

Japanese Research in a Global Landscape:

Some Recent Trends



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Four significant trends...

1

Growth in global **readership** of published research

2

Growth in global **publication** of research

3

Growth in global **collaboration** to conduct and publish research

4

Growth in **impact** through global collaboration

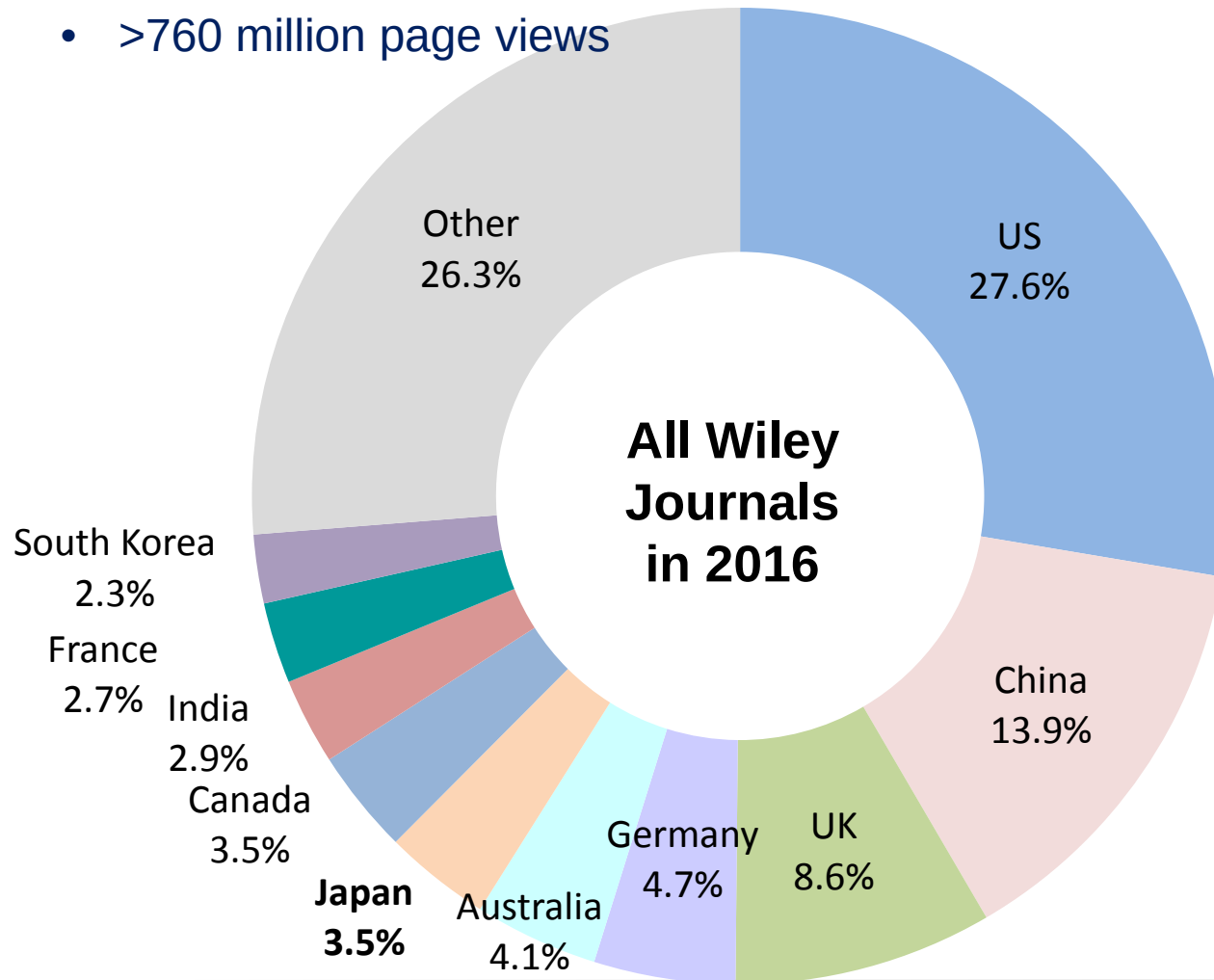
1

Trends in Readership



Our Readership is Global

- Wiley Online Library in 2016:
 - >290 million visits
 - >760 million page views

