

SOME ASPECTS OF SCIENTIFIC FUNCTION OF THE UNIVERSITY OF ORADEA BETWEEN 2006 AND 2010

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Abstract: In this study, we aimed to analyze the scientific aspects of the position of the University of Oradea between 2006 and 2010 in order to highlight the scientific potential that the university possesses. Using the statistical analysis and a specific methodology, we paid a special attention to the results (books, articles, theses and patents) obtained by teachers, researchers and students from the university in basic research, applied research and development research.

Key words: University of Oradea, scientific research, scientific results

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INTRODUCTION

The University of Oradea is located in the Bihor County and its academic tradition recommended as one of Romania's most prestigious universities (figure 1).

Thus, in 1780 was founded in Oradea a high education institution of philosophy that eight years later became the Faculty of Law, and since 1918 has been operating under the name of the Law Academy of Oradea (GSU, 2009).

In 1963, the Pedagogical Institute of three years was founded, which started with two faculties: Faculty of Philology and Faculty of Mathematics and Physics, and later in 1964 were incorporated in the Faculty of History, Geography and Physical Education Department.

In twelve years, wide areas was completed with technical (engineers) between the institution and from 1977 to 1983 it worked as the "*Higher Education Institute of Oradea*".

After 1983, education and humanities specialties began to restrict their activity, so in late 1989 in Oradea remained only the Institute of Engineers, which was affiliated with the Polytechnic Institute of Cluj-Napoca.

According to Government Decision no. 460/02.05.1990, Technical University which was founded in March 1997 was named the University of Oradea. Since foundation, the University enrolled in further development and it is ready to meet the needs of society and lifelong learning, the effectiveness and accountability¹. Within its operating faculties, cathedras and departments that play an important role in training specialists in various areas, areas requiring performance (UO, 2005).

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¹ <http://litere.ubm.ro/istoric.php>

