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Output in WoS vs. representation in JCR of SEE nations: Does mother Thomson cherish all her children equally

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Facts

In most SEE countries:

⇒ encouraging of publishing in WoS journals is the dominant policy

⇒ for many journal publishers, indexing in WoS is the ultimate goal

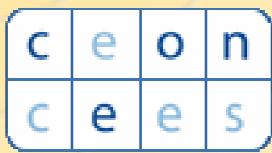
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Objective

What are the relationships among indicators of SEE countries performance, as measured by WoS, and their representation on the WoS journal list ?

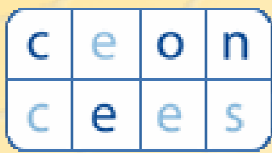
Is ranking of SEE countries in WoS reflect influenced by the contribution of papers published in local journals indexed in WoS?

How basic characteristics of journals, such as IF and internationality shape this relationship?



Number of JCR indexed journals by SEE countries

	2003	2004	2005	2006	2007	2008	2009	2010
Albania								
Bosnia & Hercegovina						1	3	4
Bulgaria	2	2	1	1	3	3	8	10
Croatia	12	12	12	12	12	14	34	46
Cyprus								
Greece	4	4	4	4	4	7	10	16
Hungary	13	13	14	15	16	15	24	37
Macedonia							2	2
Moldova								1
Montenegro								
Romania	5	5	5	5	6	9	32	50
Serbia	3	3	4	4	4	4	10	18
Slovenia	4	4	4	4	4	4	13	18
Turkey	4	4	6	9	10	10	39	61
Total	47	47	50	54	59	67	175	263

