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# **OPEN ACCESS TO SCIENTIFIC INFORMATION: COMPARATIVE STUDY IN DOAJ**

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## 1. Abstract

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- **Purpose** - to provide a comparative retrospective analysis of Bulgarian, Turkish and Croatian OA Journals added in DOAJ in last eleven-year period 2002 – 2013.
- **Design/methodology/approach** –  
**First of all is made:**
  - brief review of definitions and descriptions of the Open Access as a global movement;
  - analysis of the three main Open Access Initiatives;
  - the difference between Golden Road and Green Road.**Second of all, we used:**
  - the comparative approach and we made a comparative study of OA journals in Bulgaria, Turkey and Croatia and we present the evaluation results and findings.



## 1. Abstract

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- **Findings** – Qualitative and quantitative data for the study were collected by the DOAJ. The data are analyzed in terms of quantity and period, and the results are presented graphically and tabular and finally are made major specific conclusions and recommendations.
- **Originality/value** – There are many discussion issues related to the problematic of OA, but a thorough study of OA to scientific information especially comparative study of Bulgarian, Turkish and Croatian journals in the Directory of Open Access Journals (DOAJ) is missing in some European countries including Bulgaria.





## 2. Introduction

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- **The first ideas** about freely available e-journals - **1990s**;
- Today, the term **“archive”** is replaced by the term **“repository”**;
- The term **"Open Access"** is **officially accepted** and began to be used with the signing of the first open access initiative in **Budapest**;
- **Open access** to scientific publications is **open and free of charge** access to online journals, articles, conference papers, technical reports, theses and dissertations, reports, and reprints ;
- Publishers of open access publications refer to the movement **"open access"** .



### 3. Overview of Open Access

#### 3.1 General initiatives for Open Access

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- In general, we could say that Open Access goes through several stages in its development, which could be differentiated by signing **the three major initiatives to Open Access.**
  - **Budapest Open Access Initiative (BOAI);**
  - **Bethesda Statement on Open Access Publishing;**
  - **Berlin Declaration on Open Access to Knowledge.**



## Budapest Open Access Initiative (BOAI)

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- ❑ signed in **Budapest** on 1-2 December 2001 ;
- ❑ “old tradition + new technology = public good.”
- ❑ BOAI – the basic OA definition;
- ❑ Main ways to OA according BOAI:
  - self-archiving;
  - publication of the article in a OA journal;
- ❑ Until **August 2013** BOAI was signed by **5744** individuals and **661** organizations.



## Bethesda Statement on Open Access Publishing

- ❑ established on 11<sup>th</sup> April 2003, in Howard Hughes Medical Institute in Chevy Chase, Maryland;
- ❑ The text of the statement consists of four main parts:
  - The first part contains a **definition of OA**;
  - The second part is a **declaration of the Institutions and Agencies working group**;
  - The third part includes a **report of the Libraries and Publishers working group**;
  - The fourth part expresses the **opinion of the Scientists and Scientific Societies working group**.





## Berlin Declaration on Open Access to Knowledge in the Science and Humanities

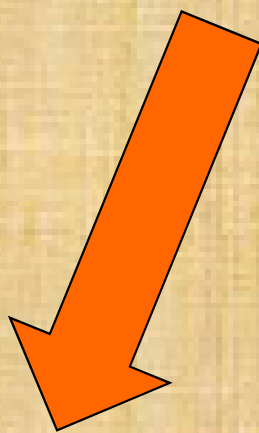
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- ❑ The declaration is a result of a **Conference on Open Access to Knowledge in the Sciences and Humanities**, held in Berlin in October 2003, organized by Max Planck Society and Project ECHO (European Cultural Heritage Online);
- ❑ Berlin Declaration overlaps as definition of OA to the previous two initiatives so far, i.e. **August 2013**, is supported by **444 organizations**.

