

Keywords: Romanian metaranking, higher education, university, league
tables, meta-analysis

I. Introduction

The Romanian Ministry of National Education and Scientific Research, through a High-Level Experts Group, elaborated and published in 2016 the 2016 University Metaranking (Andronesi, Banabic, Buzea, David, Florian, Miroiu, Murgescu, Prisăcariu and Vlăsceanu, 2016). In this metaranking, Romanian universities were ranked according to the combined results of their individual performances, as these were reflected in the international academic rankings of universities.

The G3A Think Tank[1] verified the robustness and stability of the results of the 2016 University Metaranking on the basis of a sensitivity analysis – using deciles instead of quintiles – and confirmed through the G3A – 2016 University Metaranking the results adopted by the Ministry of National Education and Scientific Research (David, Corlan and Frangopol, 2016).

In this article, we are updating the metaranking of the responsible Ministry with the new data available for 2017 in the international university rankings. Moreover, in order to answer a number of debates on the 2016 University Metaranking, this metaranking is accompanied by a clarifying qualitative analysis and by a discussion on the ranking on domains.

II. Global Analysis of Universities

As shown in the 2016 University Metaranking (Andronesi et al., 2016), a modern university deals with knowledge. In other words, it deals with generating knowledge through research, with disseminating knowledge through education (teaching/learning) and with using the knowledge for services towards society. It is obvious that education is the key element in a university, as it differentiates universities from other research units (e.g. research institutes) and from those offering services towards society (e.g. companies). Some universities remain focused

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[1]More details available here: http://rpss.inoe.ro/articles/grup-de-analiza-atitudine-si-actiune-in-politica-stiintei-din-romania-think-tank-g3a-infiintat-ca-urmare-a-propunerii-mes

especially on the educational component, transmitting the existent knowledge and having an academic profile focused on bachelor studies (similar to the American colleges), often with a local/regional reach. Other universities, alongside education, also develop the component involving services towards the community (relationship with the society / the socio-economic environment), becoming thus entrepreneurial universities; however, these also usually have a local/regional reach. Finally, in line with the *Humboldtian* model, some universities not only generate new knowledge through research, but place research at the basis of education (consequently students become not just users/assimilators of knowledge, but also knowledge creators, more performant and better integrated on the labour market and within society), as well as at the basis of the services towards community (which thus become innovative / with a competitive advantage); this way, *Humboldtian* universities acquire an academic profile focused on university studies at bachelor/master/doctoral level, with a national and international reach (some of them, through exceptional results, become *world-class*).

The global analysis and evaluation of universities are fundamental for understanding comprehensively the quality / competitiveness / excellence of the academic environment in universities. A university with a national and international reach – especially when it becomes a *world-class* type, as well – in principle cannot be well ranked in domain rankings, but not be present in global rankings. This is because a university of this type meets the minimal quality standards in almost all its programmes (which makes it visible in rankings), is competitive in most rankings and achieves levels of excellence in a number of representative ones (competitiveness / excellence ensures a top position in rankings). Consequently, global evaluation of universities is a comprehensive diagnostic for the quality / competitiveness / excellence of the academic environment from universities.

II.1. Qualitative Analysis

II.1.1. International university rankings of reference (which use global academic indicators – included in the 2017 University Metaranking):

1. The Chinese ranking *Academic Ranking of World Universities* (*ARWU*/Shanghai ranking) includes only one Romanian university, namely Babeş-Bolyai University of Cluj-Napoca/UBB, which ranks on 601 – 700 place internationally, in the *Candidates* section (candidates for the Top-500), a section first introduced in 2017 (http://www.shanghairanking.com/ARWU2017Candidates.html). The ranking is based on educational and research indicators (with emphasis on Web of Science/Clarivate Analytics publications and on graduates' prestige).

2. The ranking published in United Arab Emirates by the *Center for World University Ranking (CWUR)* – includes two Romanian universities: UBB (ranked first in Romania and on place 939 at international level) and the University of Bucharest / UB (ranked second in Romania and on place 975 internationally) (http://cwur.org/2017/romania.php). The ranking includes indicators regarding the quality of education (awards/medals of employees and graduates, etc.), research results (with emphasis on Web of Science/Clarivate Analytics publications, including innovation aspects) and the relationship with the socio-economic environment (graduates holding top-management positions, etc.).