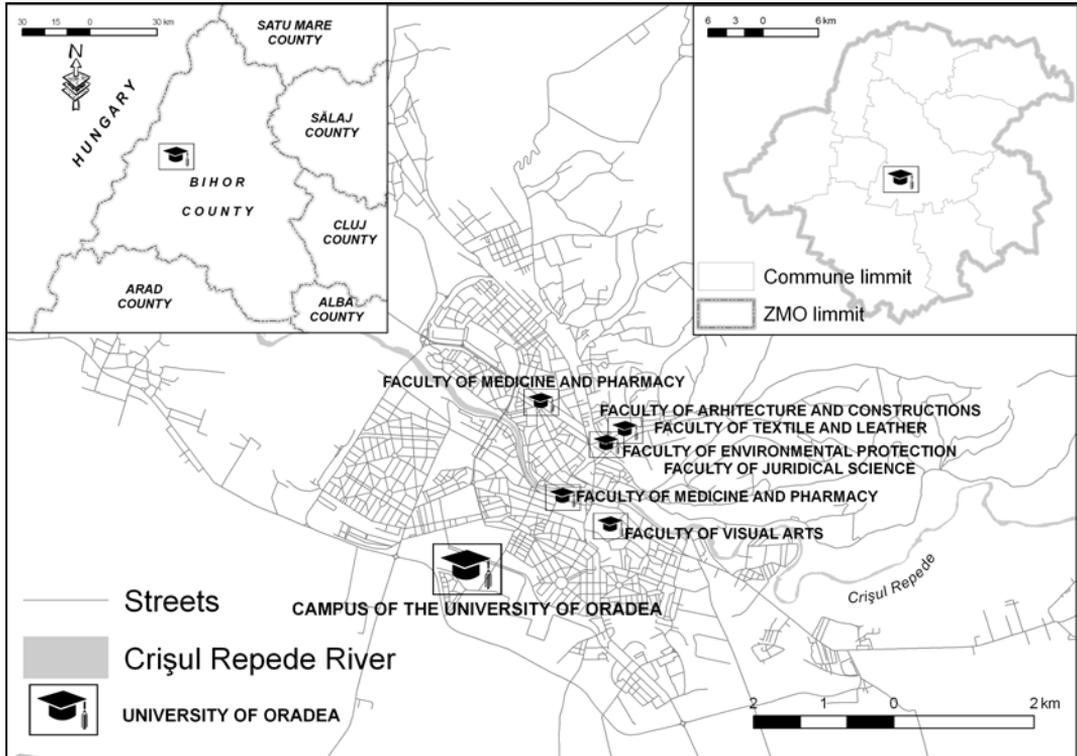


Figure 1. Geographical location of University of Oradea

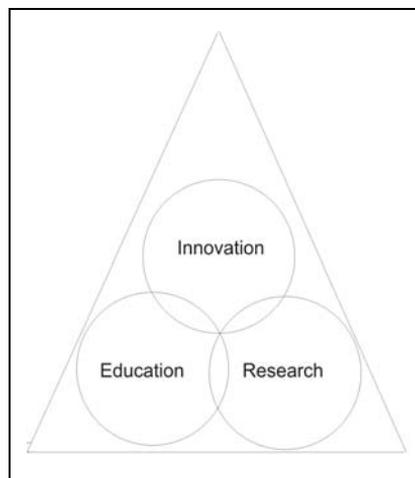


Figure 2. Knowledge triangle

In this respect, the university plays a key role in local and regional economic development functions just through its standard of education and scientific research.

The material base is in a continuous development the infrastructure is develops continuously and the competence of teachers provides the best framework for teaching activities, research and recreation. Scientific research is an important component of the knowledge triangle (figure 2), which is a provider and beneficiary of an advanced knowledge essential for the future of society (Felea et al., 2009).

CONCEPTUAL FRAMEWORK

By definition, university is a community of people of higher intellect which examine holistic and critically all aspects of human life (Powar, 2002). The examination involves two actors components, teachers and students who are engaged in talks, discussions and debates. If this perception is valid, then the university as an institution of higher education can be traced from ancient times.

In 1852, Cardinal John Henry Newman, founder of the Catholic University of Dublin introduced the concept of university in a series of speeches, considering the need for separation between the search of knowledge and concerns of humanity, so that universities must be committed to full knowledge (Powar, 2002).

Universities have had various academic models, many of them coexist. Thus some models are meeting academic major ²:

- medieval model - focused on disseminating knowledge through teaching from teacher to student;
- humanities and social model, the emphasis is on disseminating knowledge through teaching based on critical thinking and research as complementary teaching approach;
- humboldtian model, the emphasis is on research in which teacher and student performance to the generation of knowledge, theoretical and practical problems are solved locally, regionally and internationally;
- entrepreneurial model - academic act which is seen as a product of the financial perspective, this means a direct connection and serious employment, socio-economic environment and a large opening to the public university.

The academic model on which is based the University of Oradea is the humanistic-social with entrepreneurial elements in which the economic environment serves the academic vision, and humanistic and social elements are reflected in stimulating critical thinking.

Concepts and notions of higher education (college concept, the concept of university education and the concept of territorial system) are related to its evolution over time. The concept of faculty occurred in the early eighteenth century, designating a group of people dedicated to a particular study. The establishment of faculties, omit plays an important role in educating students (Vințanu, 2001; Beculau, 2001; DEX, 2009; Boloș, 2010), consisting of the educational process of knowledge acquisition and training, essential to enter in society. In this context, higher education appears as an important tool in our training, to achieve the other goals.

Also, universities function as open systems in which territorial components interact, with the purpose of training future specialists in various fields (Cocean, 2005). Therefore, these systems can be considered territorial units of the development level of regions, is extremely sensitive to changes in economical, social and cultural life of the region (Ianoș, 2010; Dabica & Svarc, 2011).

METHODOLOGY

The methodology used in this paper is based on a qualitative and quantitative information and the database obtained by the method of bibliographic documentation in Romanian literature and foreign literature (Cocean, 2005), statistical and mathematical method (Andrew & Stancu, 1995), the comparison method (Petrea, 2002) and by research conducted in the field.

DEBATES

In 2006-2010, teaching at the University of Oradea was supplemented by scientific research that was conducted in 26 centers of research, development and innovation, and the chairs and departments of each faculty (Felea et al., 2009).