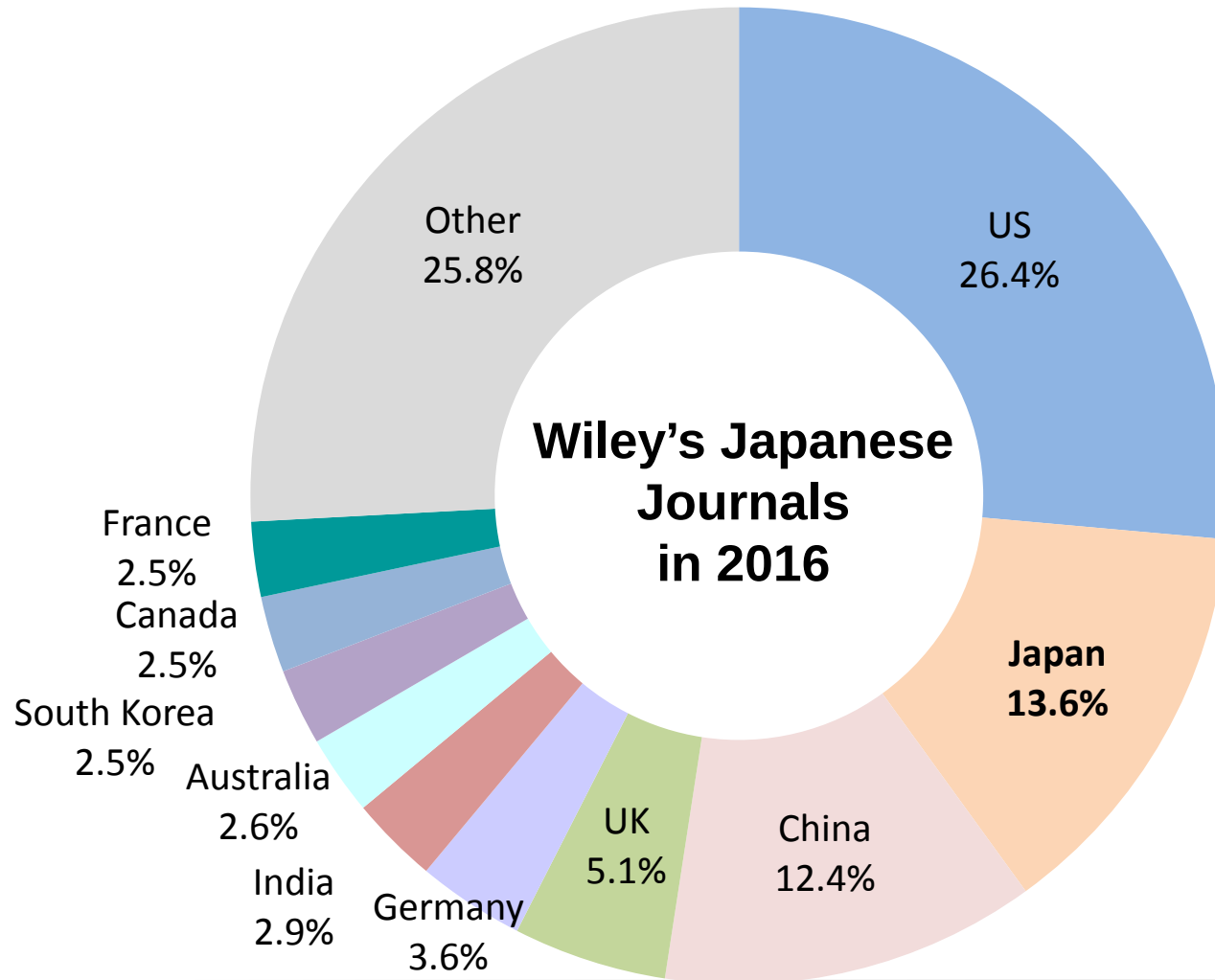


- Readership of all Wiley journals in 2016
- China is our second largest audience behind the US
- Japan is equal 6th largest source of readers

Unit of measurement for readership = full text downloads
Source: Wiley UDW

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Global Audience for Wiley's Japanese Journals

