ACADEMIC PERFORMANCE OF PROFESSORS IN ECONOMIC FIELD. COMPARATIVE STUDY BY ROMANIA REGIONS

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Abstract:

Measuring academic performance and making a ranking between countries, regions, universities or even persons represents a hard work, yet is very important for multiple audiences as policy makers, researchers, students and so on. Using bibliometric tools this paper aim is to present some evidence about the academic performance of academics in economic and business administration field at the Romania NUTS II level. Reporting the only public available data, from 2006 to 2010, the results shows differences between these regions in terms of number of papers, average number of pages and authors as well as for overall performance.

Keywords: *academic performance, bibliometrics, university system.*

1. INTRODUCTION

The concept of academic performance in higher education is closely related to the ranking. Both, performance and rankings can be drive at micro level (for individuals) or at macro level (department, university, region, country etc). Usually, performance is only one of the factors taken into account when calculating a score for institutions. When it comes to individuals, the ranking is done most often only considering the academic performance.

Carried out university rankings is difficult work, but very important for different audiences[1]. According to Dill and Soo, precisely the information requests of these categories of public regarding the academic quality of universities led to the development of ranking systems[2]. Such audiences interested in ranking systems are[3]:

• students who wish to choose the university to enroll;

• academics who want to work for prestigious universities;

• university administrators for defining management policies;

• national authorities for defining the long-term goals for education system;

• media wishing to inform the society about the quality of the university system; and

• companies for providing jobs to college graduates.

In 1983 Bob Morse, a representative of the U.S. News and World Report developed the first ranking system "American Colleges" Ranking, which became an annual publication start with 1987[4]. The publication was a real success and consequently a high number of ranking systems have been developed for national and international levels. Those rankings are conducted by different organizations such as[2]: government agencies, magazines and newspapers, professional associations etc.

Information provided by national ranking systems is useful for implementing government policies and for university management, but they provide no information about the visibility, attractiveness and quality in international comparisons[5]. This is why, lately the interest for developing ranking systems that can be applied internationally increased.

On the other hand, the most accurate information are provided using tools that can be applied on individual level. Then, is easy to do compression at macro level by simply aggregate the individual results by departments, universities, regions, countries. While indicators for measuring academic performance at macro level are described extensively in the literature[6–8] the indicators used for measuring micro level (individual) performance are considered a challenge. The reason is the need for a complete and accurate database which is not easy to find/

build[6]. Previous studies analysing individual academic performance used different data sources as: curriculum vitae[9,10], institutional reports[11], questionnaires and surveys[12], bibliographic databases[5,13–17]. Individual research performance is measured using bibliometric indicators. An extensive literature on classifying these indicators is available[18–23]. Briefly, those indicators are either simple indicators taking into account only one variable as number of papers, number of citations, number of authors, number of patents or the journal impact either composite indicators taking into account simultaneously at least two of the variables used in simple indicators. Composite indicators provide a more complete picture of the academic output because they take into account both quantitative aspects (number of papers) and quality (number of citations and impact factor of the journal).

Using bibliometric tools, namely simple and composite indicators, this paper aims to present some evidence about the academic performance of academics in economic and business administration field at the Romania NUTS II level.

2. METHODOLOGY

The sample comprise all public universities in Romania which offer under or postgraduate programs in economic and business administration field. In order to differentiate between PhD. students, associate teaching professors and academics with permanent position we included in the analysis only those academic with a public e-mail address available on web site of the institution where they are affiliated. We identified a number of 1422 academics with permanent position and with an available e-mail address. The sample, by Romania NUTS II level is structured as follows:

- Bucharest Ilfov (University of Bucharest, Bucharest University of Economic Studies), 323 academics;
- Centre ("1 December 1918" University of Alba Iulia, "Transilvania" University of Brasov, "Lucian Blaga" University of Sibiu, "Petru Maior" University of Targu Mures), 144 academics;
- North-East ("Alexandru Ioan Cuza" University of Iasi, "Ştefan cel Mare" University of Suceava, "Vasile Alecsandri" University of Bacau), 225 academics;
- North-West ("Babeş - Bolyai" University of Cluj Napoca, North University of Baia Mare, University of Oradea), 301 academics;
- South-East ("Ovidius" University of Constanta, "Dunărea de Jos" University of Galati), 95 academics;
- South Muntenia (Petrol-Gaze University din Ploiesti, "Valachia" University of Targoviste), 59 academics;
- South-West Oltenia (University of Craiova, "Constantin Brâncuşi" University of Targu Jiu), 47 acdemics; and
- West ("Aurel Vlaicu" University of Arad, "Eftimie Murgu" University of Resita, West University of Timisoara, University of petrosani), 228 academics.