3. In the Dutch ranking *Leiden Ranking (CWTS),* Romania is represented by just one university, namely UBB, ranked on place 826 internationally. (http://www.leidenranking.com/ranking/2017/list) The ranking is based on research indicators, expressed especially through Web of Science/Clarivate Analytics publications, and on the relationship with society/the socio-economic environment (through joint publications with industrial partners, etc.).

4. The Taiwanese ranking *Performance Ranking of Scientific Papers for World Universities (NTU)* includes only the Politehnica University of Bucharest (UPB), on place 701 – 800 internationally (http://nturanking.lis.ntu.edu.tw/DataPage/OverallRanking_Countries.aspx?query=&country=Romania&y=2017). The ranking is based on

research indicators (with emphasis on Web of Science / Clarivate Analytics publications and citations).

5. In the British ranking *QS World University Rankings* by *Quacquarelli Symonds* (*QS*) are included four universities from Romania: UB on place 701 – 750 at international level and other three universities on place 801 – 1000 at international level, namely (in alphabetical order): Alexandru Ioan Cuza University of Iaşi / UAIC, UBB and West University of Timişoara/ UVT (https://www.topuniversities.com/university-rankings/world-university-rankings/2018). The ranking is based on educational indicators (academic reputation, etc.), research indicators (with emphasis on the Scopus database) and indicators regarding the interaction with society/the socio-economic environment (employers' reputation, etc.).

6. The Spanish ranking *SCImago Institutions Rankings (SCImago)* includes 21 Romanian universities (25 academic institutions in all). At global level, among universities, the best ranked is UPB (place 545 internationally), followed by UBB (second at country level and on place 583 internationally) and by Technical University of Cluj-Napoca / UTCN (ranked third at country level and 613 internationally) (http://www.scimagoir.com/rankings.php?country=ROU&sector=Higher%20educ.). The ranking is based on research indicators (with emphasis on publications indexed in the Scopus database), including indicators connected to innovation – development, and on indicators regarding the relationship with society/the socio-economic environment.

7. The British ranking *World Universities Ranking* by *Times Higher Education (THE)* includes five Romanian universities. UBB is ranked on the 601 – 800 place internationally, and other four Romanian universities are included in this ranking on places 801 – 1000, namely (in alphabetical order): UAIC, UB, Grigore T Popa University of Medicine and Pharmacy from Iaşi / UMF – Iaşi and UVT (https://www.timeshighereducation.com/world-university-rankings/2018/world-ranking#!/page/0/length/25/locations/RO/sort_by/rank/sort_order/asc/cols/stats). The ranking is based on educational indicators, research indicators (with emphasis on publications and citations

taken from the Scopus database) and indicators regarding the relationship with society/the socio-economic environment (income from industry, etc.).

8. The Turkish ranking – *University Ranking of Academic Performance (URAP)* – includes 17 Romanian universities. UPB ranks first in the country and on place 709 internationally, UBB is second in the country and on place 739 internationally and UB ranks third at country level and on place 764 internationally. (http://www.urapcenter.org/2017/country.php?ccode=RO&rank=all) The ranking is based on research indicators (with emphasis on Web of Science / Clarivate Analytics publications and citations).

9. The American ranking *Best Global Universities* by *US News (USN)* includes nine Romanian universities (8 ranked and one not ranked). The university ranked first in Romania and on place 583 internationally is UBB, followed by UPB (second at country level and on place 730 internationally) and by UB (third at country level and 753 internationally) (https://www.usnews.com/education/best-global-universities/search?region=&country=romania&subject=&name=). The ranking is based on research indicators (with emphasis on bibliometric factors of publications included in the Web of Science/ Clarivate Analytics database).

If we are to analyse the best three position at country level, in five (ARWU; CWUR; CWTS; THE; USN) out of the nine reference rankings UBB ranks first in the country, in three (QS; SCImago; URAP) ranks second in the country and in one (NTU) is not included. UPB is included in three (NTU; SCImago; URAP) of the nine reference rankings and holds the first place at country level, in one of them (USN) ranks second and in the rest (ARWU; CWUR; CWTS; QS; THE) is not included. Of the nine reference rankings, UB ranks first at country level in one ranking (QS), in two others (CWUR, THE) ranks second and in two others (URAP, USN) ranks third, and in the rest of the rankings is not included (ARWU; CWTS; NTU) or holds other places (ranked fourth in SCImago).

