

## Globally national – locally international: Bibliometric analysis of a SEE psychology journal

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The article explores bibliometric features of the Serbian psychology journal *Psihologija* in the 2001–2012 period. Several basic indicators of the journal's impact were generated and compared between two periods, before and after 2007 when *Psihologija* was included in *Social Sciences Citation Index (SSCI)*. Journal's output was evaluated in regard to other psychology journals included in SSCI in the same year. The results have shown that *Psihologija's* impact factor has raised following the increased internationalization of the journal, quantified as the proportion of articles published in English and/or written by foreign authors. However, *Psihologija* and other South East European (SEE) journals still lack a solid international communication network, which is reflected in the absence of related journals and large proportion of citations from local authors. The article concludes with several suggestions for authors, journal editors, and science policy institutions.

*Keywords:* globality; locality; scientific journals; internationalizations; psychology; impact factor

Bibliometric analyses suggest that the authors in the field of social sciences are increasingly focused on publishing and citing scientific journal articles (Kyvik, 2003). This is particularly true for psychology as a bordering discipline where journals are considered to be the most important channel for research results dissemination, even more relevant than books or conference proceedings (Hicks, 2012). But the purpose of journals went beyond publishing scientific research. The number of articles, citations to them, and prestige of journals in which they were published, are commonly used as measures of scientific excellence. All participants of the scientific communication process can be evaluated this way: journals, researchers, projects, teams, faculties, and even countries. The regulations of the *Serbian Ministry of Science, Education, and Technological Development (MSETD)* are largely based on such an approach. For instance, an article published in a leading international academic journal is worth more than a national monograph, and several times more than an article in a national journal. The introduction of those regulations in 2008 have boosted the number of articles

by Serbian authors in international journals, which has almost tripled from about 7.000 in 2008–2012, to more than 20.000 in 2008–2012.

The *publish or perish* pressure have influenced not only authors, but all participants of the journal publishing process. Editors are employing strategies to improve the visibility of their journals in major bibliographic databases, particularly those published by *Thomson Reuters* (previously *Institute for Scientific Information – ISI*), available through the *Web of Science (WoS)* service: *Science Citation Index (SCI)*, *Social Sciences Citation Index (SSCI)*, and *Arts & Humanities Citation Index (A&HCI)*. Although Thomson Reuters is “interested in excellent regional journals”, publishing articles in English language is clearly a benefit for a journal that wants to be included in ISI indices (Testa, 2009). Additionally, research shows that non-English journals are cited less frequently, while non-English articles receive less citations than English ones, even within the same journal (Liang, Rousseau, & Zhong, 2013; Sangwal, 2013). Consequently, many national journals have switched to publishing articles mainly or exclusively in English language, not only at the “scientific periphery”, but also in highly developed non-English speaking countries (Kyvik, 2003; Zitt, Perrot, & Barré, 1998). The process of journal *internationalization* was also manifested through the growing interest to attract authors and reviewers from foreign countries, and, most importantly, to draw citations from international journals.

Academic publishing companies have also had to respond to the increasing number of academic journals. Two large bibliographic services were launched in 2004: *Elsevier’s Scopus* and *Google’s Scholar*. This has disrupted the ISI’s almost half a century long dominance in the area of journal indexing. Moreover, both Elsevier and Google have introduced their own methods of evaluation and offered indicators of journal prestige as alternatives to the ISI’s *Journal Impact Factor (JIF)*. JIF is published annually for approximately 11.500 journals within the *Journal Citation Reports (JCR)*. Elsevier offers free *Journal Metrics* service featuring their own indicators<sup>1</sup> for almost 20.000 journals indexed in Scopus. In 2012, Google has launched a service called *Metrics*, providing the *Hirsch index* ranking for, what is estimated to be, 40.000 journals from all around the world. However, JIF is still considered to be the major benchmark for the “quality” and relevance of scientific journals. Regulations of the MSETD consider a journal to be international only if it is indexed in ISI citation indices, i.e. available on the Thomson Reuters’ *Master Journal List*. Accordingly, Serbian faculties and scientific institutes enforce the rules which impose articles published in ISI journals as a necessary condition for academic promotions.

In response to the increased market competition, Thomson Reuters have substantially expanded journal coverage in the 2000s. The number of ISI indexed journals in the field of social sciences have increased by 42%, which

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1 Two main indicators are generated: *Source Normalized Impact per Paper (SNIP)* and *SCImago Journal Rank (SJR)*. Calculation methods for both indicators are much more complex than JIF’s.

was especially welcomed in the countries that were underrepresented in ISI databases, among others, those from Central and Eastern Europe. However, it seems that Thomson Reuters have (again) demonstrated a bias in the journal selection process. Analyses show that some countries have become “overrepresented” in comparison to their research potential (Kosanović & Šipka, 2013). During the 2005–2010 period, 10 Romanian journals were included in SSCI, 9 from Croatia, and 2 from Serbia. Other countries from the South East European region (SEE) still have no journals covered by SSCI. In 2012, the psychology of SEE region was represented in SSCI by 3 journals: *Psihologija* from Serbia, *Suvremena psihologija* from Croatia, and *Journal of Cognitive and Behavioral Psychotherapies* from Romania. In the meantime, *Suvremena psihologija* was dropped from the Master Journal List. It is clear that obtaining the JIF should not be perceived as an ultimate goal and benefit, but as a great responsibility and the beginning of a continuing process of enhancing journal quality. Many publishers and editors have neglected this fact, which have resulted in the large number of journals suppressed from the JCR.<sup>2</sup>