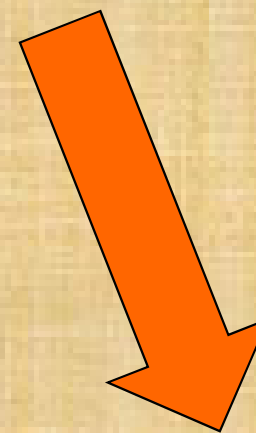


## 3.2 Green Road and Golden Road for Open Access

According to the definition of BOAI  
for achieving OA there are two main ways:



**open access repositories  
(GREEN ROAD)**



**open access journals.  
(GOLDEN ROAD)**



## Green Road (self-archiving) of Open Access

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- ❑ In self-archiving authors deposit their works in open electronic archives of OA via Internet (which does not exclude the parallel publication in traditional journals);
- ❑ Articles which are deposited in online repositories are called e-prints. The term e-print unifies the two main types: pre-print and post-print;
- ❑ Pre-prints are non reviewed articles and post-prints are refereed and accepted articles dealing print.



## Golden Road (OA-publishing) of Open Access

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- ❑ In open access publishing all costs for publishing the scientific papers are paid by the publisher and the end users' access to publications is completely free;
- ❑ One of the most popular program for OA is "Golden Road" belongs to "Open Society Foundation" and Public Library of Science. It currently contains over 2000 scientific journals, working on the principle of OA;





### 3.3 European Commission and Open Access

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- ❑ One of the main **European initiatives for OA** is the project **OpenAIRE** (OA Infrastructure for Research in Europe) - a pilot project in FP7 EU carried out in the period 2009 - 2011.
- ❑ The project is a tool for implementation of the policy of European Commission (EC) and the European Research Council (ERC) to ensure the widest possible dissemination and access to published research, funded by European programs.



## 4. Comparative study of OA journals in DOAJ for Bulgaria, Croatia and Turkey

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### 4.1 Overview of the Directory of Open Access Journals

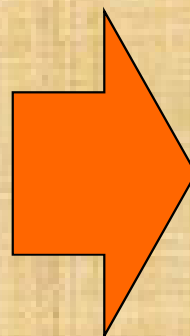
- ❑ The purpose of establishing the DOAJ is to increase the accessibility to scientific journals.
- ❑ DOAJ provides access to:
  - 9945 scientific journals in OA;
  - 5096 journals at article level from 120 countries;
  - Currently till August 2013, DOAJ provides access to 1,159,853 entries.



## Comparison of DOAJ's data

### March 2013

8846 scientific journals  
4538 journals on article level  
120 countries  
1,055,637 entries



### August 2013

9945 scientific journals  
5096 journals at article level  
120 countries  
1,159,853 entries

As it can be seen from the data presented in this six-month period, **there is exceptional growth in both scientific journals and in journals at article level**, which indicates a tendency, that the scientific community sets great store by the open access.



## The University of Lund's data about the growing number of publications over the years actual as of August 2013.

Year	2002 -2005	2006-2008	2009-2010	2011-2012	2013
Total Number Of Titles	1141	3588	4348	7489	9945

As there can be seen from the table there is a **sharply increase in the number of titles especially in the last year**, which is another proof of the orientation of scientific periodicals to the "Golden Road."





## 4.2 Open access journals in DOAJ for Bulgaria, Croatia and Turkey

Place in the ranking	Country	Number of journals in OA by the month of February 2012 (Dimchev, 2013)	Place in the ranking	Country	Number of journals in OA by the month of August 2013
1	USA	1359	1	USA	1342
2	Brazil	668	2	Brazil	921
3	United Kingdom	529	4	United Kingdom	618
6	Germany	243	7	Germany	341
8	Romania	219	8	Romania	300
<b>10</b>	<b>Turkey</b>	<b>186</b>	<b>11</b>	<b>Turkey</b>	<b>255</b>
13	France	143	14	France	190
<b>24</b>	<b>Croatia</b>	<b>82</b>	<b>24</b>	<b>Croatia</b>	<b>101</b>
26	Serbia	72	25	Serbia	99
30	Czech Republic	54	30	Czech Republic	76
32	Russia	44	31	Russia	74
38	Greece	37	<b>37</b>	<b>Bulgaria</b>	<b>51</b>
39	Slovenia	33	39	Greece	46
<b>43</b>	<b>Bulgaria</b>	<b>31</b>	43	Slovenia	43