II.1.2. Other university rankings (that also use academic indicators and/or indicators relevant to academic activity, but without these being predominant and/or comprehensive/global).

1. The Spanish ranking *Webometrics* includes over 100 Romanian institutions. At country level, the best ranked is UBB (place 865 at international level), UB ranks second (1162 internationally) and UAIC ranks third (1321 internationally) (http://www.webometrics.info/en/Europe/Romania). The ranking includes academic indicators and indicators regarding online popularity. A category of this ranking, which could potentially be used independently, is *Transparency or Openness* (Google Scholar Citations), where the ranking, at country level, is as follows: UB (1168 internationally), UBB (1187 internationally) and UMF-Iași (3983 internationally); however, this category is still in an experimental phase (beta version: http://www.webometrics.info/en/node/169).

2. The Australian ranking *uniRANK* includes several dozens of Romanian educational institutions (http://www.4icu.org/ro/). UBB ranks first among Romanian universities, followed by the Bucharest University of Economic Studies / ASE which ranks second and UPB ranking third. The ranking is based on the universities' online popularity.

3. In the *Nature Index* ranking, the first three positions at country level, among universities, are held by UBB, UB and UVT respectively (https://www.natureindex.com/country-outputs/Romania). Among all academic institutions, the first place in the country is held by 'Horia Hulubei' National Institute of Physics and Nuclear Engineering and the second place by the Romanian Academy. The ranking is based on top publications only in natural sciences (with emphasis on Web of Science / Clarivate Analytics publications), however without offering a global evaluation which would include domains/fields beyond natural sciences (e.g. life sciences / physics / earth and environmental sciences / chemistry).

II. 2. Quantitative Analysis – 2017 University Metaranking

As previously stated, the methodology used for the 2017 University Metaranking was developed by the *High Level Experts Group* from the Ministry of National Education and Scientific Research and on its basis

the 2016 University Metaranking was elaborated (Andronesi et al., 2016). We mention it briefly below (from Andronesi et al., 2016, pp. 269 – 270):

"Firstly, we defined a set of principles that would guide the methodologic approach for the 2016 University Metaranking:

- 1st Principle: The rankings included in the 2016 University Metaranking rely dominantly on academic criteria/indicators. The selection of these rankings relies on the analyses carried out by IREG – *Observatory on Academic Ranking and Excellence* (http://ireg-observatory org/en) and on the UNESCO analysis (UNESCO, 2013).

- 2nd Principle: Each ranking included in the 2016 University Metaranking has the same weight. In other words, we do not consider one ranking more important than the other and we emphasize the fact that each, in turn, generates a relevant quantity of knowledge about the universities it analyses.

- 3rd Principle: Only those ranking that offer a global evaluation of universities are to be included in the 2016 University Metaranking.

- 4th Principle: The methodology is externally audited and, where possible, result validation is verified through complementary analyses and/or through comparisons with other data available.

Starting from these principles, we selected for analysis and inclusion in the 2016 University Metaranking the following international rankings: (1) *Academic Ranking of World Universities /* ARWU (education and research) (2) *Center for World University Rankings /* CWUR (education and research); (3) *Leiden Ranking /* CWTS (research); (4) *Performance Ranking of Scientific Papers of World Universities /* PRSPWU (New note: now called NTU) (research); (5) *QS-Top Universities Ranking /* QS (education and research); (6) *Scimago Institutions Ranking /* Scimago (research dominant); (7) *Times Higher Education–World University Rankings /* THE (education and research); (8) *University Ranking by Academic Performance /* URAP (research); (9) *World's Best Universities Rankings /* US-News (New note: now called USN) (research)."

The manner in which the international rankings of universities were combined in the 2016 University Metaranking was the following: Each of the rankings mentioned above was divided into five (5) equal classes (quintiles – in order to highlight intuitively in the international university rankings the following levels: superior, average-superior,

average, average-inferior and inferior) (New note: The reference was the number of ranks, not the number of universities, as more universities can share the same rank):

- 1st Class – including universities situated in the first 20% of the total ranks included in the rankings;

- 2nd Class – including universities situated on the next 20% of the ranks (12% - 40%);

- 3rd Class – including universities situated between 41% and 60% of the ranks;

- 4th Class - including universities situated between 61% and 80% of the ranks;

- 5th Class - including universities situated between 81% and 100% of the ranks.