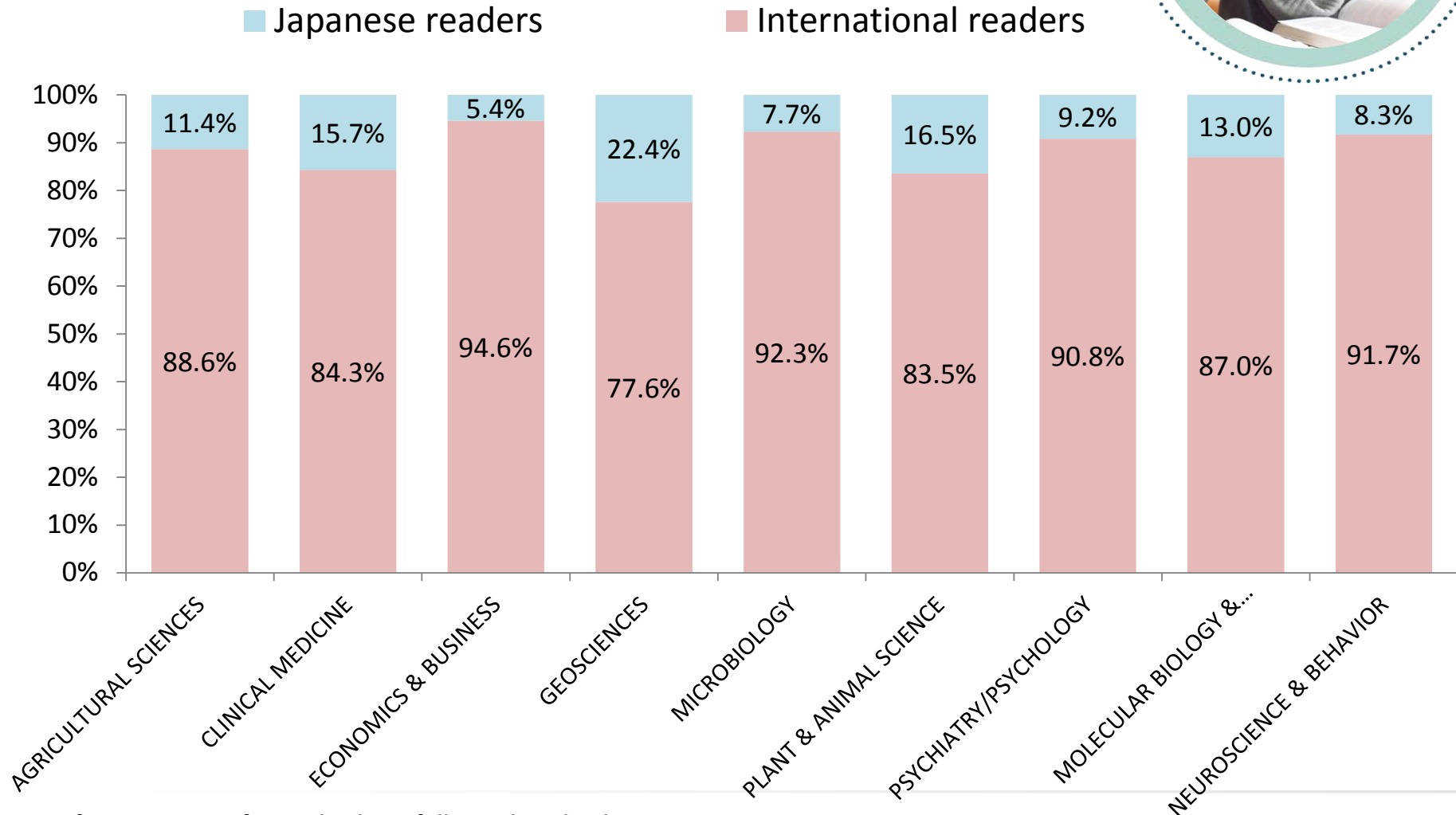


- Readership of Wiley journals managed from Japan in 2016
- More than 85% of our readers are from outside Japan
- Japanese journals are global journals

Unit of measurement for readership = full text downloads
Source: Wiley UDW

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Global Audience for Wiley's Japanese Journals



Unit of measurement for readership = full text downloads

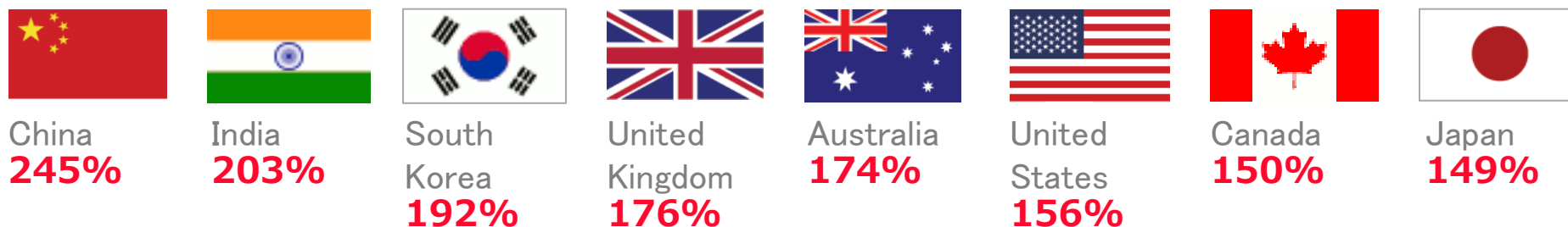
Source: Wiley UDW

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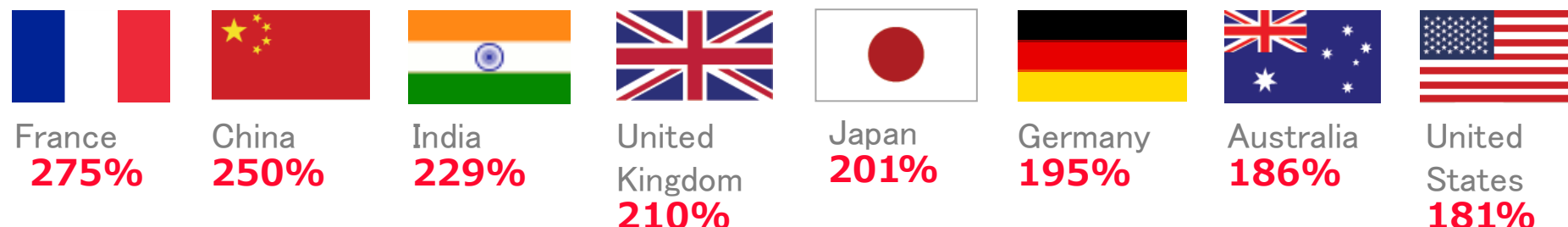
Global Rates of Readership Growth