According to the national *Journal Bibliometric Report (JBR)*<sup>3</sup>, *Psihologija* is the most cited Serbian psychology journal and one of the most influential national journals in the field of social sciences. It was among the first journals to be available in the *Open Access* format through the *Serbian Citation Index (SCIndeks)*. However, the key event for the journal’s status was its inclusion in SSCI in 2007, on the journal’s fortieth anniversary, when it became an international journal according to the criteria of the Serbian MSETD. It might be expected that this change would result in positive effects, both in the context of promoting national research and local authors, as well as attracting international articles and citations. The main goal of this paper is to verify these expectations, and can be described as threefold. The first is to observe bibliometric features of *Psihologija* in the 2001–2012 period, with the emphasis on indicators of journal internationality. The second aim is to analyze the impact of *Psihologija* within the set of psychological journals included in SSCI in the same year. And the third is to examine the contribution of national journals to the overall production of psychologists from the SEE region in WoS. The presented results should offer useful information for authors, journal editors, and government institutions in the sense that they all should be aware of benefits and drawbacks of writing articles, managing journals, and financing researches aimed at global scientific market. More broadly, this paper is a contribution to the debate on two dichotomies in science: local vs. global and national vs. international.

2 The number of journals suppressed from JCR has dramatically increased in the 2007-2012 period. Due to the violation of publications standards and impact factor manipulations, 65 journals were dropped from 2012 JCR, as compared to 9 title suppressions in 2007.

3 Available in Serbian at: <http://scindeks-bic.nb.rs>

### Data and analysis

Psychology journals were selected for the analysis regarding the year of inclusion in SSCI (2007) and the country of journal origin (SEE). This resulted in the list of 19 titles: 17 journals included in SSCI in 2007, one Croatian psychiatry journal included in 2007, and the only Romanian psychology journal indexed in WoS included a year earlier. Since the JIF becomes available only two years after the inclusion, the first available data were for 2009. Following indicators were taken from the JCR 2009 and/or last available (2012) editions:

- JIF (the average number of citations a journal have received in the analyzed year for articles published in two previous years)
- Immediacy Index (the average number of citations a journal have received in the analyzed year for articles published in the same year)
- quartile rank of a journal within the corresponding subject category
- number of published articles
- number of citations
- number of citations from foreign authors
- number of journal self-citations, i.e. citations to a journal from articles published in the same journal
- number of author self-citations
- number of citing journals, i.e. “donors” of citations to the analyzed journal
- number of related journals, i.e. journals that have strong cited and citing relationship with the analyzed journal

Bibliometric features and impact of *Psihologija* were further analyzed using the data from SCIndeks and JBR, for the six-year period before inclusion in SSCI (2001–2006), and the same period after (2007–2012). In order to obtain more stable indicators, the analyzed period was divided into six two-year intervals. Several indicators were calculated for each interval by counting the number of articles published in English, articles by foreign authors, multinational articles, and the number of citations from other SCIndeks journals.

Definitions of internationality are often ambiguous and loosely interpreted. Commonly accepted opinion is that a journal should not be regarded as international simply because it is referred in an international database or publishes articles in English language. We have accepted the view that the most accurate indicators of journal’s internationality are the multinational distributions of its authors and users (Buela-Casal, Perakakis, Taylor, & Checa, 2006; Dinkel, Berth, Borkenhagen, & Brähler, 2004). Since it is practically impossible to determine who the users (readers) of a journal are, we have defined them as journal citers, both in terms of citing authors and citing journals. All authors with non-Serbian affiliations are considered to be foreign, and all articles written by two or more authors from different countries are classified as multinational. Regarding the data source, all indicators based on information taken from SCIndeks are labeled

as *national* (e.g. national citation rate), and all indicators based on WoS data as *international* (e.g. international impact factor). Scientometric distributions are known to be highly skewed, so the appropriate nonparametric methods were applied to test the differences between groups (e.g. Mann–Whitney U test) and correlations among different indicators (e.g. Spearman’s Rho).

## Results

### The internationalization of *Psihologija*

As the leading national psychology journal, *Psihologija* was publishing mainly articles in Serbian language by the authors from Serbia and former Yugoslavia. Inclusion of the journal in SSCI has induced change in the editorial policy and journal’s global visibility. The major leap was receiving the first JIF in 2009, followed by the sharp increase of all internationality indicators. This was also when the emergence of truly multinational papers has occurred. The proportion of articles by foreign authors has increased, as well as the proportion of articles written in cooperation of Serbian and foreign authors. The decrease in the proportion of foreign authors in the last two-year period reveals the change in the publishing strategy of local authors who became more interested (or motivated) to publish articles in English. The language shift seems to be the most apparent and a single consistent change in the journal’s editorial policy after 2007.