When the number of ranks in a ranking was not a multiple of 5, the grouping interval between the 5 classes was rounded up to a whole number. The necessary adjustment, as a result of this rounding up, was applied to the last class (5th Class, which included up to 4 more or less ranks than the interval established by the rounding up.) (New note: Just like in the 2016 University Metaranking, in all rankings, in cases in which the ranks were presented as interval, both for establishing the place of the university as well as the number of ranks in the ranking, we used the best rank.)

The universities placed in various classes received points as follows: 1st Class – 5 points, 2nd Class – 4 points, 3rd Class – 3 points, 4th Class – 2 points and 5th Class – 1 point.

Each Romanian university consequently cumulated a score which reflects the sum of points received as a consequence of being included in one of the classes of each analysed ranking.

As we showed in the 2016 University Metaranking (Andronesi et al., 2016) of the nine rankings included in the metaranking, only THE ranking conditions clearly the inclusion of universities in the ranking by the universities' consent. Generally, inclusion in the eight rankings is not dependent on the university's wish or consent to be included. However, even though most organisations publishing such rankings do not require universities' consent to participate in the rankings, the majority of the latter are also based on empirical data supplied by the

universities. Consequently, the universities' consent to participate is presumed, but it is not sufficient for the university to be included in the ranking.

Moreover, on the basis of the experience with the 2016 University Metaranking, the universities that are interested in being evaluated at international level had the opportunity of applying explicitly for being examined with the view of being potentially included in university international rankings. The THE ranking even invited only those universities which have achievements and which enjoy a reputation visible at international level. Thus, only the wish of one university to be included is not enough, not even for THE ranking, which states that: "...*If you can't find a university when you search the rankings by university name, it could be because that university is not ranked, or is known under a different name. Try searching the rankings by country instead, or search the university directory to find an unranked university. A university may not be ranked for two reasons: either it does not fulfil the inclusion criteria for the rankings, or it did not score highly enough to be included. A university is not included if it does not teach undergraduates, if it teaches only one subject, or if it produces fewer than an average of 200 research papers a year..."* (see https://www.timeshighereducation.com/student/advice/how-use-rankings-frequently-asked-questions*).*

Finally, we remind you that all rankings included in the metaranking, both in 2016 as well as in this article, had to fulfil simultaneously the following criteria: (1) to offer a global score of the university and (2) on the basis of the global score to establish ranks. If there were several global scores, then the reference is the one presented by default by the ranking. Of the international rankings, following the methodology of the 2016 University Metaranking (Andronesi et al., 2016) we have not included U-Multirank, because, through its explicit engagement, (1) it does not offer a global score; (2) it does not offer ranks and (3) it allows for thousands of versions by combining criteria/indicators.

The results of the 2017 University Metaranking are presented in the table below. Of the 92 Romanian universities (55 public and 37 private universities), only 23 universities, all public, have an international presence. This does not imply that the remaining Romanian universities do not have an important social function; this,

when it exists, is probably relevant and has an impact at local/regional level.

Table 1. 2017 University Metaranking (Global analysis of universities)

Position in Meta-ranking	University	Total points - quintiles
1	Babeş-Bolyai University of Cluj-Napoca / UBB	14
2	University of Bucharest / UB	10
2	Politehnica University of Bucharest / UPB	10
3	Alexandru Ioan Cuza Unviersity of Iaşi / UAIC	7
4	West University of Timişoara/ UVT	5
4	Carol Davila University of Medicine and Pharmacy of Bucharest / UMF-Bucharest	5
4	Iuliu Haţieganu University of Medicine and Pharmacy of Cluj-Napoca / UMF-Cluj-Napoca	5
4	Grigore T Popa University of Medicine and Pharmacy of Iaşi / UMF-Iaşi	5
4	Gheorghe Asachi Technical University of Iaşi / UTGA	5
5	Technical University of Cluj-Napoca / UTCN	3
5	Politehnica University of Timişoara / UPT	3
5	Transilvania University of Braşov – UTB	3
6	Bucharest University of Economic Studies / ASE	2
6	University of Agricultural Sciences and Veterinary Medicine of Cluj-Napoca / USAMV Cluj-Napoca	2
6	University of Craiova	2
6	Ovidius University of Constanţa	2
7	Victor Babeş University of Medicine and Pharmacy of Timişoara / UMF-Timişoara	1
7	University of Medicine and Pharmacy of Craiova / UMF-Craiova	1
7	University of Oradea	1
7	Dunărea de Jos University of Galaţi	1
7	Lucian Blaga University of Sibiu	1
7	Oil & Gas University of Ploieşti	1
7	Valahia University of Târgovişte	1

Note: The total score of Romanian universities included in the metaranking is of 90 points. Romanian universities not present in the table are the ones not included in any of the 9 international rankings of universities included in the 2017 University Metaranking. For clarity, the order of presentation of universities with the same number of points / same position in the metaranking is established, in the table, according to the alphabetical criterion combined with the type of university (e.g. comprehensive vs. specialised).

