

Collaboration of Turkish Scholars: Local or Global?

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Outline

- ❑ Collaboration
- ❑ Methodology
- ❑ Findings
 - ❑ Authorship trends
 - ❑ Collaboration types (intranational-international)
 - ❑ Collaboration in different disciplines
 - ❑ Collaborative partners of Turkey
- ❑ Conclusion

Collaboration

Article Discussion Read Edit View history

Collaboration

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For other uses, see [Collaboration \(disambiguation\)](#).

"[Collaborator](#)" redirects here. For other uses, see [Collaborator \(disambiguation\)](#).

See also: [Co-operation](#); [Coordination](#).

Collaboration is working together to achieve a goal, but in its negative sense it is working as a traitor.^[1] It is a [recursive](#)^[2] process where two or more people or [organizations](#) work together to realize shared goals, (this is more than the intersection of common goals seen in co-operative ventures, but a deep, collective, determination to reach an identical objective) — for example, an intriguing endeavor^{[3][4]} that is creative in nature^[5]—by sharing knowledge, learning and building consensus. Most collaboration requires [leadership](#), although the form of leadership can be social within a [decentralized](#) and [egalitarian](#) group.^[6] In particular, teams that work collaboratively can obtain greater resources, recognition and reward when facing competition for finite resources.^[7] Collaboration is also present in opposing goals exhibiting the notion of [adversarial collaboration](#), though this is not a common case for using the word.

Collaboration

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“two heads are better than one”

Scholarly Collaboration

- ❑ Reasons for scholarly collaboration
 - ❑ Accessing the expertise, equipment or resources one does not have
 - ❑ Encouraging cross-fertilization across disciplines
 - ❑ Improving the access to funds
 - ❑ Educating a student ... (Bozeman and Corley 2004)
- ❑ Globalization, opportunities for the mobility, technological innovations, small world ...
- ❑ For some fields => inevitable

Methodology

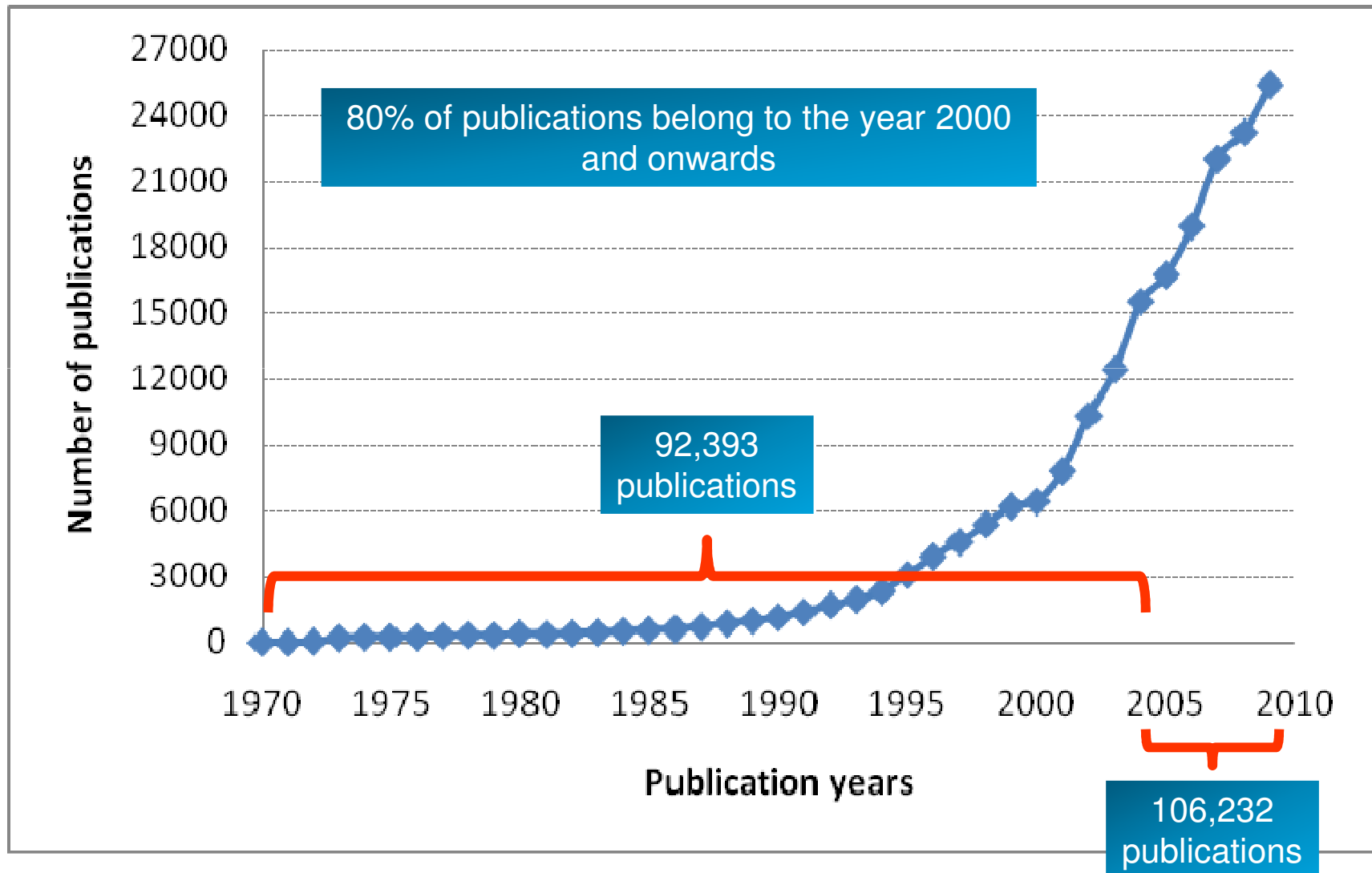
- ❑ Data source *Web of Science*
- ❑ Data set cover 1970-2009
- ❑ Authored by the scholars affiliated with Turkish institutions
- ❑ Different forms of Turkish addresses (e.g., “Turkey,” “Turkiye”, “Turkei,” “Turquie”)
- ❑ Data cleaning process
- ❑ There is no document type distinction
- ❑ 198,595 publications