We collected data from 2006 to 2010 available in university's reports of public universities.

In order to provide an overview of the academic performance in economic and business administration field in Romania, as simple indicators we used the number of articles, the article category, the number of pages and the number of authors for each article.

As composite indicator we used the CLpn index which was developed by Combes and Linnemer (2003) especially for the economics profession[24]. The index is a weighted sum of all journal publications indexed in the database EconLit of the American Economic Association. For each article, three types of weights are used: the journal quality weight, the number of coauthors, and the length of the article. The sum runs for the period analysed (from year *t* to year *T*). An individual academic *i*'s CLpn index can be calculated using the following formula[24]:

$$CLpn_i(T) = \sum_k \frac{p_{k(i)} w_{k(i)}}{n_{k(i)}} \quad (1),$$

where, k represents the academic i's article, $p_{k(i)}$ $p_{k(i)}$ represents the number of pages of the article k, $n_{k(i)} n_{k(i)}$ the number of authors of the article k, and $w_{k(i)}$ $w_{k(i)}$ the quality weight (impact) of the journal in which article k was published.

In the present study, the original index is adapted to the Romanian academic specific. Therefore we did not use the original journal quality weights (for EconLit – indexed journals), and instead we assigned quality weights to the category of article as classified by the Executive Unit for Financing Higher Education, Research, Innovation and Development (UEFISCDI), as follows[1]: ISI (Thomson) indexed journals with an impact factor (a) – 0,8; ISI indexed Science and social science journals without impact factor (b) – 0,6; ISI indexed arts and humanities journals (c) – 0,6; ISI indexed Proceedings (d) – 0,6; BDI indexed articles (indexed database) and working papers and articles published in B+ journals according to the National Council of Scientific Research in Higher Education classification – 0,2; articles published in national journals recognized by National Council of Scientific Research in Higher Education (B category) – 0,05.

We report the results below.

3. RESULTS

We collected data from 2006 to 2010 available in university's reports of public universities[2]. We obtained a database with 15,524 records (academics and their publications, respectively). Nevertheless some 155 professors did not publish any paper in the analysed period (2006-2010).

As figure below displays the number of articles is not evenly distributed by regions. Academics in Bucharest Ilfov region publish about one third of the total number of articles. This is not surprising considering that the higher number of academics (323) in the sample are affiliated to universities in Bucharest Ilfov region (Fig. 1).

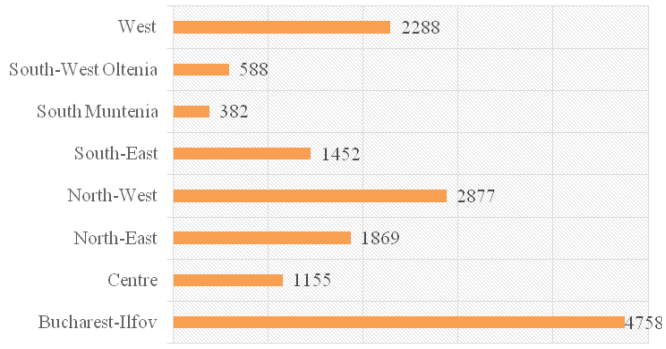

Fig. 1. Number of articles published by Romanian academics in economics and business administration, 2006-2010

When divide the number of the paper published by the academics in a specific region to the number of academics in the respective region the results change. The highest number of articles published in average by an academic in economic and business administration field is recorded in South-East region (15.28), followed by Bucharest- Ilfov region (14.73). Yet, the South Muntenia region remains the region with the lowest number of papers as a whole as well as the number of paper per author (Fig. 2).