Percentage Growth (2011-2016): All Wiley Journals



Percentage Growth (2011-2016): Wiley's Japanese Journals



Japanese journals mirror trends seen in international journals

2

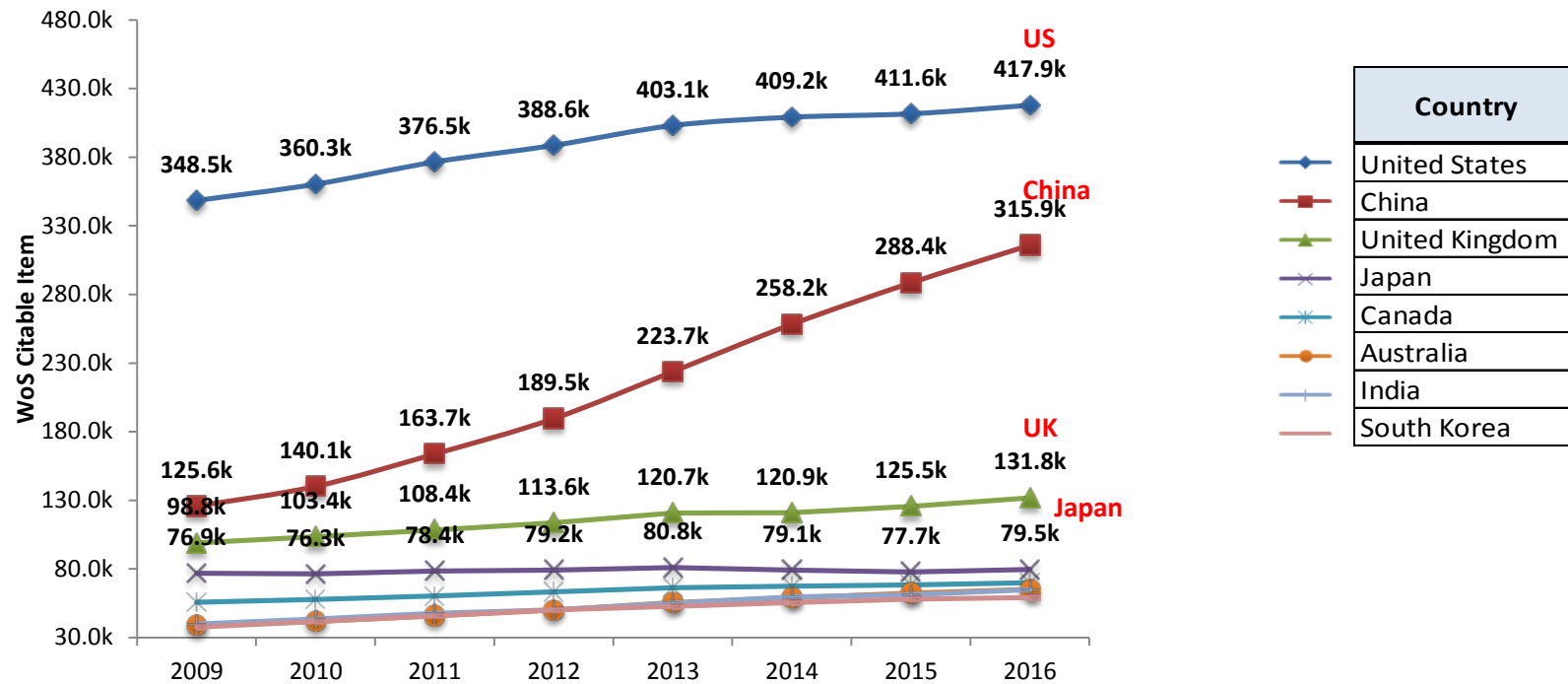
Trends in the Global Publication of Research