Research Questions

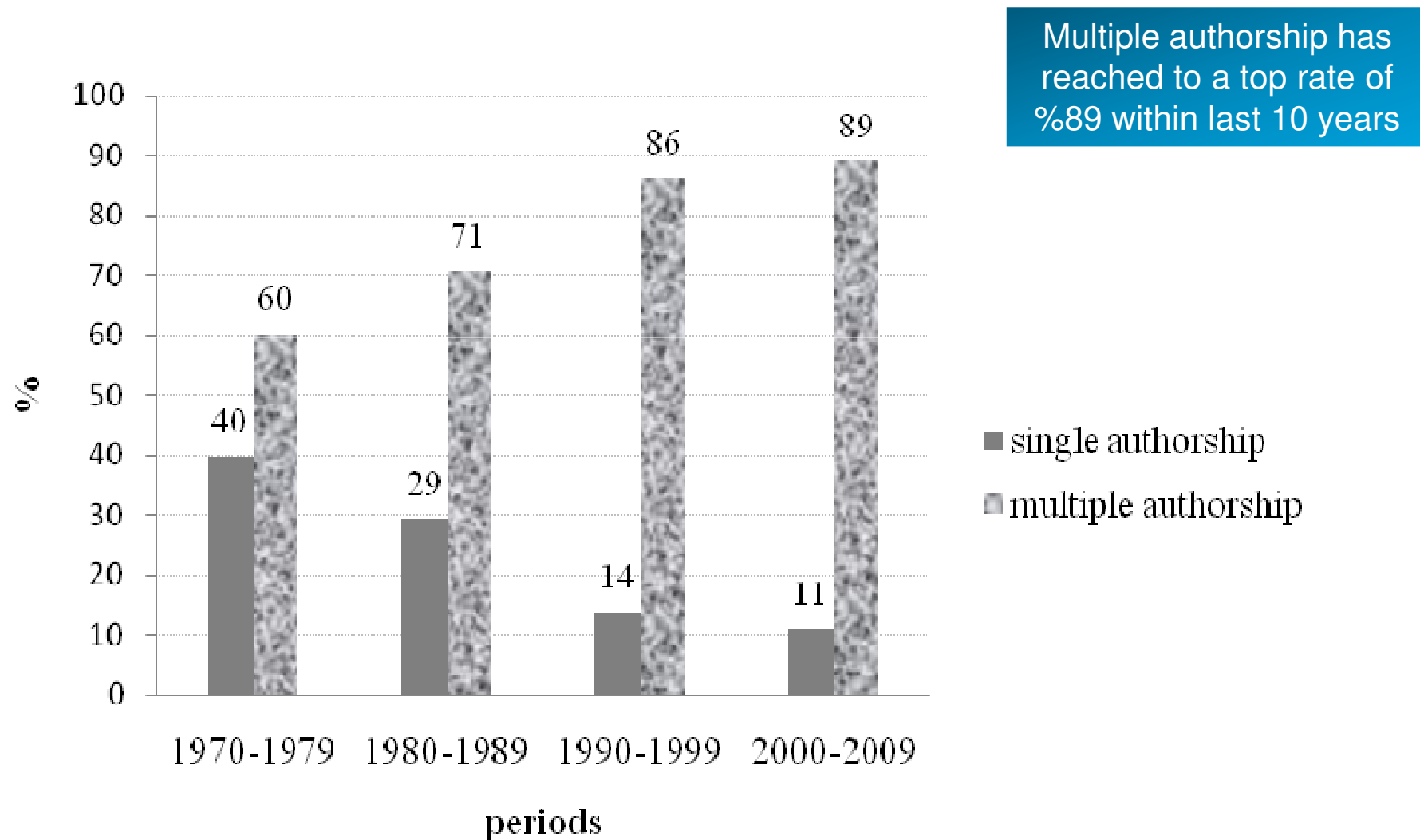
- ❑ Does the multiple authorship prevalent?
- ❑ Does the collaboration rate change by year?
- ❑ What is the distribution of collaboration types (intranational/international)?
- ❑ Does the rate and type of collaboration differ across the disciplines?
- ❑ Which countries are the most important collaborative partners of Turkish scholars?