II.2.1. Sensitivity Analyses
In order to verify the robustness of the global analysis results, we carried out a series of supplementary analyses, taking into consideration two aspects.

Firstly, in the cases where there were intervals for describing the position of the last universities, we also took into consideration the weakest rank of the intervals in order to establish the number of ranks in those particular rankings. In this situation, there are two changes in the number of points of Romanian universities included in the 2017 University Metaranking (Table 1), namely UBB's score increases by 1 point (it receives one extra point in the ARWU ranking), the same as UB's score (it receives one extra point in the QS ranking). However, the alternative used in the 2017 University Metaranking (Table 1) was also used in the 2016 University Metaranking (Andronesi et al., 2016), consequently any evolution of the scores must be analysed by using the same methodology.

Secondly, for the SCImago ranking, after consulting with the authors of the ranking, we carried out a re-calculation of the ranks, using the global score, only for the universities in the ranking (without any other types of institutions). This second analysis did not lead to any change in the resulting scores of the Romanian universities included in the 2017 University Metaranking (Table 1).

III. Analysis of Universities on Domains and Subjects

Domain and subjects analysis is very hard to integrate and to quantify, as the domains/subjects are not defined in a consistent manner in the various university rankings (e.g. the name of the domains/subjects, the fields they cover, number, content, etc.). Nevertheless, we can formulate a number of general tendencies (for details and nuances, however, we recommend the individual analysis of each ranking).

III.1. Domains

A domain includes several subjects. In what follows we will present the position of Romanian universities that rank first at country level in various academic domains (in the order from Table 1), as these are defined and publicly visible in the various international university rankings. (Note: Some universities may receive individually further information about more detailed positioning at country level, but many of these are not publicly assumed by the rankings, probably because there are minute differences that do not cross the threshold of public/international relevance):

UBB ranks first in the country in the following domains: Arts/Humanities (QS, THE), Life/Earth Sciences (CWTS, Life Sciences – together with UB in THE), Socio-Economic Sciences (CWTS), Math/Informatics (CWTS), Physics and Engineering (CWTS) and Biomedical Sciences/Health (CWTS).

UB ranks first at country level in the following domains: Natural Sciences (QS), Life Sciences (THE – jointly with UBB) and Social Sciences (QS).

UPB ranks first in the country in the following domains: Engineering/Technology (QS; Engineering – NTU).

III. 2. Subjects

In this section, we present the ranks held by Romanian universities that hold the first place at country level in various academic subjects (in the order from Table 1), as they are defined publicly visible in the various international rankings of universities (Note: Some universities may

receive individually further information about more detailed positioning at country level, but many of these are not publicly assumed by the rankings, probably because there are minute differences that do not cross the threshold of public/international relevance):

UBB ranks first in the country in the following subjects: Math (ARWU – alongside UB; NTU. URAP; USN), Biology (THE; URAP), Life Sciences (URAP); Geology (URAP); Psychology (URAP); Psychology/Cognitive Sciences (URAP); History (URAP); Modern Languages (QS – alongside UB); English Language/Literature (QS – alongside UB); Language/Literature/Linguistics (THE); Art/Design (THE), Sports (THE – alongside UB), Engineering (USN) and Mechanical Engineering (ARWU).

UB ranks first at country level in the following subjects: Math (ARWU – alongside UBB; QS), Chemistry (QS, NTU – alongside UPB), Physics/Astronomy (QS – alongside UPB; Physics – URAP), Modern Languages (QS – alongside UBB), Linguistics (QS), English Language/Literature (QS – alongside UBB) and Sports (THE – alongside UBB).

UPB ranks first in the country in the following subjects: Engineering (URAP), Electrical/Electronic Engineering (ARWU; QS), Material Science/Engineering (URAP; USN), Chemical Engineering (ARWU; URAP), Mechanical Engineering (URAP), Chemistry (NTU – alongside UB; URAP; USN), Physics/Astronomy (QS – alongside UB, Physics – USN) and Informatics/Computer Science (URAP).