Growth in Research Publishing



Research Output by Country



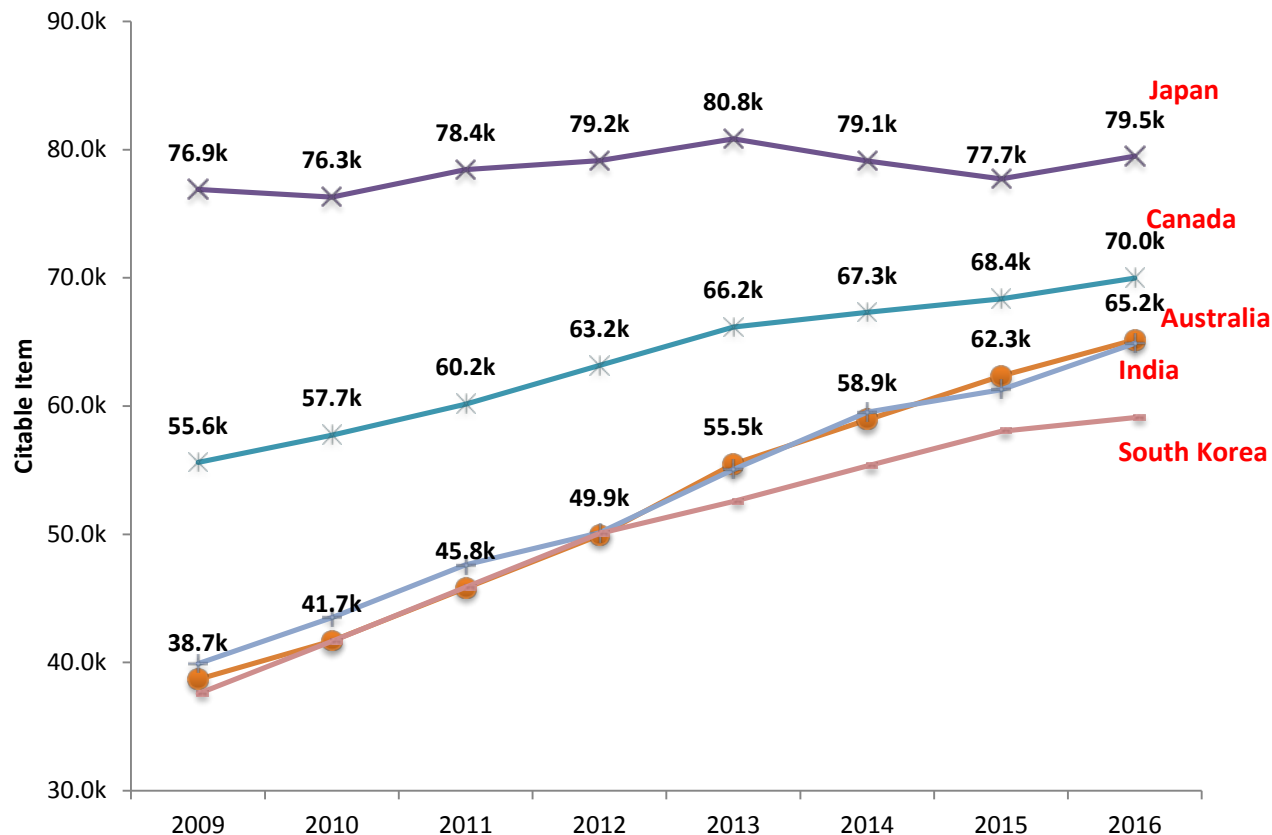
Unit = Web of Science citable item

Source: Clarivate Analytics Web of Science

Growth in Research Publishing



Research Output by Country



Country	Growth Rate (CAGR)
United States	2.6%
China	14.1%
United Kingdom	4.2%
Japan	0.5%
Canada	3.3%
Australia	7.7%
India	7.2%
South Korea	6.7%
WoS Average	4.1%