Findings

Publications of Turkey



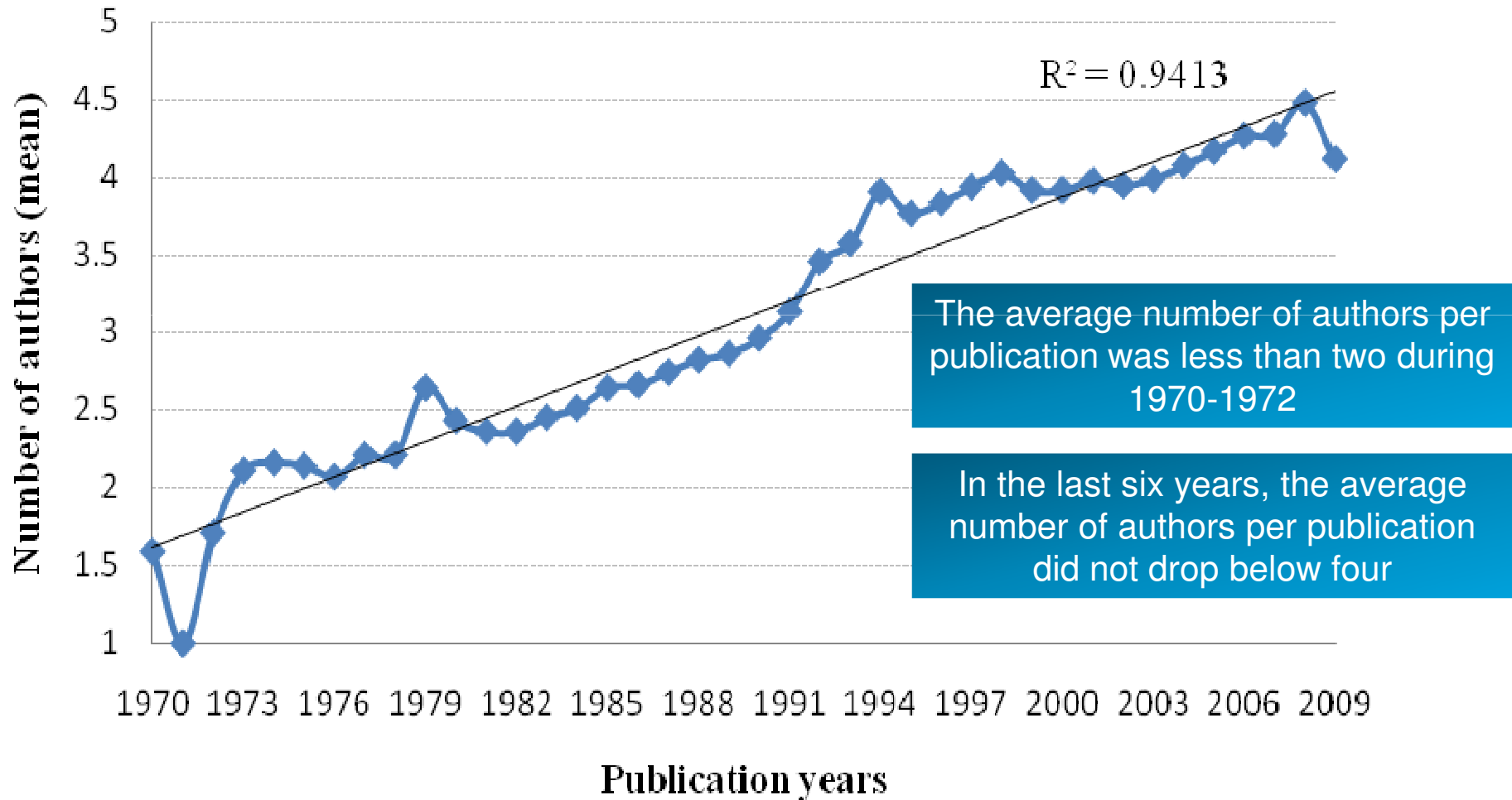
Distribution of Publications by Authorship