Scientific research was done in research groups or by individuals (teachers, researchers and students), omit research is aimed in the following areas (as H.G. nr.749 of July 6, 2009) ³: science,

²<http://www.democratieubb.ro/?p=183>

³ <http://info.uoradea.ro/article/661.html>

economics, engineering sciences, natural sciences, science humanities, social and political sciences, arts, physical education, agricultural sciences and forestry (Felea et al., 2009).

In the case of professors, scientific research is part of the work they perform and complete on a regular basis (UO, 2005; Felea et al., 2009).

Table 1. Number of teachers and researchers from the University of Oradea engaged in scientific research, in 2006 - 2010

(Data source: CDI Projects and Programmes Office, University of Oradea)

University of Oradea	2006	2007	2008	2009	2010
Total number of professors	1374	1318	1291	1291	1287
Total number of researchers	12	12	19	20	12
Total teachers and researchers	1386	1330	1310	1311	1299

In the period under study (2006-2010), scientific research at the University of Oradea included the fundamental side, practical side (results expressed in various publications) and research and development side (results expressed in patents) (David, 2006).

Funding research was provided by national research programs conducted by the Ministry of Education (Program "*Research Excellence*" - CEEEX and the National PN II), the international research programs offered by the European Union⁴ and implemented by the Ministry of Education and Research⁵ (FP6, FP7 Programme, NATO and bilateral) and research contracts signed with various educational and economic units in the country and abroad. Output expressed in scientific include knowledge for solving theoretical and practical problems was operationalized⁶ through publications (books, articles, and various studies), theses and patents (UO, 2005; CDI Projects and Programmes Office, University Oradea).

Analyzing the data (figure 3 and figure 4) we notice that in 2006 - 2010, the number of research projects won through national competitions by the teaching staff of the University of Oradea is much higher compared to the number of research projects won through international competition, since many national competitions launched by the Ministry of Education.

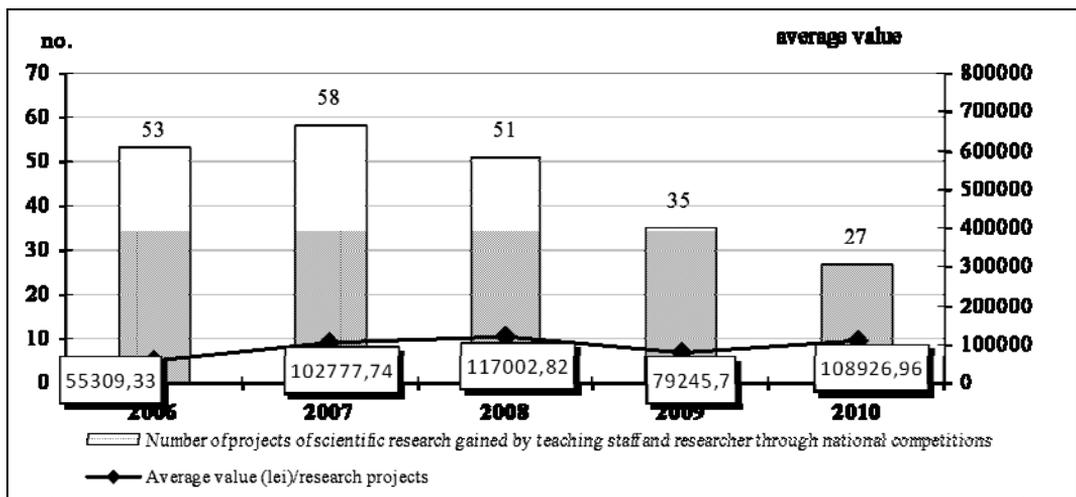


Figure 3. The evolution of scientific research projects won through national competitions by teaching staff and researchers of the University of Oradea, in 2006-2010 and the average value (lei) / research project (Source: CDI Projects and Programmes Office, University of Oradea)