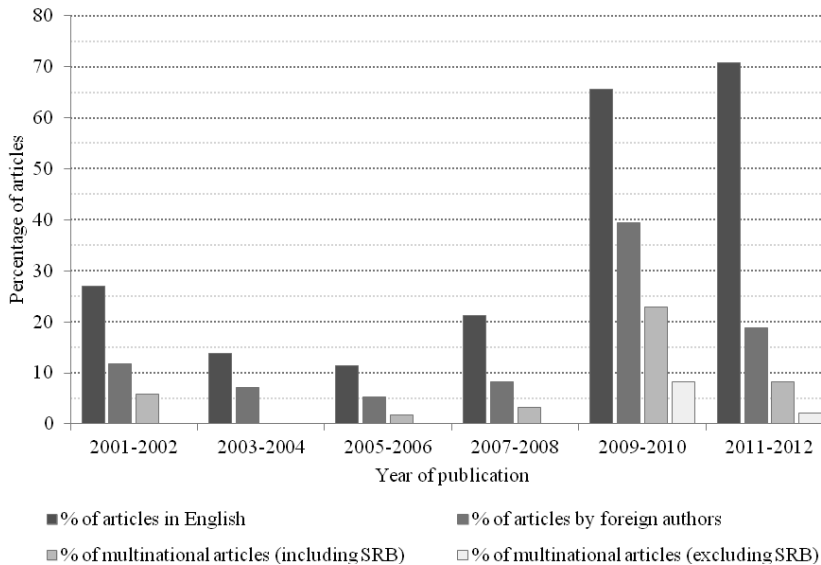
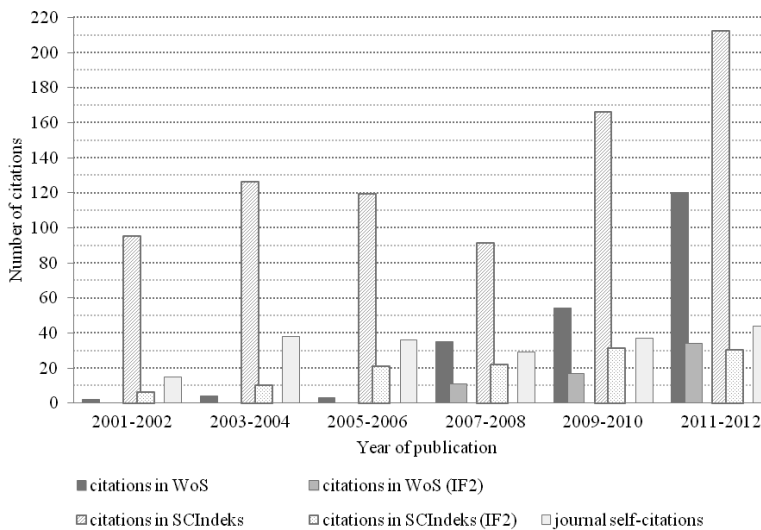


Figure 1. Internationality indicators for *Psihologija* in the 2001–2012 period

By becoming visible in a prestigious international database, *Psihologija* has got the opportunity to break up the *vicious circle of inadequacy*, typical

for local journals from small countries (Marušić & Marušić, 1999). It could be expected that this change will result in more article submissions, thus making the reviewing processes more rigorous, which will improve the overall quality of the journal. These effects should be visible in the journal's international citation rate as an indicator of acceptance by foreign authors. The data in Figure 2 shows that the number of citations to *Psihologija* in WoS is indeed constantly increasing after 2007. But we should point out that the similar trend is visible at the global level. The median citation rate of journals in *Psihologija*'s subject category (Multidisciplinary Psychology) has increased from 438 in 2007, to 653 in 2012. The same is true for the national citation index where the number of citations to *Psihologija* has doubled in 2011–2012, compared to 2001–2002. Likewise, the median citation rate in the group of national psychology journals (excluding *Psihologija*) has grown from 9 in 2007 to 32 in 2012. It is important to note that the proportion of citations to two year old articles, used in the calculations of JIF, constantly decreases, particularly in SCIndeks, where the majority of cited articles from *Psihologija* are more than 10 years old.



\* IF2 indicates the number of citations used in the calculation of the journal's Impact Factor

Figure 2. Citation rate of *Psihologija* in SCIndeks and WoS in the 2001–2012 period

Similar citation trends are evident both in national and international indices, but we should differentiate two dimensions of impact. In the group of cited articles published in *Psihologija* in 2007–2012, correlation of the number of national citations and the number of international citations is negative and significant ( $\rho = -0.25$ ,  $p = .02$ ). The structure of those impacts are obviously related to many factors such as the author's activity, author's origin, language, topic, etc. It can be noticed that highly cited papers are usually published by highly productive authors. Consequently, in the group of articles cited two or

more times in WoS ( $N = 54$ ), correlation between the total number of citations and the number of authors' self-citations is positive and significant ( $\rho = 0.47$ ,  $p < .01$ ). This does not mean that *Psihologija*'s international impact is based on this type of citation, but it is evident that authors' activity and orientation towards publishing abroad, affect journal's impact.