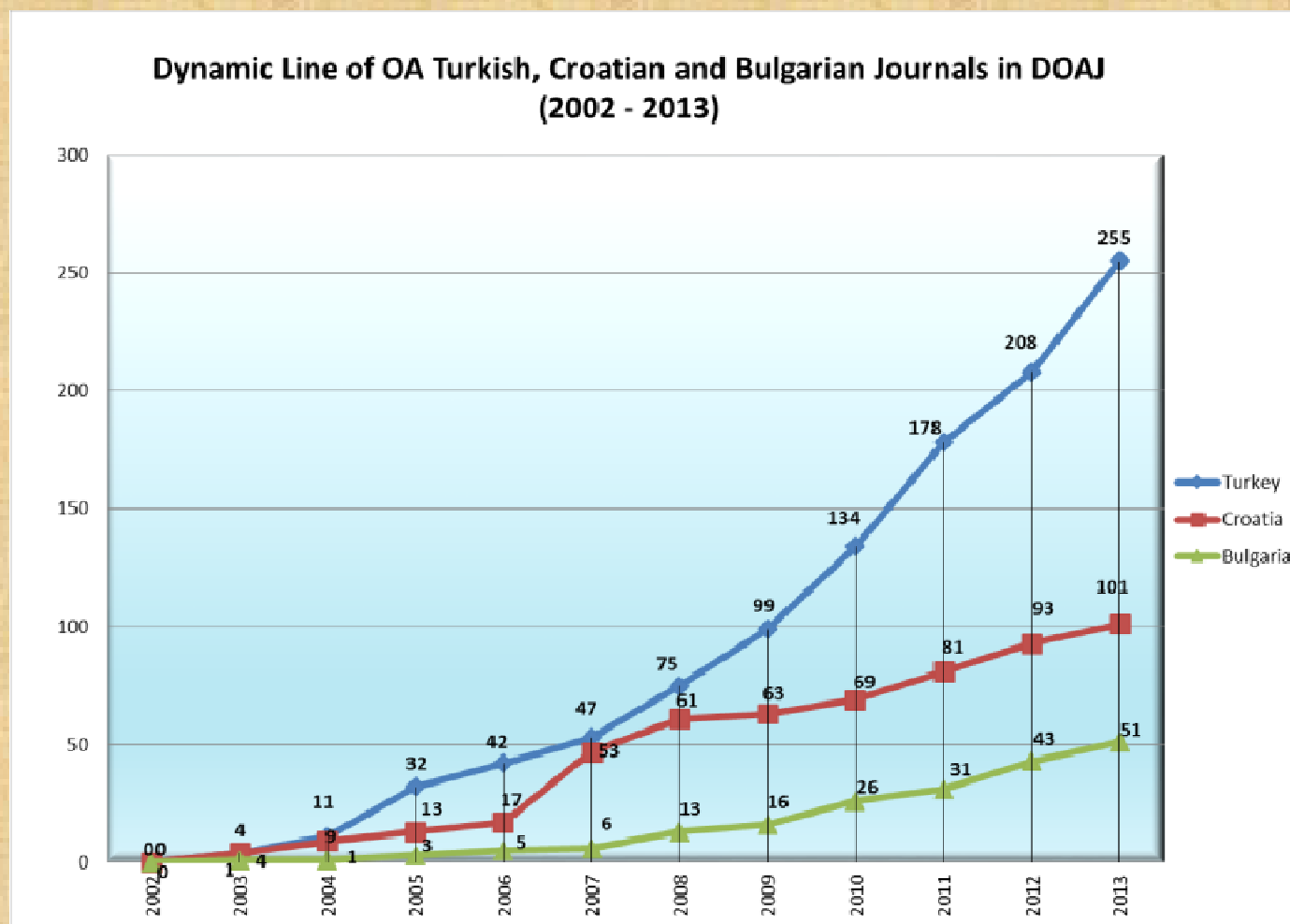
## 4.2 Open access journals in DOAJ for Bulgaria, Croatia and Turkey

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As can be seen by the above comparative table, Turkey is currently in 11th place with a nearly 70 journals and Croatia held its 24th place ranking with a growth of 19 journals. Positive tendency that occurs for Bulgaria is that the country goes up in the rankings from 43rd to 37th place with a growth of 20 open access journals. This is an encouraging fact for the development of Open access to scientific information in our country.



## 4.2 Open access journals in DOAJ for Bulgaria, Croatia and Turkey





## 4.2 Open access journals in DOAJ for Turkey

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Turkey is one of the largest aggregators in higher education with its 169 universities, of which 105 are public and 64 are private, carrying out activities in both national and international dimension. In 2006, a number of initiatives were organized by Turkish libraries and Information Centers for promotion of OA among the academic community in Turkey.