Unit = Web of Science citable item

Source: Clarivate Analytics Web of Science

3

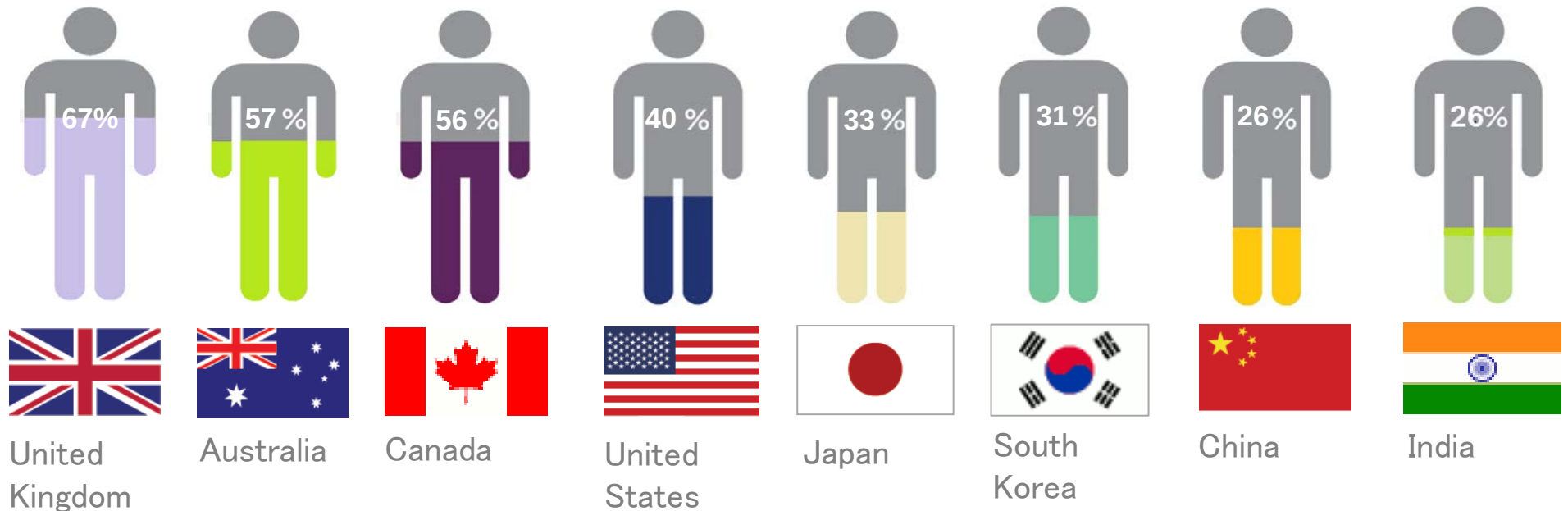
Trends in Global Research Collaboration



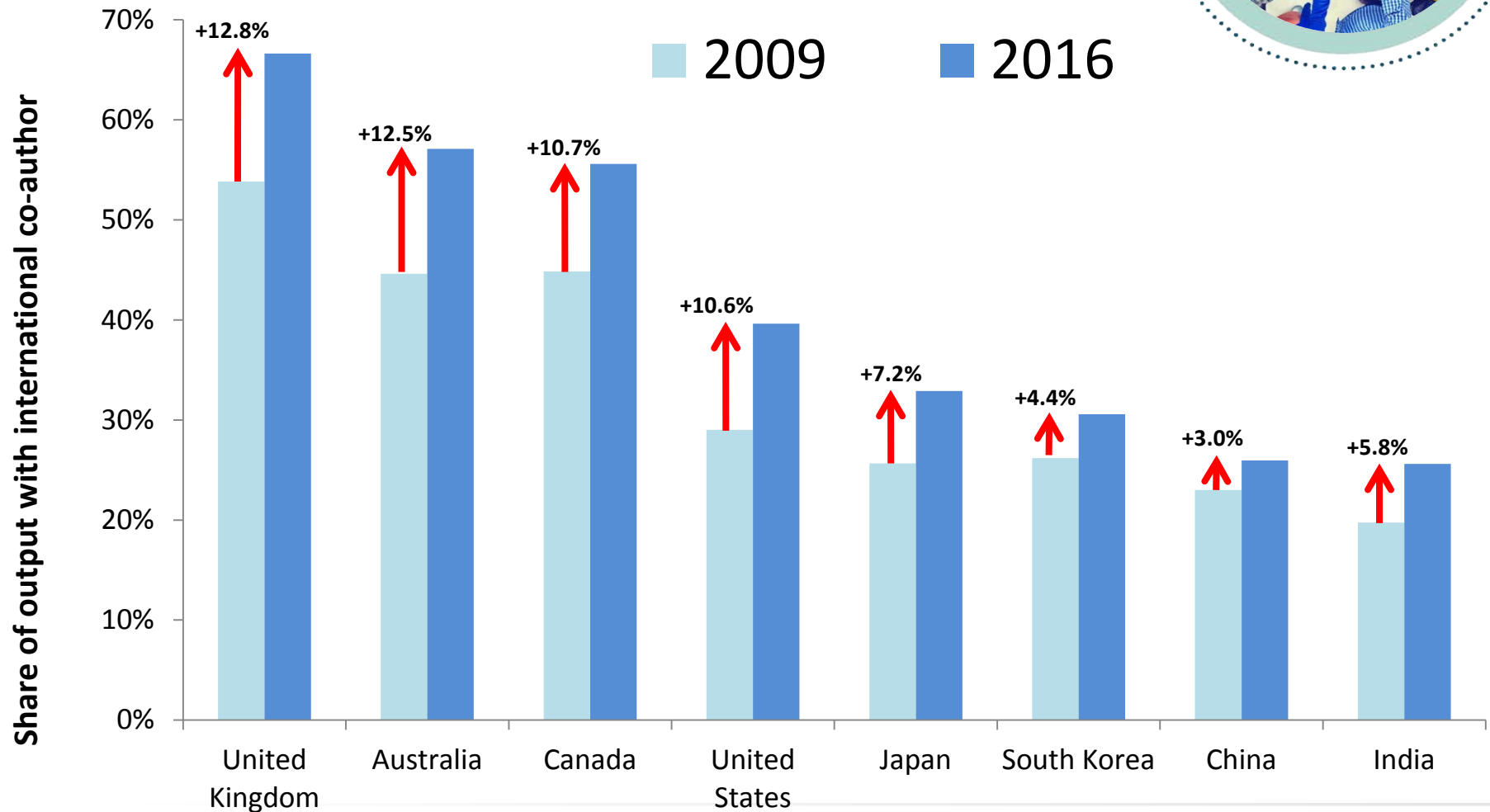
Which Nations Collaborate Globally?