⁴ <http://info.uoradea.ro/article/662.html>

⁵ http://ec.europa.eu/research/fp7/pdf/fp7-brochure_ro.pdf

⁶ <http://www.democratieubb.ro/?p=183>

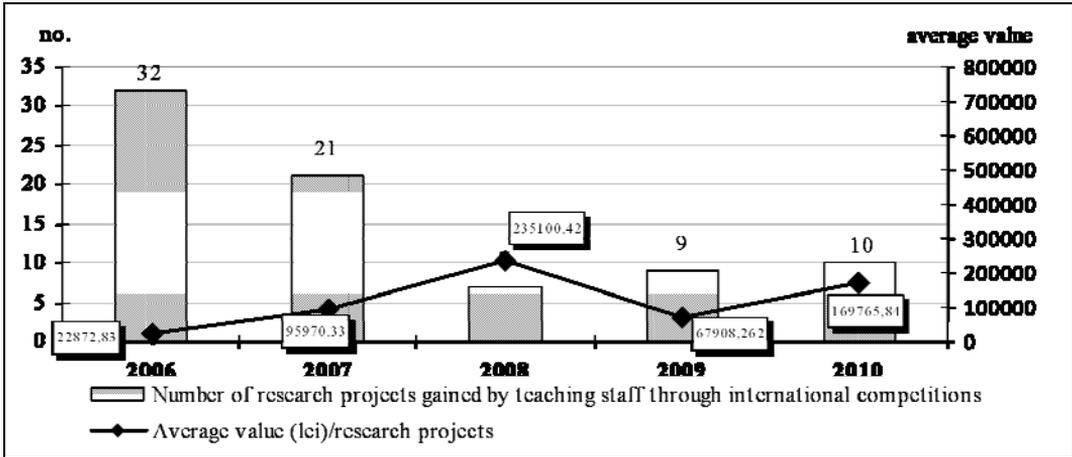


Figure 4. The evolution of scientific research through international competitions won by the teaching staff of the University of Oradea, in 2006-2010 and the average value (Lei) / research project
 (Source: CDI Projects and Programmes Office, University of Oradea)

The average value (lei)/research project won the national competition was in 2008 (117002.82 lei), while the largest mean (lei)/research project won through international competition has been increasing in 2008 (235100.42 lei).

During 2006 - 2010, the income from research contracts won through national competitions was 20574275.27 lei, being much higher than the income from contracts won through international competitions (6541734.6 lei). Revenues were distributed in different segments of university expenditures: salaries, overhead, travel, equipment, teaching materials etc.

In addition to scientific research based research projects, teaching staff and researchers from the University of Oradea have taken a broad range of fundamental and applied research whose results were expressed in various publications (books published by national and international, articles and various studies included in prestigious journals in the country and abroad and national and international scientific conferences volumes) (Munteanu & Munteanu Rodica, 2004; David, 2006; Vladimirescu & Otovescu, 2007) and PhD theses.

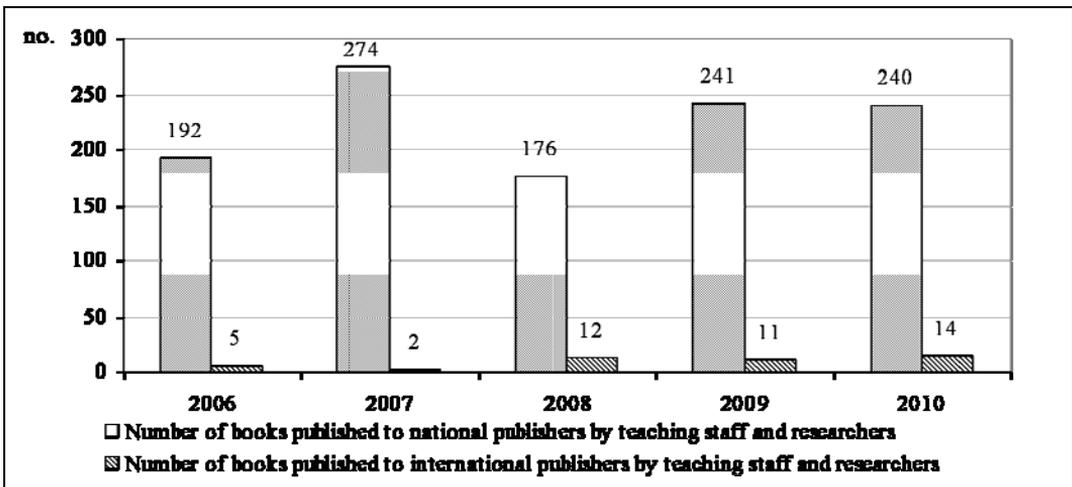


Figure 5. Evolution of the number of books published by national and international teaching staff and researchers of the University of Oradea, in 2006-2010
 (Source: CDI Projects and Programmes Office, University of Oradea)

In the period under study (2006-2010), is observed (figure 5) that teaching staff and the researchers of University of Oradea have published a larger number of books at publishers in the country compared to the number of books published from international publishers.