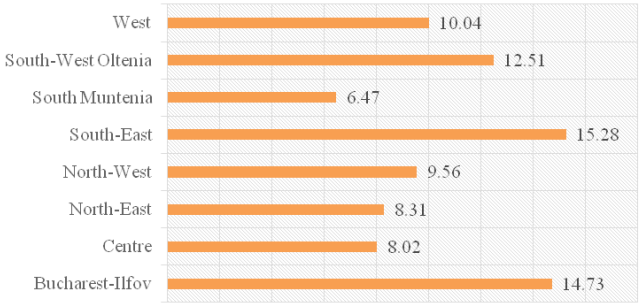

Fig. 2. Average number of articles per author for Romanian academics in economics and business administration, 2006-2010

In terms of length of the articles published the differences between Romanian NUTS II regions are not significant. The average number of pages per article ranges between 6.99 and 9.71. Thus, the difference between the regions is smaller than two pages.

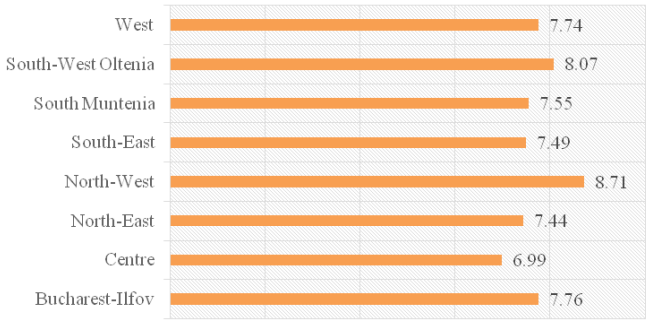

Fig. 3. Average number of pages per article for Romanian academics in economics and business administration, 2006-2010

Considering the average number of co-authors per paper, again the differences are not significant. Except the Centre, where the academics prefer to work by themselves or with only one co-author (with an average of 1.69 authors per article) in the other regions it seems that the academics in

economic and business administration field prefer to work in teams of two or three persons (with an average mean of authors per article ranged between 2.09 and 2.92). Indeed it seems that the academics working in larger teams are more productive (Fig. 3 and Fig. 4).

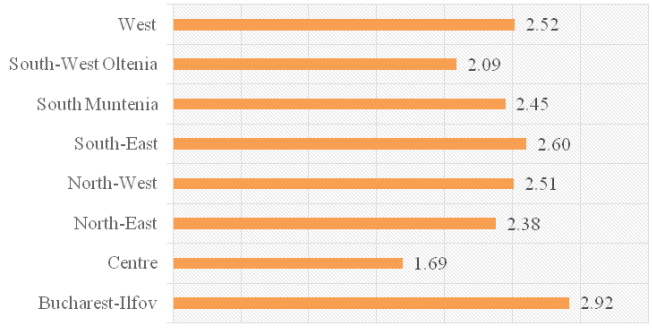

Fig. 4. Average number of authors per article for Romanian academics in economics and business administration, 2006-2010

Turning to the articles category, the figure below shows that Romanian academics in economics and business administration tend to publish database-indexed articles (64 per cent of the total number of publications). A further 16 per cent is represented by CNCSIS (B) articles and 13 per cent by ISI (d) published papers. Less than seven per cent of academics manage to publish articles in ISI (a), ISI (b) or ISI (c) journals. These evidence with academic performance of Romanian academics in economics and business administration depicts us a country with an educational system undergoing transition. Academics just start to publish articles in high ranked journals (about 20 per cent of their articles are published in ISI journals or conference volumes).

