

# Analysis of Open Access Publications of the Slovenian Researchers in 2015: Impact and Economics

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# Open Access

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Open-access (OA) literature is digital, online, free of charge, and free of most copyright and licensing restrictions (p. Suber).

- Green way – archiving in repositories:
  - embargo period;
  
- Gold way – publishing in gold journals:
  - APCs (Article Processing Charge)
  
- Hybrid way – publishing in hybrid journals:
  - APCs (Article Processing Charge)

# Motivation

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➤ On short term period:

- to have an evidence on OA publications,
- to have an evidence on sum of APCs
- Total Cost of Publication analyses;

➤ on long term period:

- to put and to assess Slovenian contribution to STM publishing in a context of STM publishing economy;
- to identify some patterns of Slovenian researchers publications;
- to identify critical points in a research publication workflow in SICRIS from publishing via bibliographic record to open access.

# Methodology

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- identification of all Slovenian publications and Slovenian gold open access publications published in 2015 with the use of SCOPUS, the bibliographic database with citation index;
- identification of Slovenian open access publications in hybrid journals with the use of well known information resources of scientific periodicals (reviewing without authentication);
- determination of the journal impact with the use of ARRS methodology and researcher's bibliography in COBISS.SI system;
- estimation of the share of target publications (research sample), archived in Openscience.si, the aggregator of Slovenian repositories.

# Key Data

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- we have found 5.577 scientific publications in Scopus, where one of the authors was from Slovenia and publication was published in 2015 (AFFILCOUNTRY = Slovenia, March 2016);
- IZUM has established 5.061 links between articles in Scopus and COBISS.SI with the API protocol for the articles published in 2015 (SCOPUS-EID – COBISS-ID; March 2016);
- with the above mentioned methodology we discovered 1.139 Slovenian open access articles (22%) with at least one ID number (SCOPUS-EID, COBISS-ID), 41 conference papers and 37 other scientific works without ID number, all published in 2015 (March 2016);
- **Final research sample: 1.139 Slovenian open access articles, published in 2015.**

# OA Articles by Business Model

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- 911 articles were published in gold open access journals:
  - For 484 articles one had to pay APC;
  - 427 articles were published free of charge.
- 228 articles were published in hybrid journals (payment of APC);
- altogether 712 APCs should be paid according to publisher's licencing model (484 for gold + 228 for hybrid);
- only 55 out of 1.139 OA articles were archived in at least one Slovenian repository.