Regarding the publication language, average international citation rate of articles in English is slightly higher (0.84) than those in Serbian (0.45). However, this difference is not statistically significant, mainly because of the generally low citation rate of articles published in *Psihologija* (median value is 0 for both languages). Articles by foreign authors are cited more often in WoS (0.97) than those by Serbian authors (0.55). These ratios are exactly the opposite in SCIndeks. Articles in Serbian have higher average national citation rate (1.39) than those in English (0.55) and articles written by foreign authors are cited less (0.23) than those by Serbian authors (1.17). Because a single highly cited paper can largely affect the average values, percentages of cited papers were also calculated for each category. Articles written in English and articles written by foreign authors are more likely to be cited in WoS. Specifically, 45% of articles written by foreign authors and only 34% of articles by Serbian authors were cited at least once in WoS. Similarly, 42% of articles written in English and only 31% of articles in Serbian were cited in WoS.

When the topic of articles is concerned, it is difficult to summarize the great variety of subject terms and keywords. In order to gain at least a quick insight into the basic thematic of cited papers, we have extracted the most cited foreign journal titles in three categories of articles published in *Psihologija*: those cited only in WoS, those cited only in SCIndeks, and those cited in both sources<sup>4</sup>. The topics of cited journals were clearly related to articles' category. The articles (or authors) in the field of *experimental psychology* are mainly oriented towards the international auditorium and are highly cited almost exclusively in WoS. On the other hand, articles in the subjects of *developmental and educational psychology* are more interesting to authors who publish papers in national journals. Finally, it seems that the most "universal" themes, recognized to the same extent by both the national and international scientific communities, come from the pool of *personality psychology* topics.

If we further analyze the data shown in Figure 2 it is apparent that the number of journal self-citations was relatively constant over the whole 12-year period. In the context of citation rate growth, this means that the proportion of self-citations is decreasing, namely from 83% in 2007–2008 to 37% in 2011–2012. In some respect, this is a positive trend since the large number of journal self-citations could be interpreted as a form of JIF manipulation. It is good that *Psihologija* builds its status by expanding the circle of citing journals which have enlarged from 7 titles in 2009, to 25 in 2012. However, decreasing proportion of self-citations also reveals that the journal acts mostly as a "citing donor" for foreign journals. The proportion

4 Due to the limitations of the paper length, data are not displayed and are available upon request.

of self-citations in the total number of citations that *Psihologija* gives to other journals decreased from 5% in 2001–2006 to 3% in 2007–2012.

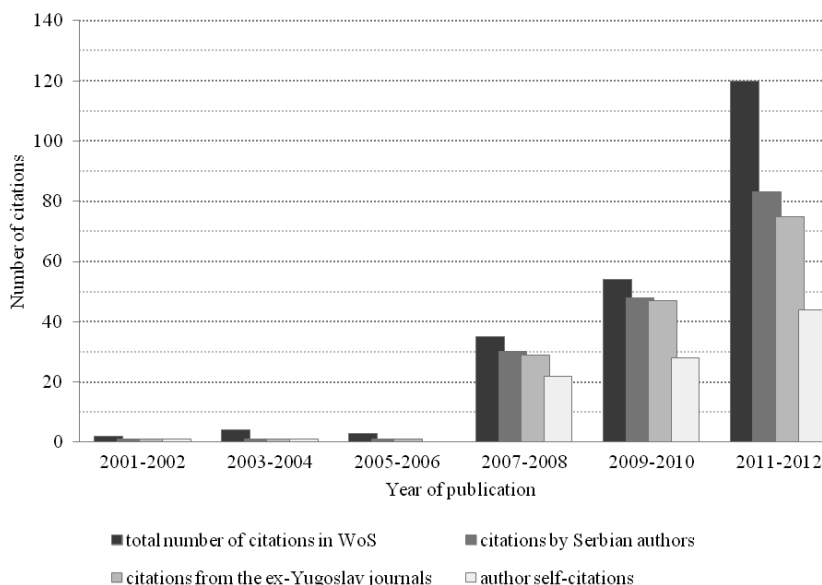


Figure 3. Sources of citations to *Psihologija* in WoS during the 2001–2012 period

The type and source of international citations to *Psihologija* are shown in Figure 3. In the first years of indexing in WoS, *Psihologija*'s impact was largely based on self-citations, both at the journal level (Figure 2), and author level (Figure 3). These proportions were much lower in 2011–2012 which should be considered as a positive trend. However, citations by authors from Serbia and citations from ex-Yugoslav journals still make up the largest segment of journal's impact. The growth of the journal's global impact largely relies on the orientation of Serbian authors towards publishing in foreign journals, as well as the increased number of regional journals indexed in WoS. When we consider both the entire analyzed period (2001–2012) and each two-year period, the most salient citation donors of *Psihologija* (beside the journal itself) are journals from the ex-Yugoslav countries: *Vojnosanitetski pregled* from Serbia, *Društvena istraživanja*, *Suvremena psihologija*, and *Collegium Antropologicum* from Croatia, and *HealthMED* from Bosnia and Herzegovina<sup>5</sup>. This pattern diminishes the authenticity and sustainability of the journal's internationalization process, especially if we bear in mind that some of those journals were suppressed from WoS. If we exclude journal self-citations, 13% of all citations to *Psihologija* came from dropped journals.

5 HealthMED and TTEM were two Bosnian journals which were dropped from SSCI in 2012 due to citation manipulations and violation of standard editorial conventions. Not a small number of authors from Serbia, especially in the field of social sciences, were publishing their articles in those journals.