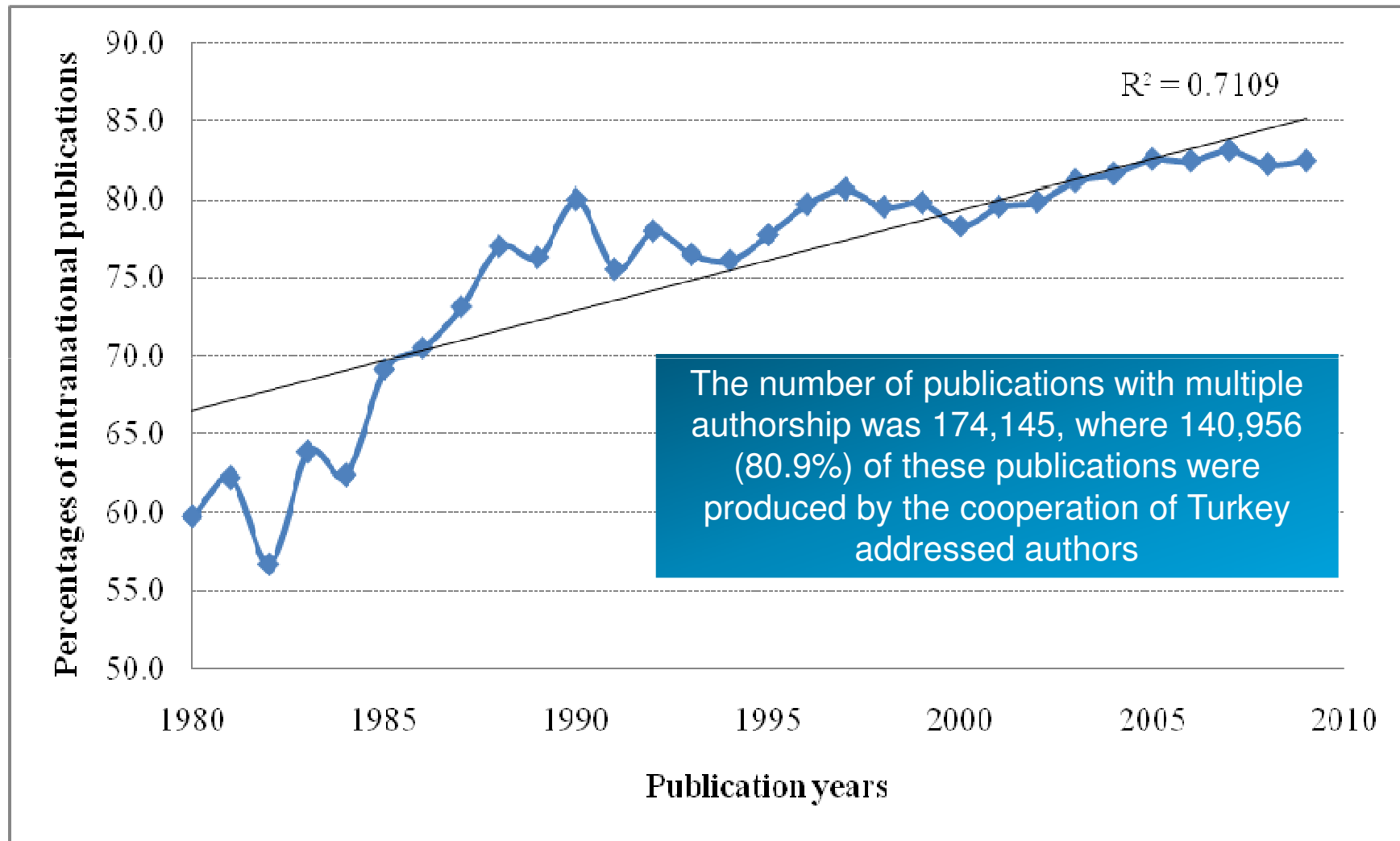
Distribution of Publications by Single/Multiple Authorship (2000-2009)