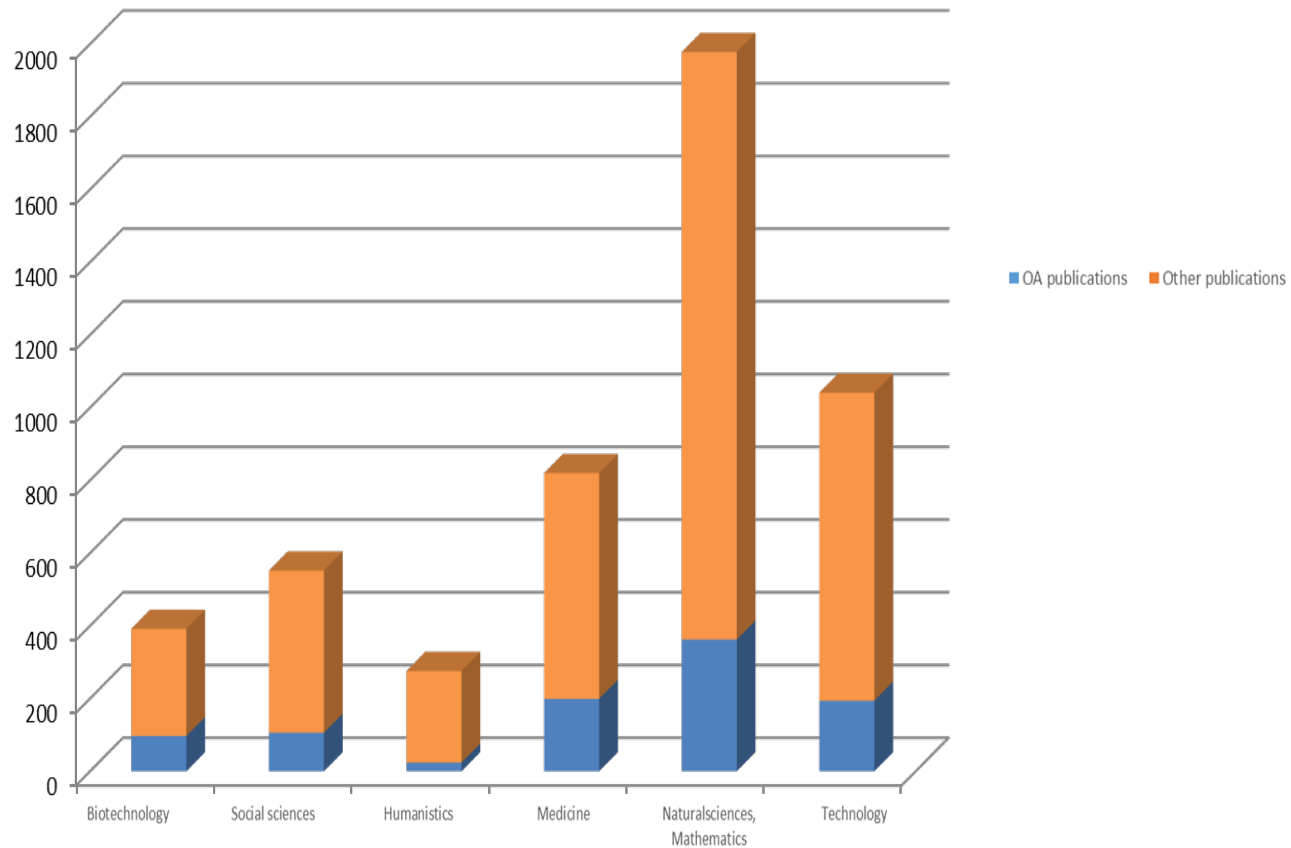
# Costs for APCs

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- For each article in each journal we checked the APC prices (publisher's catalogue); APC can vary on the type of document;
- for all 712 articles 1.123.901 EUR for article processing charges (APC) should be paid according to publisher's restrictive list price model;
- the average APC was 1.574 EUR;
- possible differences: international publications, discount based on membership in academic societies, special contracts, rewarded publications ectr...;
- based on publisher's feedback on our questionnaire we estimate that approximately 60 % of the above mentioned sum were invoiced to Slovenian authors for the open access of their articles, this is approximately 675.000 EUR.

# Slovenian Articles per Scientific Field (OA v. other publications)

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# The Impact of journals, where Slovenian OA articles were published

5.061 articles (linked articles Scopus - COBIB)	1.139 articles (OA articles – gold + hybrid)
$A^{1/2}$ = 3.457 articles or 68 %	$A^{1/2}$ = 534 articles or 46 %
$A'$ = 2.617 articles or 52 %	$A'$ = 404 articles or 35 %
$A''$ = 493 articles or 10 %	$A''$ = 66 articles or 6 %
Average SNIP = 1,19	Average SNIP = 0,93



228 OA articles in hybrid journals	911 articles in gold OA journals
$A^{1/2}$ = 153 articles or 67 %	$A^{1/2}$ = 381 articles or 42 %
$A'$ = 119 articles or 52 %	$A'$ = 285 articles or 31 %
$A''$ = 18 articles or 8%	$A''$ = 48 articles or 5 %
Average SNIP = 1,36	Average SNIP = 0,69
Average APC = 2.140 EUR	Average APC = 1.312 EUR