## Psihologija within the group of psychology journals newly added in WoS

In 2007, 44 journals from the fields of psychology and educational sciences were included in SSCI along with *Psihologija*. The majority of those journals publish articles exclusively in English (23 titles), while other most represented languages in the group were Spanish (9 titles), Turkish (4 titles), and Croatian<sup>6</sup> (4 titles). Out of the six ex-Yugoslav countries, only Croatia, Slovenia, and Serbia are currently represented in SSCI with 11, 10, and 2 social science journals respectively. As far as strictly psychological journals are concerned, the only SEE countries represented in SSCI in 2012 were Croatia, Romania, and Serbia, with one indexed journal each. In the following section, the impact of *Psihologija* will be analyzed in the context of 18 other psychological journals included in SSCI in 2007. Basic bibliometric indicators for all analyzed journals are presented in Table 1.

Table 1.

*Bibliometric indicators for 19 psychology journals introduced in SSCI in 2007*

Journal and country	Q		JIF		cit	% self	Im. Ind.	No. Art	No. CJ	No. RJ	
	'09	'12	'09	'12							
EUR REV SOC PSYCHOL*	GBR	2	1	1.61	2.06	239	0		16	41	
REV PSICODIDACT	ESP	4	2	0.41	1.51	98	45	0.45	35	22	6
BEHAV PSYCHOL	ESP	4	3	0.22	0.80	211	63	0.62	65	25	10
AN PSICOL-SPAIN	ESP	4	3	0.24	0.55	294	31	0.13	143	27	19
REV PSICOL DEPORTE	ESP	4	3	0.60	0.90	219	47	0.28	68	26	7
PSIHOLOGIJA	SRB	4	4	0.08	0.29	56	28	0.00	48	25	0
Z SEXUALFORSCH	DEU	4	4	0.26	0.77	206	75	0.61	31	22	2
REV ARGENT CLIN PSIC	ARG	4	4	0.11	0.30	28	20	0.00	50	10	1
EDUC PSYCHOL-UK*	GBR	3	3	0.71	1.03	950	16	0.20	96	160	58
HIST PSYCHOL*	USA	3	3	0.61	0.75	149	40	0.14	40	25	6
Z SPORTPSYCHOL	GER	4	4	0.27	0.30	38	57	0.00	23	22	2
APPL DEV SCI*	USA	4	4	0.65	0.73	722	16	0.18	33	113	27
PSICOL-REFLEX CRIT	BRA	4	4	0.15	0.17	165	42	0.01	155	25	8
SUVREM PSIHOLOGIJA	CRO	4	4	0.16	0.12	22	33	0.08	25	11	1
PSYCHIAT DANUB*	CRO	4	4	0.70	0.63	375	34	0.31	267	41	12
J COGN BEHAV PSYCHOT*	ROM	4	4	0.58 <sup>a</sup>	0.38	49	7	0.00	34	25	0
REV IBEROAM DIAGN EV	ARG	4	4	0.19	0.00	11			35	11	
BODY IMAGE*	NLD	1	2	2.19	1.74	1143	30	0.38	123	151	48
PSYCHIAT PSYCHOL LAW*	AUS	3	4	0.53	0.42	212	21	0.02	79	28	20

Q – quartile rank in the corresponding category, cit – number of citations, %self – percent of journal self-citations (used in JIF calculation), Im.Ind. – Immediacy Index, No.Art. – number of articles in 2010–11, No.CJ – number of citing journals, No.RJ – number of related journals. All indicators are for 2012. Shaded backgrounds indicate values that were increased during the 2009–2012 period.

\* – journals that publish articles only in English, <sup>a</sup> – JIF for 2008 as the starting year

6 *Psihologija's* information sheet in JCR indicates that the journal's publication language is Serbo-Croatian. This raises the question whether the Croatian language was recognized by database administrators as “regional”, which could have led to the aforementioned “overrepresentation” of Croatian journals.

Psychology journals published in English have had larger JIF value the first time they appeared in JCR. Five of those journals had 3<sup>rd</sup> or higher quartile rank in their corresponding categories. The difference in initial JIF between journals publishing in English and journals publishing in other languages is statistically significant ( $U = 12, Z = 2.53, p = .01$ ). However, there is no significant difference between English and non-English language journals in the number of citations, nor in the number of published articles. The number of citing journals is larger for English language journals both in 2009 ( $U = 15, Z = 2.28, p = .02$ ) and 2012 ( $U = 10.5, Z = 2.66, p < .01$ ). The stable communication network of journals citing recently published articles is crucial for journal status. This is most evident in the case of Spanish journals which have all managed to increase JIF in 2012 and advance to a higher rank. This is mostly due to the larger number of related journals with whom they have intensive citation interchange. The success of Spanish journals is even more impressive when we consider the average number of published papers, which have almost tripled from 20.7 in 2007 to 55.7 in 2012. The growth of this so-called *Journal Packaging Intensity*, is almost typical for new WoS journals, especially those from non-English speaking countries (Basu, 2010).