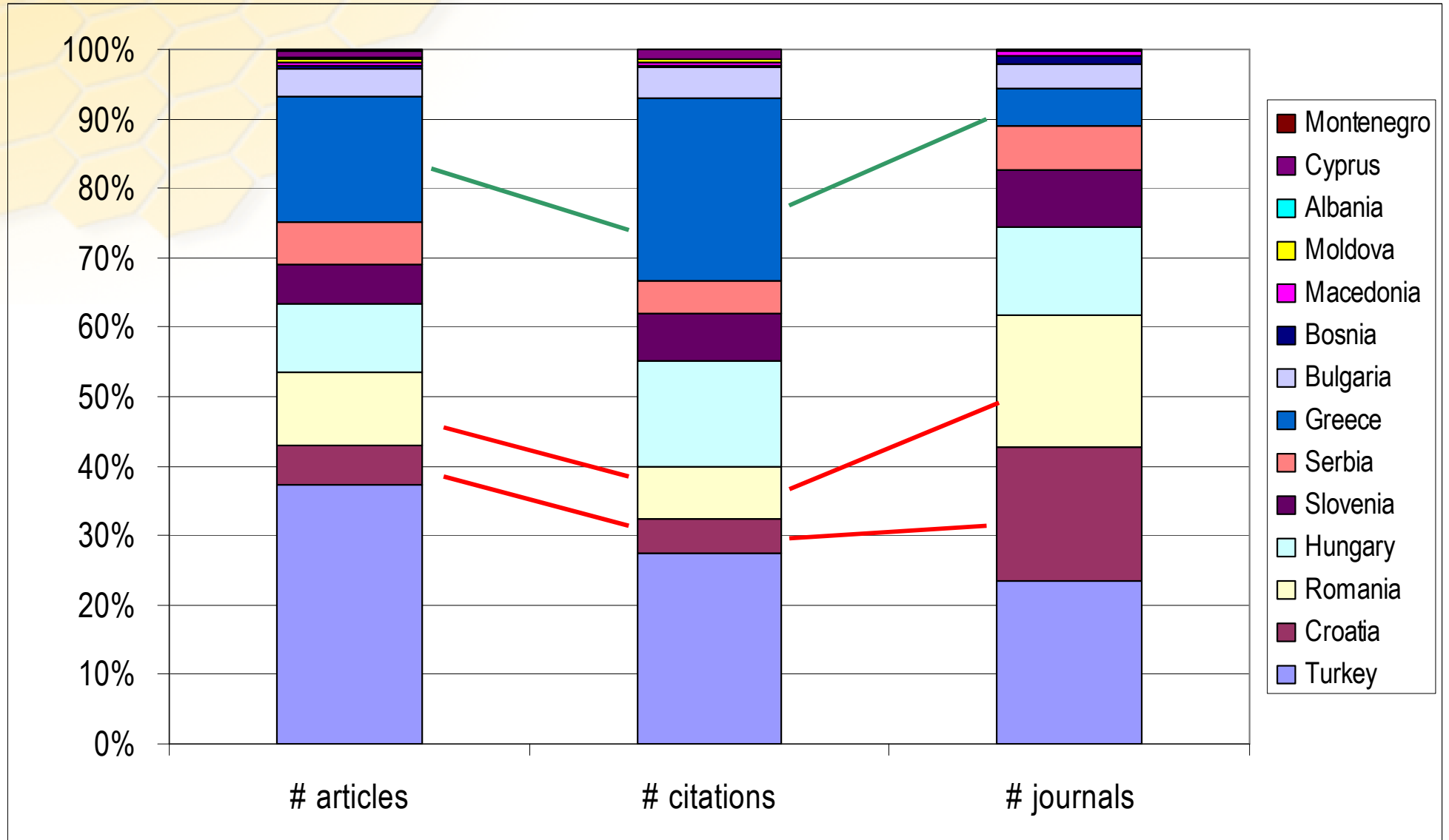


Number of papers, citations and (national) journals in WoS by country
(aggregated data)

	WoS papers 2006-2011	WoS citations 2006-2011	WoS journals 2011
Turkey	105,915	301,655	75
Croatia	16,193	55,191	61
Romania	29,568	81,820	60
Hungary	27,792	169,026	41
Slovenia	16,288	73,283	26
Serbia	16,962	51,308	20
Greece	51,445	290,671	17
Bulgaria	11,176	47,998	11
Bosnia	1,906	3,745	4
Macedonia	1,111	3,751	2
Moldova	1,161	4,761	1
Albania	410	972	
Cyprus	3,085	14,448	
Montenegro	559	1,165	

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Same data, different presentation



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Explanation

Two possible explanations:

⇒ (1) Thomson criteria were not applied reliably
(Mother Thomson had some pats)

⇒ (2) Some journals were more motivated to get to WoS and persistent in applying
(A child that cries more, gets more attention)

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Search strategy

Document Types=(Article OR Review)

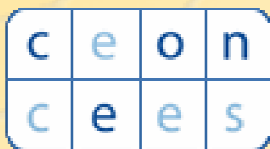
Databases=SCI-EXPANDED, SSCI, A&HCI

Timespan=2007-2011

#1 cu=xxx

#2 (is=0567-8315 or is=1452-8266 or is=1451-3994)

#3 #1 not #2



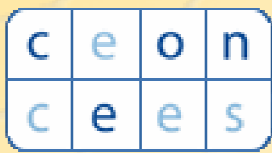
Changes in rankings of countries by **number of papers** after national journals exclusion

	WoS	corrected	ranking change
Albania	410 (14)	410 (14)	
Bosnia & Hercegovina	1,906 (10)	1,244 (10)	
Bulgaria	11,176 (8)	9,136 (8)	
Croatia	16,193 (7)	10,362 (7)	
Cyprus	3,085 (9)	3,085 (9)	
Greece	51,445 (2)	50,087 (2)	
Hungary	27,792 (4)	24,667 (3)	+1
Macedonia	1,111 (12)	1,048 (12)	
Moldova	1,161 (11)	1,086 (11)	
Montenegro	559 (13)	559 (13)	
Romania	29,496 (3)	15,988 (4)	-1
Serbia	16,962 (5)	13,672 (6)	-1
Slovenia	16,288 (6)	13,738 (5)	+1
Turkey	105,380 (1)	91,233 (1)	