# Comparison of OA articles (1.139) v. linked articles (5.061)

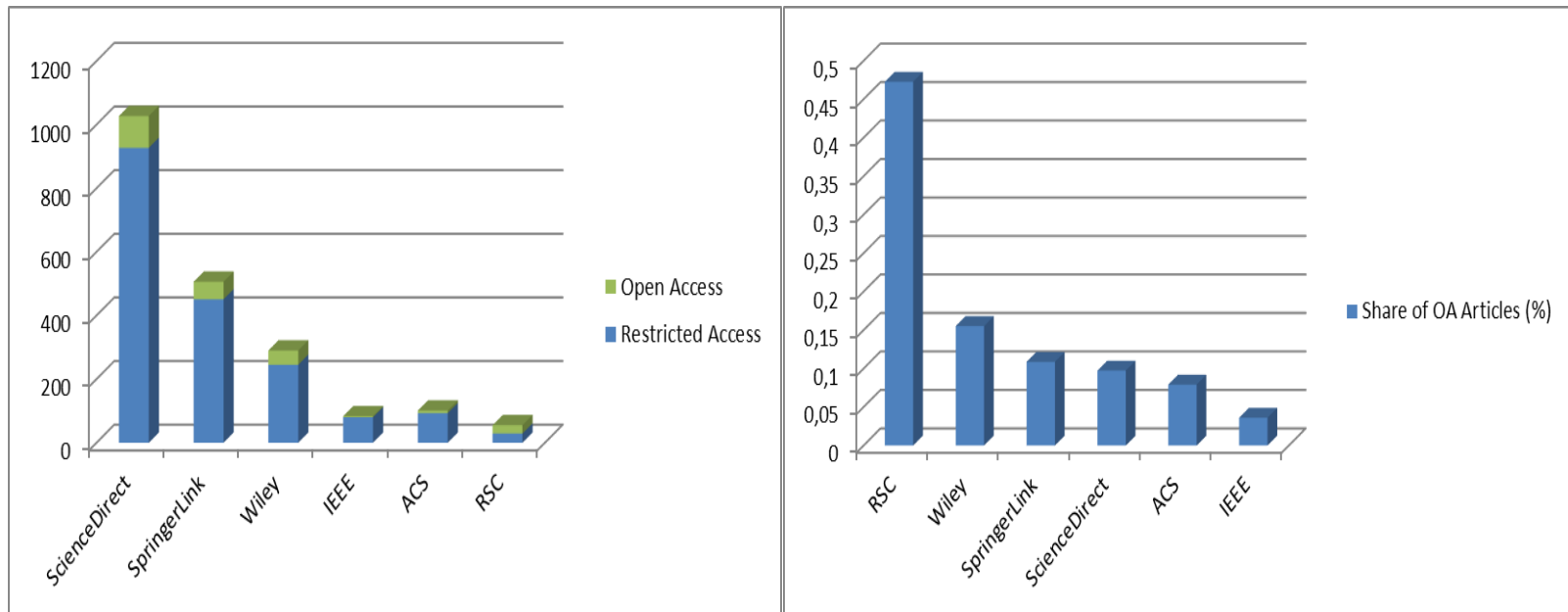
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Scientific field	Average SNIP OA articles	Average SNIP (linked articles)	Difference
Natural sciences, Mathematics	1,04	1,23	> 0,19
Technology	1,04	1,42	> 0,38
Biotechnology	0,76	1,09	> 0,33
Medicine	1,02	1,19	> 0,17
Social sciences	0,63	0,85	> 0,22
Humanities	0,47	0,66	> 0,19
<b>Together</b>	<b>0,93</b>	<b>1,19</b>	<b>&gt; 0,26</b>

# Articles per publisher

Publisher	Number of OA articles	Average SNIP	APC sum (EUR)	Average APC (EUR)
Wiley	45	1,24	110.047	2.501
Taylor&Francis	21	0,86	19.770	942
Springer	55	1,04	101.115	1.839
RSC	26	1,07	45.909	1.836
PLOS	71	1,09	96.101	1.353
Nature	31	1,39	34.950	1.156
Elsevier	100	1,48	179.664	1.796
BMC (Springer)	55	1,12	95.470	1.768

# OA analysis per publisher



# Repositories - archiving

Only 55  
articles  
were  
deposited  
in at least  
one of  
Slovenian  
repositories

dirros.openscience.si/Statistika.php?lang=slv

Uvoženo iz IE

## Digitalni repozitorij raziskovalnih organizacij Slovenije

↑	Uvodnik	Iskanje	Brskanje	Statistika	Obvestila	Kontakti	Prijava	
CTK - Centralna tehniška knjižnica Univerze v Ljubljani	110	64	1	0			111	64
GeoZS - Geološki zavod Slovenije	11	0					11	0
IER - Inštitut za ekonomska raziskovanja								
IHR - Inštitut za hidravlične raziskave								
IJS - Institut Jožef Stefan	11	0	2	0			13	0
IK - Inštitut za kriminologijo pri Pravni fakulteti v Ljubljani	1	0	14	0			15	0
IMT - Inštitut za kovinske materiale in tehnologije								
INV - Inštitut za narodnostna vprašanja								
INZ - Inštitut za novejšo zgodovino								
IZUM - Institut informacijskih znanosti								
KI - Kemijski inštitut	18	0	1	0			19	0
KIS - Kmetijski inštitut Slovenije	1	0	2	0			3	0
NIB - Nacionalni inštitut za biologijo								
OI - Onkološki inštitut Ljubljana	1	0					1	0
PI - Pedagoški inštitut								
SB-CE - Splošna bolnišnica Celje								
SB-JE - Splošna bolnišnica Jesenice								
UIRS - Urbanistični inštitut Republike Slovenije								
UPK - Univerzitetna psihiatrična klinika Ljubljana								
ZAG - Zavod za gradbeništvo Slovenije								
ZRC-SAZU - Znanstvenoraziskovalni center Slovenske akademije znanosti in umetnosti								
Skupaj	158	64	20	0			178	64

Zadnja osvežitev: 17.05.2016

Število klikov po obdobjih

	Zadnjih 7 dni 10.05 - 17.05	Zadnjih 30 dni 17.04 - 17.05	Vseh 13.01.2015 - 17.05
Gradiva:	2.399	6.943	37.837
Datoteke:	19	77	743

# Conclusions

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- advocacy of open access among researchers is necessary;
- cooperation and support of bibliographers with publishing and depositing of articles;
- providing OpenAIRE compatibility in the COBISS system.
- common information support of Slovenian libraries (pilot project).