The difference in the number of related journals between English and non-English language journals, which was significant in 2009 ( $U = 39, Z = 2.28, p = .02$ ) was no longer significant in 2012 ( $U = 16, Z = 1.71, p > .05$ ). In this respect, Spanish journals are “privileged” since they have larger potential to be cited by other Spanish and Latin American journals. This is not true for SEE journals, which have practically no related journals. Unlike some “prosperous” journals, *Psihologija* doesn’t have a steady base of international citers. Such a base is closely related to the dynamic and currentness of the citation exchange. The correlation between JIF and Immediacy Index in the group of analyzed journals is very high and significant ( $p = .82, p < .01$ ). However, *Psihologija* is among the 8% of psychological journals indexed in SSCI with no citations for articles in the year of publication (2012).

*Psihologija* had the third largest relative increase of JIF in 2009–2012 within the group of analyzed journals, while the JIF value of other SEE journals have decreased in the same period. This should also be interpreted in the context of several other trends. First, the citation rate of almost all journals has raised. This is mainly due to the enlargement of the SSCI coverage in the field of psychology, namely from 483 indexed titles in 2009 to 559 in 2012. Second, the number of articles per issue has also increased across the whole database. In relation to that, in the group of non-English language journals, *Psihologija* and *Suvremena psihologija* have the highest relative decrease in the number of published papers in 2010 and 2011. Hence, the increase of *Psihologija*’s JIF should be partly attributed to reduced voluminosity. Finally, most journals have managed to increase JIF, which means that reference values for nearly all subject categories have elevated. *Psihologija* is somewhat in a convenient position since the median JIF in its category has practically stagnated around 0.93 during the

analyzed period, while in other psychological subdisciplines, it has increased, e.g. from 1.465 to 1.676 in clinical, from 0.982 to 1.1 in educational, and from 1.349 to 1.413 in social psychology. Consequently, *Psihologija* has improved its rank in the category from 112<sup>th</sup> out of 112 journals in 2009 to 108<sup>th</sup> out of 126 journals in 2012.

### The role of national journals in the national scientific production

In the following section we will briefly analyze the productivity and citation impact of ten SEE countries in the field of psychology. We have extracted all journal articles published from 2007 to 2012 and available in WoS with the name of each SEE country in the author's address. For Croatia, Romania, and Serbia, the procedure was repeated with the limitation to articles published in national journals. The data are presented in Figure 4.

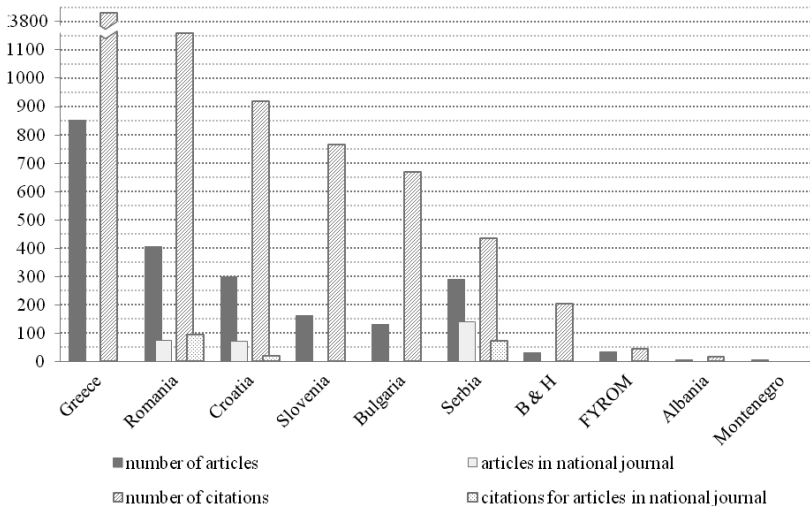


Figure 4. Productivity and citation impact of SEE countries in the field of psychology in 2007–2012 (WoS data excluding conference proceedings)

Greek psychologists are the most productive, far above the average of other SEE countries. They are also very effective since the mean citation rate of Greek articles is 4.50. Bosnia and Herzegovina and Macedonia<sup>7</sup> have the lowest number of papers in international psychology journals, while Albania and Montenegro are barely visible globally. During 2007–2012, the Serbian authors have published 292 papers in psychology journals indexed in WoS, and

<sup>7</sup> Errors in WoS are not unusual, but in the case of small countries may cause significant aberrations (Andreis & Jokić, 2008). For example, in one highly cited paper, Priština (Kosovo, Serbia) was located in Macedonia by the database administrators. If we would take this paper into account, it would increase Macedonian impact for almost 50%. In two other papers, Priština was located in Slovenia and Turkey.

received 435 citations for those articles. Serbia is the only SEE country with the above median productivity and below median citation rate in the field of psychology. This means that Serbian psychologists are relatively productive, but not very effective, since the average citation rate of articles by Serbian authors is 1.5. Only FYROM and Montenegro are below this value. The most efficient are the authors from Bosnia and Herzegovina whose papers are cited 6.44 times on the average. Articles published in *Psihologija* make up almost 50% of the overall international productivity of Serbian psychologists. In the cases of Croatia and Romania, the share of articles published in national journals is much lower, 23% and 18% respectively. As for the citation rates, it is evident that citations to papers published in national journals are a minor fraction of the total number of citations. Highly cited papers are generally published in international journals with high JIF, by multinational teams of authors. On the average, 10% of articles accounts for more than 70% of all received citations for each country. Consequently, the percentage of uncited papers for all countries is relatively high and ranges around 65%, with the exception of Greek papers, of which 2/3 were cited at least once.