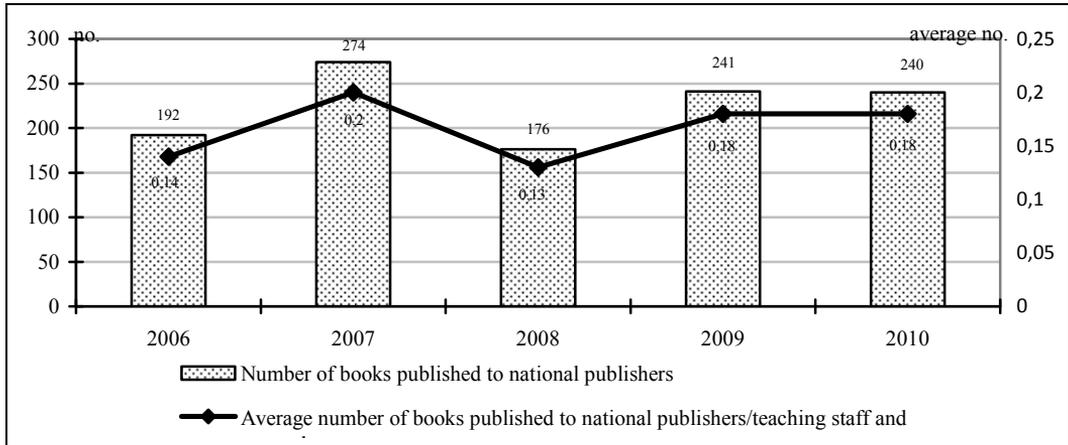


Figure 6. Evolution of the number of books published by teaching staff and researchers of University of Oradea at the national publishers in 2006 - 2010 and the average number of books published by national / teaching staff and researcher

(Source: CDI Projects and Programmes Office, University of Oradea)

The highest number of books published by national/teaching staff and researcher was in 2007 (0.20 average number of books/teaching staff and researcher) following stimulation of teachers and researchers since 2007⁷, through awarding scientific research (nr.1305 Ministerial Order of 13 June 2007, Government Decision no. 551/06.06.2007) and academic promotion criteria imposed by the specialized committees of the Ministry of Education (Ministerial Order no. of 3548 April 6, 2006).

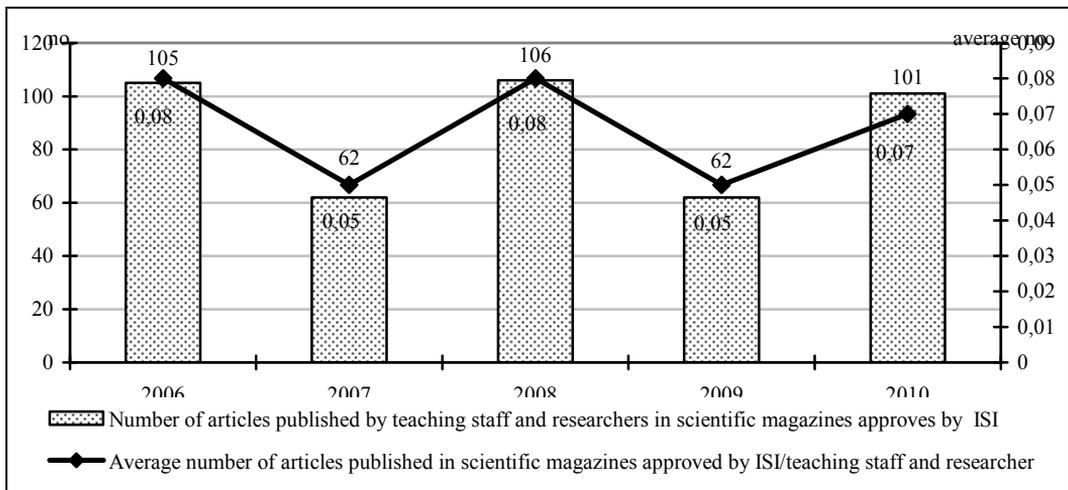


Figure 7. Evolution of the number of articles published in ISI journals, in 2006 - 2010 by teaching staff of the University of Oradea and the average number of articles published in ISI journals / teaching staff and researcher