Percentage of articles with overseas co-author(s) 2016



Rising Rates of Global Collaboration

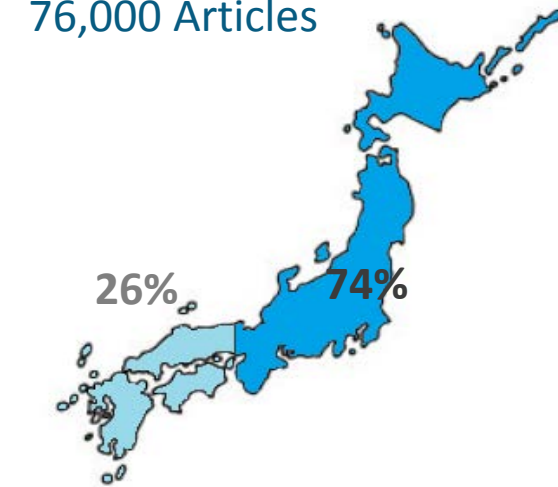


Japan's Global Collaboration

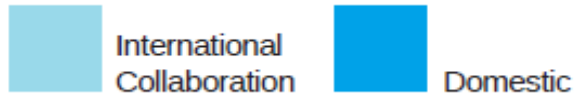


2009

76,000 Articles

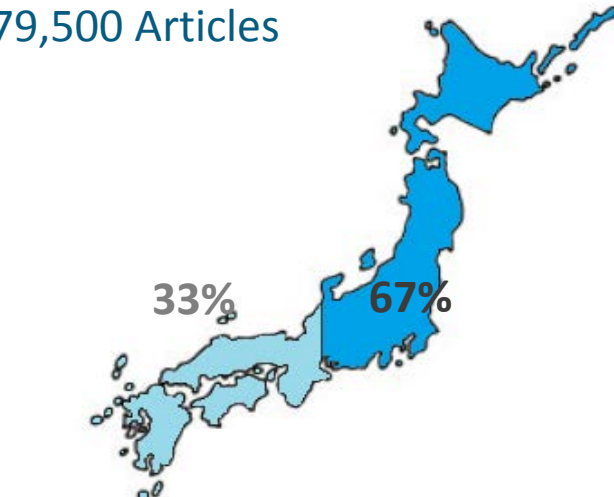


19,700 Articles

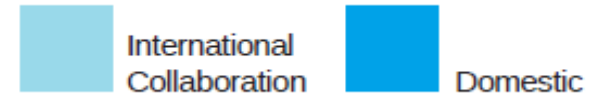


2016

79,500 Articles



26,000 Articles



Who Does Japan Collaborate With?



9,126 Collaborating papers

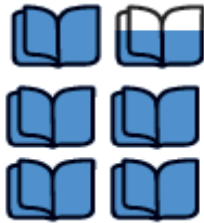


11.5% of
Japan's papers



2.2% of
US's papers

5,588 Collaborating papers



7.0% of
Japan's papers



1.8% of
China's papers

3,702 Collaborating papers



4.7% of
Japan's papers



2.8% of
UK's papers

3,213 Collaborating papers



4.0% of
Japan's papers



2.9% of
Germany's papers

2,450 Collaborating papers



3.1% of
Japan's papers



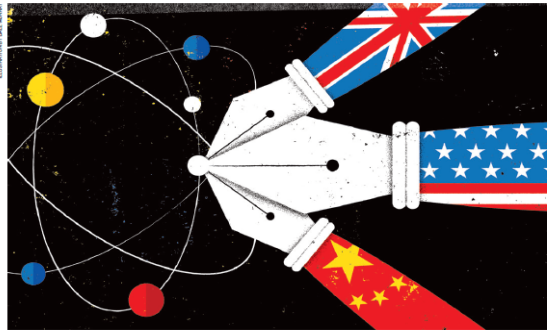
3.2% of
France's papers

4

Globalisation and Research Impact



Does Collaboration Drive Impact Growth?



The fourth age of research

Jonathan Adams analyses papers from the past three decades and finds that the best science comes from international collaboration.

Research has progressed through three ages: the individual, the institutional and the national. Nations competed to be at the cutting edge because this contributed to the wider economy through knowledge, new processes and products. Today, we are entering a fourth age of research, driven by international collaborations between elite research groups. This will challenge the ability of nations to conserve their scientific wealth either as intellectual property or as research talent. Tensions are

growing: between the knowledge a country needs to remain competitive and the assets it can exclusively secure, and between the collaborative and domestic parts of the research base. Institutions that do not form international collaborations risk progressive disenfranchisement, and countries that do not nurture their talent will lose out entirely. To explore the scale of this challenge, I analysed data on research articles and reviews from Thomson Reuters Web of Science between 1981 and 2012. I included

papers in a country's tally if one or more author addresses included that country, but no weighting was applied for the number of authors or addresses on each paper. For the 25 million papers I included in my analysis, I calculated the balance of international and domestic research collaboration for established economies (the United States, the United Kingdom, Germany, France, the Netherlands, Switzerland) and emerging ones (China, India, South Korea, Brazil, Poland). I looked particularly at all 9

30 MAY 2013 | VOL 497 | NATURE | 557



>50% articles have an international co-author.
Has this led to higher research impact?



How can global collaboration keep up with rapid growth rates?



What about Japan?

'The Fourth Age of Research' Jonathan Adams, Nature, 497, 557-560 (30 May 2013)

Citation impact is typically greater when research groups collaborate, and the benefit strengthens when co-authorship is international

The Relative Citation Impact



Average number of citations per article in each year, weighted by the world average.