UVT ranks first at country level in Physics (ARWU).

Carol Davila University of Medicine and Pharmacy of Bucharest / UMF-Bucharest ranks first in the country in the following subjects: Medicine/Health (ARWU; URAP; USN).

Gheorghe Asachi Technical University of Iaşi / UTGA ranks first at country level in Commerce/Management/Tourism/Services (URAP) and Environmental Sciences (URAP).

ASE ranks first in the country in the following subjects: Economy/Econometrics (Economy – ARWU; QS).

Additionally to the universities included in the global analysis from Table 1, the University of Agricultural Sciences and Veterinary Medicine of Bucharest / USAMV-Bucharest ranks first at country level in the following subjects: Agriculture/Forestry (QS).

IV. Conclusions and Discussion

The global analyses use both criteria/indicators dependent on the size of the institutions, as well as criteria/indicators that are not dependent on it. UBB, UB and UPB – universities that have a similar number of academic/research staff – are the ones best positioned in the international rankings (regardless of the weight of the two types of criteria/indicators), which shows that their positioning cannot be explained (only) by the institution's size, but also by its capacity of fulfilling quality/competitiveness/excellence criteria.

IV. 1. Global Analysis

As we have previously showed, of the approximate 92 active Romanian universities, of which 55 are public and 37 private, only 23 universities (all public) have an international presence. This does not imply that the other universities do not have an important social function, but the latter is probably relevant and has an impact at local/regional level.

In the case of the best ranked three universities in the country, the 2017 University Metaranking, in comparison to the results of the 2016 University Metaranking, UBB increased its score by one point (by being included in ARWU) – holding its first place in 2017 as well (just like in the 2016 metaranking), UB remained at the same level, and UPB increased its score by two points (by being included in NTU and by a better ranking in USN).

The university from the *Universitaria* Consortium are the most **visible** academic group of Romanian universities in the international area of the academic environment (38 points of the total of 90 points obtained by the Romanian universities): UBB (14 points), UB (10), UAIC (7) and UVT (5). UBB, UB and UAIC differentiate more clearly from the other 23 universities included in the 2017 University Metaranking, with a higher **impact** on the international academic area. ASE's score (2) is explained by the fact that it is a specialised higher education institution, the only of this type from the *Universitaria Consortium*; indeed, its performance at subject level positions ASE on the top position in the country in Economy/Econometrics.

Technical universities from the big/traditional Romanian university centres have a **visible presence** in the international academic area (21 points): UPB (10), UTGA (5), UPT (3) and UTCN (4). UPB distances itself visibly in this group, having an **impact** that is similar to some of the best positioned universities of the *Universitaria Consortium.*

The medical universities from the big/traditional Romanian university centres also have a **visible presence** in the international academic area (17 points): UMF – Bucharest (5), UMF – Cluj-Napoca (5) and UMF-Iaşi (5). To these, other universities from important academic centres are added, with a **promising presence**, which are included in an international ranking of universities: UMF – Timişoara (1) and UMF – Craiova (1).

The emergent comprehensive universities from important academic centres are **visible** and have a **promising presence** in the international academic area (12 points): Transilvania University of Braşov (3, with a visible presence), University of Craiova (2, with a visible presence) and Ovidius University of Constanţa (2, with a visible presence). To these other universities are added, from representative academic centres, with a promising presence, which are included in an international ranking of universities: University of Oradea (1), Dunărea de Jos University of Galaţi (1), Lucian Blaga University of Sibiu (1), Oil & Gas University of Ploieşti (1) and Valahia University of Târgovişte (1).

Of the **universities with an agricultural-veterinary profile**, USAMV – Cluj-Napoca (2) has a **visible presence** in two international rankings of universities.

The total score of the five universities from the *Universitaria Consortium* represents 42% of the total number of points obtained by the Romanian universities in the international university rankings. If we are to add UPB's contribution, which has a performance similar to some of the most performant universities from the *Universitaria Consortium*, then the percentage reaches 53%.

IV. 2. Analysis on Domains/Subjects

As previously stated, the results of the analyses on domains/subjects are difficult to quantify and synthesize. The reader can, however, analyse carefully the results presented under Section III, in order to

formulate their own conclusions and decisions. Broadly speaking, we can notice that, generally, the first place at country level on domains/subjects is held by universities that are positioned on the top three places in the country in the global analysis – namely UBB, UB and/or UPB – to which are added, in Physics UVT, and on subjects, the specialised universities (e.g. ASE, UMF – Bucharest, USAMV – Bucharest, UTGA).