(Source: CDI Projects and Programmes Office, University of Oradea)

⁷ <http://info.uoradea.ro/article/661.html>

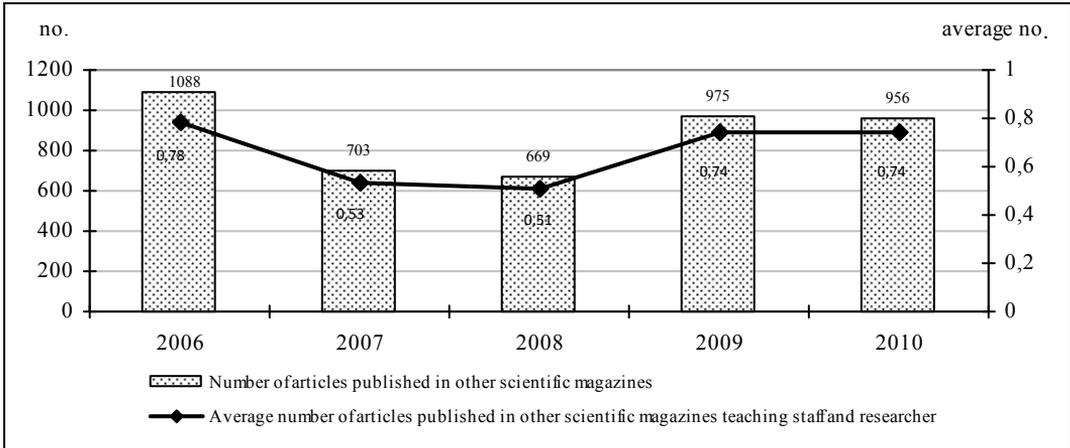


Figure 8. Evolution of the number of articles published in professional journals, in proceedings of scientific meetings (national and international) in 2006 - 2010 by teaching staff and researchers of the University of Oradea and the average number of articles published in other journals/teaching staff and researcher (Source: CDI Projects and Programmes Office, University of Oradea)

With regards to the number of articles published by teaching staff and researchers of the University of Oradea in 2006-2010, is observed (figure 7 and figure 8) a large number of articles published in scientific magazines and journals CNCISIS indexed base international data to the number of articles published in ISI journals, due to stringent criteria published in the ISI (Institute for scientific information) (e.g., the degree to which the article to be published containing citations of published articles for a magazine ISI impact factor score high and relatively high influence) (David, 2006). During this period, the highest number of articles published in ISI journals / teaching staff and researcher was in 2006 and 2008 (0.08 average number of articles/teaching staff and researcher), and the highest number of articles published in other journals/teaching staff and researcher in 2006 (0.78 average number of articles/teacher and researcher).

Also, the qualities of teaching and scientific research of professors have been officially recognized by allowing the system to coordinate the qualifications for doctoral studies (Munteanu & Munteanu Rodica, 2004).