## 4.2 Open access journals in DOAJ for Turkey

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These initiatives led to the creation of numerous institutional OA archives, especially in the universities. It can be seen from the graph, that **at the moment there are 255 Turkish DOAJ journals in OA**. Some of these publications are uploaded platforms for OA journals, but most of them are managed by individual research institutions (universities) and scientific societies.



## 4.2 Open access journals in DOAJ for Croatia

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The second highest in development perspective of OA in the graph is Croatia. There are seven public universities (Zagreb, Split, Rijeka, Osijek, Zadar, Dubrovnik and Pula), 30 public and private polytechnics, 25 public institutes and six technology centres in Croatia. The oldest university is University of Zagreb, founded in 1669, and there are about 180 000 students enrolled at all universities and polytechnics.



## 4.2 Open access journals in DOAJ for Croatia

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There is a strong developing OA environment in Croatia and several academic and research institutions which initiate different activities concerning open access to the scientific information for example:

- ☐ School of Medicine;
- ☐ Faculty of Humanities and Social Sciences;
- ☐ Faculty of Mechanical Engineering and Naval Architecture;
- ☐ Faculty of Organization and Informatics at University of Zagreb;
- ☐ University of Zadar, University of Osijek, Rudjer Boskovic Institute, National and University Library, etc.



## 4.2 Open access journals in DOAJ for Croatia

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There is a vibrant OA journal publishing environment, and a number of platforms to increase awareness of Croatian publications, like **Central portal of Croatian OA journals HRCAK**. The central repository of Croatian scientific journals HRCAK offers access to over 300 OA journals and 80 000 articles.





## 4.2 Open access journals in DOAJ for Bulgaria

Currently, **Bulgaria is presented in DOAJ with 51 journals at August 2013**. In our country there has been a significant growth of OA journals during the last years - **in 2007 we had only 6 journals in OA and in 2013 there were 51 OA journals**. This positive tendency could be explained by the fact that over **the last few years in Bulgaria there are six active scientific repositories of OA**, namely:

- Repository of Burgas Free University;
- Repository of Central Medical Library;
- Repository of the Institute of Mathematics and Informatics, Bulgarian Academy of Sciences;
- Repository of the New Bulgarian University;
- Bulgarian OpenAIRE repository, coordinated by the Institute of Mathematics and Informatics, Bulgarian Academy of Sciences;
- Repository of the Sofia University "St. Kliment Ohridski".



## 4.2 Open access journals in DOAJ for Bulgaria

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**We could summarize that:**

- ❑ In Bulgaria there is a certain level of awareness among the scientific and library community about issues of OA, especially among university researchers;
- ❑ However, there are still few institutions that have created and developed repositories of OA and insufficient number of scientists are involved in the movement for OA to research publications;



## 4.2 Open access journals in DOAJ for Bulgaria

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- ❑ It is necessary to be conducted a targeted strategy to raise awareness among the academic, research and library community in Bulgaria for the benefits of OA publishing and creating a supportive environment for creation of repositories;
- ❑ In this process, an important role is played by library professionals and library associations which are called to be an active partner in science and education in the global environment.



## 5. Conclusion

Based on the review and quantitative chronological analysis of open access journals in DOAJ for Turkey, Croatia and Bulgaria, we can conclude as follows:

- ❑ there is a growing interest in OA to scientific information and this is obvious by the booming growth of OA journals in all three countries;
- ❑ researchers in all three countries are increasingly aware of their rights and they require easier and smooth publication road for their research;





## 5. Conclusion

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Librarians and information professionals are called to help their customers to take advantage of the extraordinary potential of OA and participate in the creation of repositories and to encourage publication in the available repositories of scientific content. **The library professionals in Turkey and Croatia are more active in this role, while in Bulgaria the library community must be activated and should apply best practices to encourage lecturers and researchers to become involved in the policy of OA and exchange of scientific information.**



## 5. Conclusion

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In the website of the International Open Access Week is underlined that **librarians are key advocates of free access to information worldwide**. Every year in October (21-27 October 2013), librarians and scientists from all around the world realize numerous initiatives in promoting OA as a new norm in scholarship and research. **The shared experience could serve as an inspiration and best practice models, which could be followed.**

# Thank you for your attention!



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