V. Implications

In conclusion, as stated before, the analysis shows that only 23 universities from the country, all public, have a minimum international visibility (approximately 42% of the total number of public universities in the country and 25% of the total number of active universities in the country), considering that currently we have in Romania 92 active universities of which 55 public universities and 37 private ones. As we mentioned before, this does not automatically imply that the remaining universities do not have an important social function, but the latter, when present, is probably relevant and has an impact only at local/regional level.

This ranking highlights again the existence (see also Andronesi et al., 2016, David et al., 2016) of at least four classes of universities in Romania: (1) national universities, which are **visible** and have an international **impact** (with *world-class* potential); national universities which are internationally **visible**; (3) emergent national universities, with a **promising presence** at international level, and (4) universities with a **local/regional impact**. Consequently, public policies regarding higher education, especially public funding of university research, should be differentiated, through distinct mechanisms, according to the type of universities, so that each one would reach its potential and/or the mission undertaken through its *University Charter* (local / regional / national / international / *world-class*). Indeed, the funding of Romanian universities is unpredictable and often below the required amount of quality assurance, not to mention the amounts required to reach competitiveness/excellence. As mentioned as well in the 2016 University Metaranking (Andronesi et al, 2016), Babeş-Bolyai University from Romania, ranked first in the

country in the 2016 and 2017 metarankings, has an annual budget which is about 10 times smaller than Washington State University, a university ranked among the last ones in the ARWU international ranking (Top-500). Consequently, if funding were an indicator taken into account by international rankings – considering that it can attract human resources of high quality and can maintain a competitive academic environment, both with an impact on a university's position in the rankings - , Romanian universities would be placed on much better positions in international university rankings, given that some have, even now, when they are underfunded, remarkable performances.

In a recent speech given at Sorbonne University – titled *Initiative for Europe* -, the president of France, Emmanuel Macron, expressed the idea that there is a need for "European universities", an idea to become an institutional reality in the future: "*...I believe we should create European Universities – a network of universities across Europe with programmes that have all their students study abroad and take classes in at least two languages. These European Universities will also be drivers of educational innovation and the quest for excellence. We should set for ourselves the goal of creating at least 20 of them by 2024. However, we must begin setting up the first of these universities as early as the next academic year, with real European semesters and real European diplomas...*   " (see at: http://international.blogs.ouest-france.fr/archive/2017/09/29/macron-sorbonne-verbatim-europe-18583.html).

Are we ready for at least the top Romanian universities of the 23 universities included in the 2017 University Metaranking to be included in the 20 European universities? In this context, it is worth considering whether more performant universities from Romania would deserve to be supported explicitly in order to become European universities, in the meaning expressed by the president of France. For example, the National Rectors Council / CNR (see the CNR Resolution from Târgu Mureş from 2016, available in Romanian here: http://www.cnr-romania.ro/rezolutie-consiliul-national-al-rectorilor-tirgu-mures-9-octombrie-2016/) proposed supporting the positions of researchers in universities through an independent mechanism, which could stimulate the innovation and excellence component from the structure of a European university.

If we do not understand and we do not support these developments from the Romanian academic environment, we will once again be left out of the game played in the big league of the academic environment, with a negative impact on student training and on country competitiveness.

Note: Some universities may be classified in domains/subjects in which they do not have formal bachelor degrees (often neither master degrees) and/or which do not correspond to the domains/fields established administratively in Romania. This happens because an international university does not define itself only through undergraduate programmes (bachelor), but also through graduate programmes (research master / doctoral / postdoctoral programmes / research schools), defined at an international level. It is possible that between the time of analysis of international rankings and the publishing date of the article, some rankings of domains/subjects adjusted some scores. For example, when the article was published, in the domain/subject analysis, in the THE ranking, in Sport, only UBB, and not UB as well, ranked first in the country, and in Biology the first position is jointly held by UBB and UB. We remind you again in this context of the recommendation included in the article, namely to check directly the rankings concerning domains/subjects; the article includes only general trends, in contrast to the metaranking of global score, where the analysis is precise / quantitative (Table 1). Moreover, we remind you that the metaranking is subject to all limitations of the rankings it includes.

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