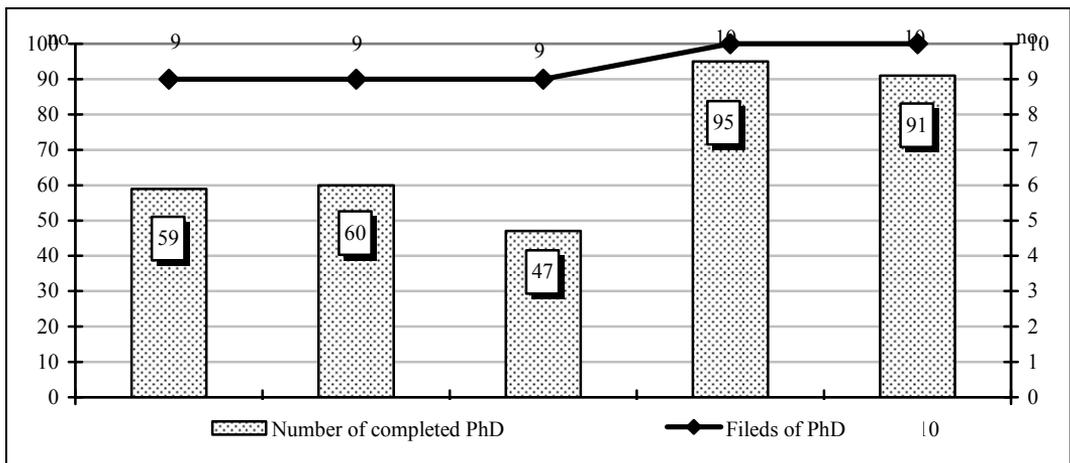


Figure 9. Evolution of doctoral theses completed under the direction of doctoral from the University of Oradea in 2006 - 2010 and the number of fields of doctoral (Source: CDI Projects and Programmes Office, University of Oradea)

The number of doctoral theses completed in 2006 - 2010 (figure 9) under the leadership of doctorate from the University of Oradea has increased from 59 doctoral theses in 2006 to 95 theses in 2009, increasing number of seats open for competition for admission to doctoral studies and the increasing number of areas that PhD. The title of PhD is essential for a teaching position or/and to promote academic and the accession in a better position, even other than academic.

Scientific research is complemented by patents obtained by teaching staff as a result of solving problems of economic, medical, technical and others (CDI Projects and Programmes Office, University of Oradea).

It is noticed that in 2006 - 2010, the University of Oradea teaching staff have obtained a total of 43 patents (table 6). The highest number of patents registered in 2007 (39 patents) to 2006 (0 patent), 2008 (a patent), 2009 (a patent) and 2010 (two patents).

The major concern in the University of Oradea for scientific research is reflected in the number of organized scientific events in the institution in order to promote areas of research and results and to attract new national and international funding (UO, 2005; David, 2006).

Table 6. Number of patents obtained by the teaching staff of the University of Oradea in 2006 - 2010
(Data source: CDI Projects and Programmes Office, University of Oradea)

University of Oradea	Number of patents					Total
	2006	2007	2008	2009	2010	
Patents	0	39	1	1	2	43

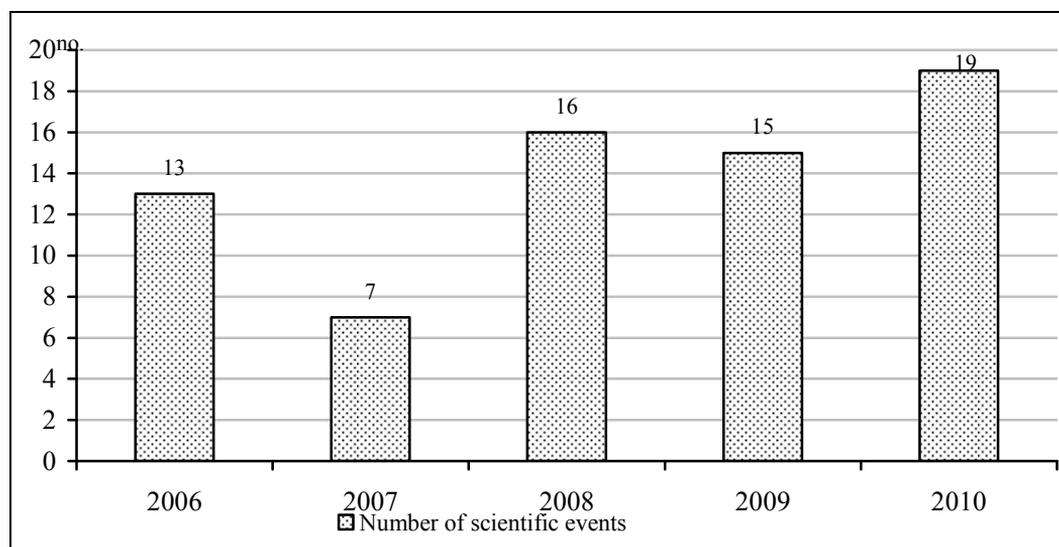


Figure 10. The evolution of scientific events held at the University of Oradea in 2006 - 2010
(Source: CDI Projects and Programmes Office, University of Oradea; ⁸)

In the period 2006 - 2010 (figure 8), the number of scientific events organized at the University of Oradea has grown from 7 events in 2007 to 19 scientific events in 2010.