### Discussion

Radical enlargement of Thomson Reuters databases and the emergence of new ones have changed the way we access scientific information and evaluate scientific impact. Being a productive international author doesn't have the same meaning as it had a few decades ago. Increased productivity of national scientific communities is not necessarily the indicator of their larger activity or international recognition, but could be the effect of shifts in the editorial policy of major database publishers (Collazo-Reyes, 2013). Although some researches from the SEE region have suggested that there is no relationship between the number of national journals indexed in international databases and the productivity of scientists from the origin countries (Sambunjak, Ivaniš, Marušić, & Marušić, 2008), we have shown that the existence of *Psihologija* in WoS is essential for the representation of Serbian psychology at the international level. However, in order to survive the global competition, it is not enough to be simply visible online. On the example of Croatian *Suvremena psihologija*, we have observed three possible reasons for the decline of JIF (and title suppression): the lack of online full text, negligible number of articles in English, and untimely publication.

The most evident change following the inclusion of *Psihologija* in SSCI is the orientation towards publishing articles in English. Although the language shift is a necessary precondition for journal internationalization, we have to agree with the view of Zitt et al. (1998) that it is only a "quasi-mechanistic enhancement" or a *transnational*, one-way form of transformation. Indicators such as the proportion of foreign authors, share of international references, and others used in the national Journal Bibliometric Report are rather indicators of the "local internationality". True indicators of international acceptance must take

into account the characteristics of citation exchange among journals. Relatively small numbers of multinational papers and genuine international citations indicate that *Psihologija* still lags behind in building a solid communication network of citing authors and related journals. Knowing that the indicators of internationality are not capable to discriminate globally multinational journals from those with contributions by authors from neighboring countries (Buela-Casal et al., 2006), it seems that we are experiencing the effects of the failure of authors from the ex-Yugoslav countries to exploit the comparative advantage of the common language in building a wider knowledge (and citation) exchange system.

More than 80% of citations to articles in WoS originates from journals published in scientifically developed countries (Didegah, Thelwall, & Gazni, 2012). If a journal is required to increase its impact, it has to attract those citations. The customary way to achieve this is by quality editing, strict reviewing, shortening publishing periods, and internationalizing authors, editorial committees, peer reviewers, and readers (Fenglian & Li, 2003). But there is another side to the story. As Dinkel et al. (2004) have noticed, local authors are now competing with foreign ones to publish in traditionally national journals that became “international”. We have to add that, in this competition, foreigners have the advantage because the terms *foreign* or *English* are often wrongly equated with the term *international*. Foreign journals and foreign authors, especially those from Western countries, are those who profit most from the current publication and citation “internationalization” strategies of local authors and national journal editors (Lancho-Barrantes, Guerrero-Bote, & Moya-Anegón, 2013). Similarly to some other SEE psychology journals, *Psihologija* has become a “citation donor” for highly cited foreign journals, i.e. the *consumer* rather than *producer* of internationally recognized knowledge (David, Moore, & Domuta, 2002). The downside of such a position is that even the local authors now rarely cite articles written in native language, published in national journals (Dinkel et al., 2004; Pajić, 2007). We have seen that the national citation rate of fresh articles published in *Psihologija* is constantly decreasing after 2007. It is reasonable to expect that the growing interest of foreign authors to publish in *Psihologija* will only reinforce this trend.

*Psihologija*'s international citation growth is mostly the effect of increased activity of Serbian authors and their direction towards publishing abroad. It seems that on the national level of evaluation, *Psihologija* gives credit to the authors, while on the international level, it is quite the opposite. This is convenient for those domestic authors who are more focused on productivity rather than impact, but it is somehow risky for the journal, especially having in mind that several regional journals were excluded from WoS and that highly cited local authors are more motivated to publish their articles in more prestigious journals. Other SEE countries are also facing the problem that domestic authors are increasingly favoring international journals over national, even those indexed in WoS (Jokić, Zauder, & Letina, 2009). This is why national journals from small countries should not build their international impact upon the mobility of domestic authors.

On the other hand, it is not unreasonable to count on the ability or willingness of those authors to promote not only themselves, but also the national journals and national science. This willingness would be reflected in motivating their (highly cited) foreign colleagues to publish coauthored papers in national journals.

### Conclusion

The presented analysis of newly indexed WoS journals has led to several conclusions regarding the dichotomy between “national” and “international” science. It was shown that journals from English-speaking countries initially attracts more citations from the larger number of citing journals. However, language shift is clearly not sufficient for a national journal to advance in global rankings. The Spanish case indicates that the solid network of closely related journals could be the key to success. On the other hand, this demonstrates that even the improvement of JIF is not necessarily the indicator of journal’s internationality and true global acceptance. The next important factor of journal’s advance is the timeliness of publication. It is not only the indicator of publishing and reviewing capacity, but also the way to increase the citation rate of fresh articles. In the time when top journals are practicing *advance online publication* and offer citable articles several months in advance, national journals cannot afford even a slight delay in releasing issues. Finally, we need to raise the question about the (negative) effects of the journal globalization process on national science. It seems that this process is more of an unilateral adjustment to the Western perspectives in science and evaluation of science, rather than the promotion of national research. The dilemma is whether to treat WoS indexed national journals as a platform for local promotions or to move forward and transform them into truly international journals. The last would imply the need to attract more papers written in international collaborations and to improve journal marketing in order to expand and truly internationalize the circle of journal users. Until those changes happen, most WoS indexed journals from “peripheral countries” will remain only locally international, but globally national.