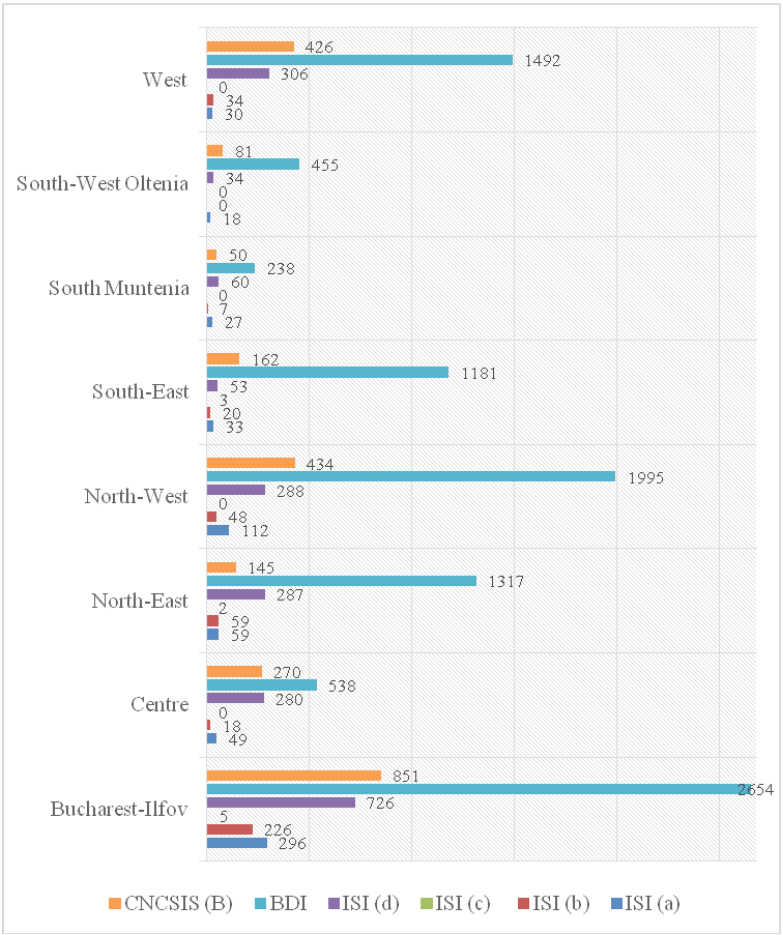

Fig. 5. Number of articles by category published by Romanian academics in economics and business administration, 2006-2010

Using a composite indicator to asses academic performance, namely the *CLpn index*, the results shows notable differences between Romania's NUTS II regions. The index value ranges from zero (in all regions, showing that some of the academics did not publish any paper in a period of 5 years, from 2006 to 2010) to 232.54. Thus, considering all three weights the index use (article's category, number of pages and number of co-authors), the most productive academic in economics and business administration field is affiliated to a university in North-West Romania (with a performance index of 232.54). Turning to the average performance index the differences recorded between regions are quite big. The highest value is recorded in Bucharest-Iflov region (13.39) which is more than double as the lowest one registered in South Muntenia (5.54).

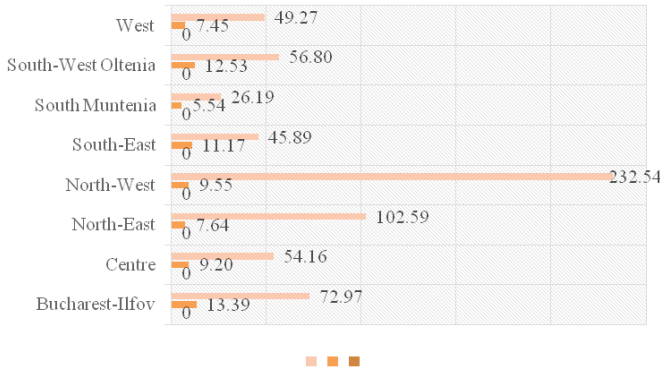

Fig. 6. Academic performance of Romanian academics in economics and business administration, 2006-2010

4. CONCLUSIONS

Using bibliometric tools (both simple and composite indicators) this paper provide some evidence about the performance of academics in economic and business administration field at the Romania NUTS II level. Reporting data from 2006 to 2010, the results shows differences between these regions in terms of number of papers, average number of pages and authors as well as for overall performance. Along with these differences between Romanian's regions the results also reveals a relatively weak academic environment. Academics in economics and business administration field tend to publish their research results in low ranked journals. Yet, this is not unusual for a country with an educational system undergoing transition.

Limits. One of the research limits is the fact that productivity data were quantified only for a period of five years (2006-2010). Previous information is not available, neither more recent data. Regarding the sample, only public universities were included. Therefore, the results cannot be extrapolated to private universities.

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Endnotes

1. UEFISCDI - public institution with legal personality under the Ministry of National Education (MEN) with responsibilities in higher education, scientific research, development and innovation.
2. These data are the only public data available on the individual level that we are aware. Other recent reports made available for public compress only macro level data.