CONCLUSIONS

Scientific research is a subset of research, the knowledge production is aimed to solve the theoretical and practical issues, plus and formulation of problems is an important step of scientific research (David, 2006).

⁸ <http://www.uoradea.ro>

Within the University of Oradea, in 2006 - 2010, scientific research was conducted jointly or separately, in research centers in the chairs and departments of each faculty. Particular emphasis was given to scientific research conducted on the basis of research projects, whose total value was lei 20574275.27 for research projects won through national competitions and 6541734.6 lei for research projects won through competitions international. During this time, teaching staff and researchers have published a total of 1123 national book publishers, 44 published books from international publishers, 4391 of articles published in professional journals, in proceedings of scientific meetings (national and international) and total of 436 articles published in ISI journals. Also, had a total of 43 patents as a result of solving problems of technical, medical, cultural.

Through this research activity carried out by teaching staff and researchers, University of Oradea contributes to the economic, social and cultural local community, regional, national and even international.

REFERENCES

- Andrei T., Stancu S. (1995), *Statistica: teorie și aplicații*, Editura All, București.
- Boloș V. (2010), *Universitatea "Petru Maior" 2000-2004: sinteză documentară*, Editura Universității "Petru Maior", Târgu-Mureș.
- Cocean P. (2005), *Geografie regională*, Editura Universitară Clujeană, Cluj-Napoca.
- Dabic M., Svarc J. (2011), *About the concept of entrepreneurial university: is there an alternative?*. Drustvena Istrazivanja Journal, vol. 20, issue 4, pp. 991-1013. (Croatia).
- David D. (2006), *Metodologia cercetării clinice: fundamente*, Editura Polirom, Iași.
- Felea I., Derșidan I., Șipoș S., Bococi D. (2009), *Centre de cercetare, dezvoltare și inovare*, Editura Universității din Oradea, Oradea.
- Ianoș I. (2010), *Insertia teritorială a universităților din România*, Editura Universitară, București.
- Munteanu I., Munteanu R. (2004), *Universitatea de Vest din Timișoara*, Editura Universitatea de Vest, Timișoara.
- Petrea R. (2002), *Didactica geografiei*, Editura Universității din Oradea, Oradea.
- Powar K. B. (2002), *Indian higher education: a conglomerate of concepts, facts and practices*, Concept Publishing Company, New Delhi, India.
- Schaub H., Zenke K. G., trad. de Beculau R. (2001), *Dicționar de pedagogie*, Editura Polirom, Iași.
- Vladimirescu I., Otovescu D. (2007), *Universitatea din Craiova: monografie (1947-2007)*, Editura Universitaria & Editura Beladi, Craiova.
- *** (2009), *Dicționarul explicativ al limbii române (DEX)*, Editura Univers Enciclopedic Gold, București.
- *** (2009), *Ghidul de studii universitare 2009-2010 (GSU)*, Editura Universității din Oradea, Oradea.
- *** (2005), *Universitatea din Oradea (UO)*, Editura Universității din Oradea, Oradea.
- *** Data archive CDI Projects and Programmes Office, University of Oradea.
- *** (1990), H.G. nr. 460/02.05.1990.
- *** (2007), H.G. nr. 551/06.06.2007.
- *** (2009), H.G. nr. 749/06.07.2009.
- *** (2007), OM. nr. 1305/13.06.2007.
- *** (2006), OM. nr. 3548/06.04.2006.
- http://www.cdep.ro/pls/legis/legis_pck.lista_anuala?an=2010&emi=5,824&tip=5&rep=0 (accessed on 18.11.2011).
- <http://www.democratieubb.ro/?p=183> (accessed on 02.02.2012).
- http://ec.europa.eu/research/fp7/pdf/fp7-brochure_ro.pdf (accessed on 02.02.2012).
- <http://info.uoradea.ro/article/661.html> (accessed on 15.11.2011).
- <http://info.uoradea.ro/article/662.html> (accessed on 15.11.2011).
- <http://www.uoradea.ro> (accessed on 19.11.2011, 05.01.2012, 10.02.2012)

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