### References

- Andreis, M., & Jokić, M. (2008). An impact of Croatian journals measured by citation analysis from SCI-expanded database in time span 1975–2001. *Scientometrics*, 75(2), 263–288. doi:10.1007/s11192-007-1858-x
- Basu, A. (2010). Does a country’s scientific “productivity” depend critically on the number of country journals indexed? *Scientometrics*, 82(3), 507–516. doi:10.1007/s11192-010-0186-8
- Buela-Casal, G., Perakakis, P., Taylor, M., & Checa, P. (2006). Measuring internationality: Reflections and perspectives on academic journals. *Scientometrics*, 67(1), 45–65. doi:10.1007/s11192-006-0050-z

- Collazo-Reyes, F. (2013). Growth of the number of indexed journals of Latin America and the Caribbean: the effect on the impact of each country. *Scientometrics*, 1–13. doi:10.1007/s11192-013-1036-2
- David, D., Moore, M., & Domuta, A. (2002). Romanian Psychology on the International Psychological Scene: A Preliminary Critical and Empirical Appraisal. *European Psychologist*, 7(2), 153–160. doi:10.1027//1016-9040.7.2.153
- Didegah, F., Thelwall, M., & Gazni, A. (2012). An international comparison of journal publishing and citing behaviours. *Journal of Informetrics*, 6(4), 516–531. doi:10.1016/j.joi.2012.04.003
- Dinkel, A., Berth, H., Borkenhagen, A., & Brähler, E. (2004). On raising the international dissemination of German research: Does changing publication language to English attract foreign authors to publish in a German basic psychology research journal? *Experimental Psychology*, 51(4), 319–328. doi:10.1027/1618-3169.51.4.319
- Fenglian, Z., & Li, L. (2003). Improving the International Influence of Chinese Academic Journals. *Journal of Scholarly Publishing*, 34(2), 101–107. doi:10.3138/jsp.34.2.101
- Hicks, D. (2012). One size doesn't fit all: on the co-evolution of national evaluation systems and social science publishing. *Confero*, 1(1). Retrieved from [http://works.bepress.com/diana\\_hicks/33](http://works.bepress.com/diana_hicks/33)
- Jokić, M., Zauder, K., & Letina, S. (2009). Croatian scholarly productivity 1991–2005 measured by journals indexed in Web of Science. *Scientometrics*, 83(2), 375–395. doi:10.1007/s11192-009-0071-5
- Kosanović, B., & Šipka, P. (2013). Output in WoS vs. Representation in JCR of SEE Nations: Does Mother Thomson Cherish All Her Children Equally (pp. 125–137). Centre for Evaluation in Education and Science. doi:10.5937/BIOAC-111
- Kyvik, S. (2003). Changing trends in publishing behaviour among university faculty, 1980–2000. *Scientometrics*, 58(1), 35–48. doi:10.1023/A:1025475423482
- Lancho-Barrantes, B. S., Guerrero-Bote, V. P., & Moya-Anegón, F. de. (2013). Citation increments between collaborating countries. *Scientometrics*, 94(3), 817–831. doi:10.1007/s11192-012-0797-3
- Liang, L., Rousseau, R., & Zhong, Z. (2013). Non-English journals and papers in physics and chemistry: bias in citations? *Scientometrics*, 95(1), 333–350. doi:10.1007/s11192-012-0828-0
- Marušić, A., & Marušić, M. (1999). Small Scientific Journals from Small Countries: Breaking from a Vicious Circle of Inadequacy. *Croatian Medical Journal*, 40(4), 508–514.
- Pajić, D. (2007). Bibliometric description of literature cited in Serbian psychological journals: Implications for the evaluation of scientific achievement [in Serbian]. In *XIII naučni skup Empirijska istraživanja u psihologiji. Book of Abstracts* (pp. 72–73). Belgrade: Institute for psychology and Laboratory of Experimental Psychology.
- Sambunjak, D., Ivaniš, A., Marušić, A., & Marušić, M. (2008). Representation of journals from five neighboring European countries in the Journal Citation Reports. *Scientometrics*, 76(2), 261–271. doi:10.1007/s11192-007-1915-5
- Sangwal, K. (2013). Some citation-related characteristics of scientific journals published in individual countries. *Scientometrics*, 97(3), 719–741. doi:10.1007/s11192-013-1053-1
- Testa, J. (2009). The Thomson Reuters Journal Selection Process. *Transnational Corporations Review*, 1(4), 59–66.
- Zitt, M., Perrot, F., & Barré, R. (1998). The transition from “national” to “transnational” model and related measures of countries' performance. *Journal of the American Society for Information Science*, 49(1), 30–42. doi:10.1002/(SICI)1097-4571(1998)49:1<30::AID-ASIS>3.0.CO;2-3