Effect of "correction procedure" on productivity is minor

Just two pairs of countries exchanged their positions on the list

Possible reason: large differences among countries



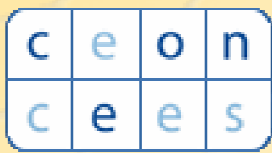
Changes in rankings of countries by **number of citations** after national journals exclusion

	WoS	corrected	ranking change
Albania	972 (14)	972 (14)	
Bosnia & Hercegovina	3,745 (12)	3,407 (12)	
Bulgaria	47,998 (8)	47,040 (8)	
Croatia	55,191 (6)	50,712 (6)	
Cyprus	14,448 (9)	14,448 (9)	
Greece	290,671 (2)	287,732 (2)	
Hungary	169,026 (3)	164,979 (3)	
Macedonia	3,751 (11)	3,694 (11)	
Moldova	4,761 (10)	4,718 (10)	
Montenegro	1,165 (13)	1,165 (13)	
Romania	81,820 (4)	70,229 (5)	-1
Serbia	51,308 (7)	48,449 (7)	
Slovenia	73,283 (5)	71,717 (4)	+1
Turkey	301,655 (1)	289,208 (1)	

Effect on citation rate is even smaller

Just Romania and Slovenia exchanged their positions on the list

Possible reason: the same as previously



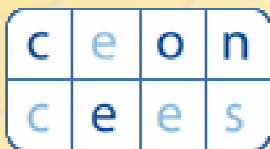
Changes in rankings of countries by **impact** after national journals exclusion

	WoS	corrected	ranking change
Albania	2.37 (12)	2.37 (13)	-1
Bosnia & Hercegovina	1.96 (14)	2.74 (12)	2
Bulgaria	4.29 (5)	5.15 (4)	1
Croatia	3.41 (7)	4.89 (5)	2
Cyprus	4.68 (3)	4.68 (6)	-3
Greece	5.65 (2)	5.74 (2)	
Hungary	6.08 (1)	6.69 (1)	
Macedonia	3.38 (8)	3.52 (10)	-2
Moldova	4.1 (6)	4.34 (8)	-2
Montenegro	2.08 (13)	2.08 (14)	-1
Romania	2.77 (11)	4.39 (7)	4
Serbia	3.02 (9)	3.54 (9)	
Slovenia	4.5 (4)	5.22 (3)	1
Turkey	2.86 (10)	3.17 (11)	-1

Effect on RCI are huge

Possible reason: a narrow range of the RCI as a variable

Also, the effect is real and interpretable



Changes in rankings of countries in comparison with **internationality and IF** of journals

	papers	citations	RCI	international	rank	average IF	rank
Romania (60)	-1	-1	4	40.25	10	0.647	3
Croatia (61)			2	47.28	8	0.354	7
Bosnia (4)			2	54.16	7	0.224	9
Slovenia (26)	1	1	1	43.17	9	0.376	6
Bulgaria (11)			1	58.55	5	0.274	8
Greece (17)			0	87.35	1	1.109	1
Serbia (20)	-1		0	57.99	6	0.821	2
Hungary (41)	1		0	77.01	2	0.567	4
Turkey (75)			-1	20.65	11	0.382	5
Albania			-1				
Montenegro			-1				
Macedonia (2)			-2	67.19	4	0.202	10
Moldova (1)			-2	70.36	3		11
Cyprus			-3				

the biggest deficit in the quality (RCI) have overrepresented countries with journals of law internationality and impact

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Conclusion

- ⇒ Overrepresentation of countries in WoS is harmful for their scientific performance (similarly to how parental overprotection influences children competence and competitiveness)
- ⇒ this is practically a channel to bring bad goods to the international market
- ⇒ This doesn't mean that having more journals in WoS/JCR is bad for the country R&D policy. There are other important benefits.
- ⇒ All in all, being better represented in WoS/JCR asks for a certain price.

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Reservations?

- ⇒ We didn't have conditions to control self-citation rate of journals
- ⇒ Field-representations by countries couldn't be taken into account and IF is field-dependant
- ⇒ We saw here only first consequences in the chain (long-term effects?)

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Questions?