<i>Year</i>	<i>Single</i>		<i>Multiple</i>		<i>Total</i>
	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>	
2009	3,142	12.4	22,228	87.6	25,370
2008	2,696	11.6	20,513	88.4	23,209
2007	2,443	11.1	19,549	88.9	21,992
2006	1,894	10.0	17,045	90.0	18,939
2005	1,616	9.7	15,106	90.3	16,722
2004	1,603	10.3	13,892	89.7	15,495
2003	1,386	11.1	11,053	88.9	12,439
2002	1,165	11.3	9,141	88.7	10,306
2001	798	10.2	7,008	89.8	7,806
2000	713	11.1	5,713	88.9	6,426

Average Number of Authors



Intranational vs. International



Collaboration in Different Disciplines

<i>Disciplines</i>	<i>Single</i>		<i>Multiple</i>		<i>Total</i>
	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>	
Surgery	790	5.5	13,575	94.5	14,365
Pediatrics	550	6.0	8,592	94.0	9,142
Clinical Neurology	426	5.5	7,322	94.5	7,748
Pharmacology & Pharmacy	356	4.8	7,048	95.2	7,404
Cardiac & Cardio. Systems	246	4.0	5,873	96.0	6,119
Engineering, Chemical	1,006	16.7	5,021	83.3	6,027
Environmental Sciences	930	16.0	4,883	84.0	5,813
Biochemistry & Mol. Biology	313	5.8	5,122	94.2	5,435
Oncology	213	4.0	5,137	96.0	5,350
Radiology, Nuclear Medicine	329	6.2	4,999	93.8	5,328

Types of Collaboration by Disciplines

<i>Disciplines</i>	<i>Intranational</i>		<i>International</i>		<i>Total</i>
	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>	
Surgery	12,720	93.7	855	6.3	13,575
Pediatrics	8,120	94.5	472	5.5	8,592
Clinical Neurology	6,390	87.3	932	12.7	7,322
Pharmacology & Pharmacy	5,849	83.0	1,199	17.0	7,048
Cardiac & Cardio. Systems	5,464	93.0	409	7.0	5,873
Engineering, Chemical	4,428	86.2	709	13.8	5,021
Environmental Sciences	3,851	75.2	1,271	24.8	4,883
Biochemistry & Mol. Biology	4,645	91.9	410	8.1	5,122
Oncology	4,127	82.2	894	17.8	5,137
Radiology, Nuclear Medicine	4,502	90.1	497	9.9	4,999

Collaborative Partners of Turkey

- ❑ Collaboration with 160 different countries
- ❑ United States of America, England, Germany, Italy & France are the most collaborative countries with Turkey
- ❑ Turkey does not collaborate with some countries frequently (e.g., People's Republic of China, Russia, Australia)
 - ❑ PRC is the 2nd most productive country in the world
 - ❑ It ranked 23rd among the countries that Turkey has collaborated

The Most Collaborative Countries with Turkey

<i>Countries</i>	<i># of pub.</i>	<i># of articles</i>	<i>articles (%)</i>
USA	13,911	10,610	76.3
England	4,298	3,392	78.9
Germany	3,997	3,011	75.3
Italy	2,176	1,486	68.3
France	2,141	1,555	75.6
Canada	1,531	1,168	76.3
Japan	1,415	1,082	76.5
Netherlands	1,290	928	71.9
Switzerland	1,045	732	70.0
Spain	985	697	70.8

Conclusion

- ❑ Multiple authorship is prevalent
- ❑ There has been a significant increase in the average number of authors per publication
- ❑ Turkish scholars generally collaborate intranationally
- ❑ Most of the Turkey addressed scientific works can be defined as domestic
- ❑ Collaboration is essential for interdisciplinary researches

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