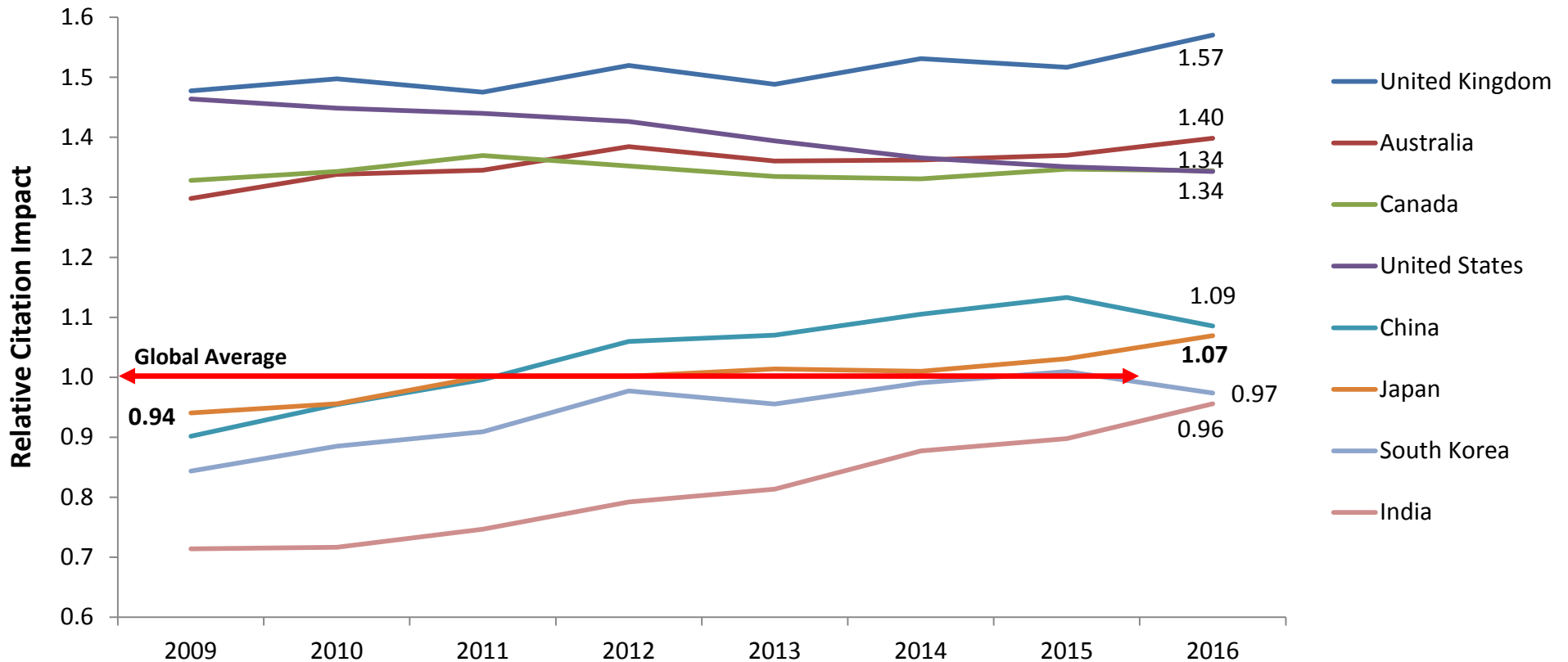
?

A Relative Citation Impact (RCI) of 1 means that your citation impact is equal to the world average.

Rates of Relative Citation Impact



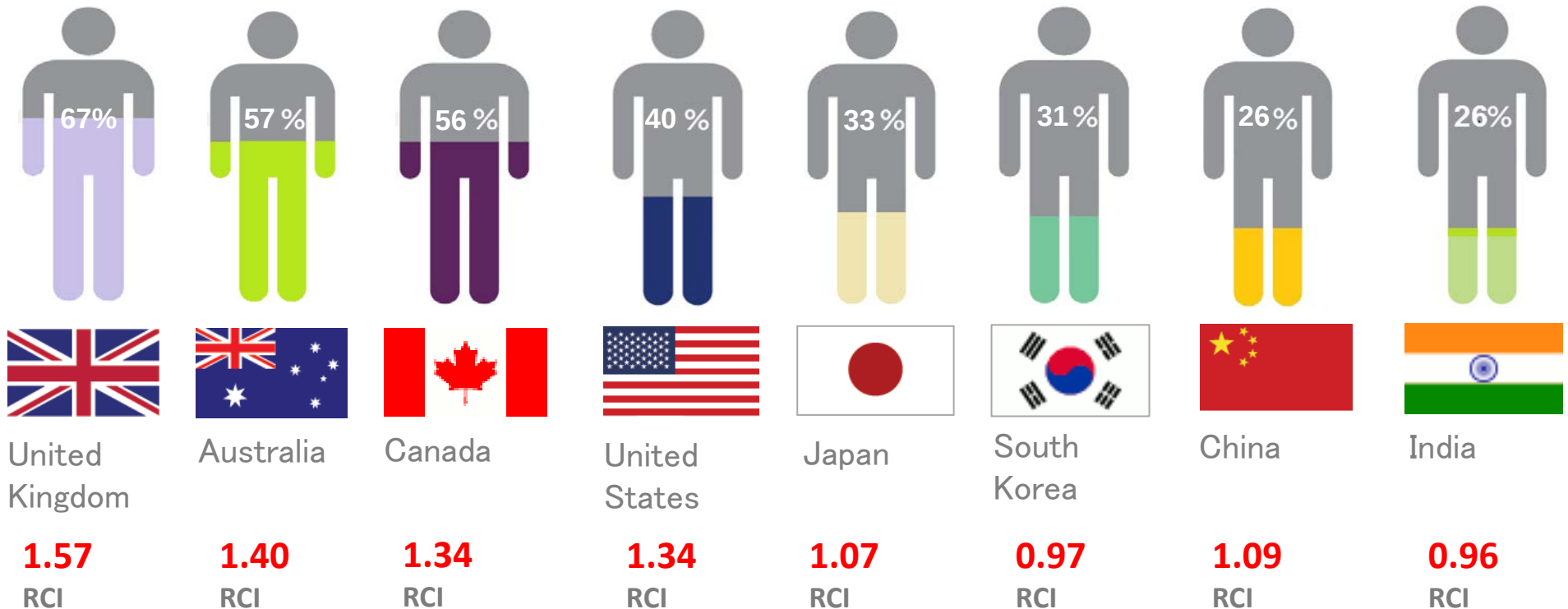
Relative Citation Impact by Country



Rates of Relative Citation Impact



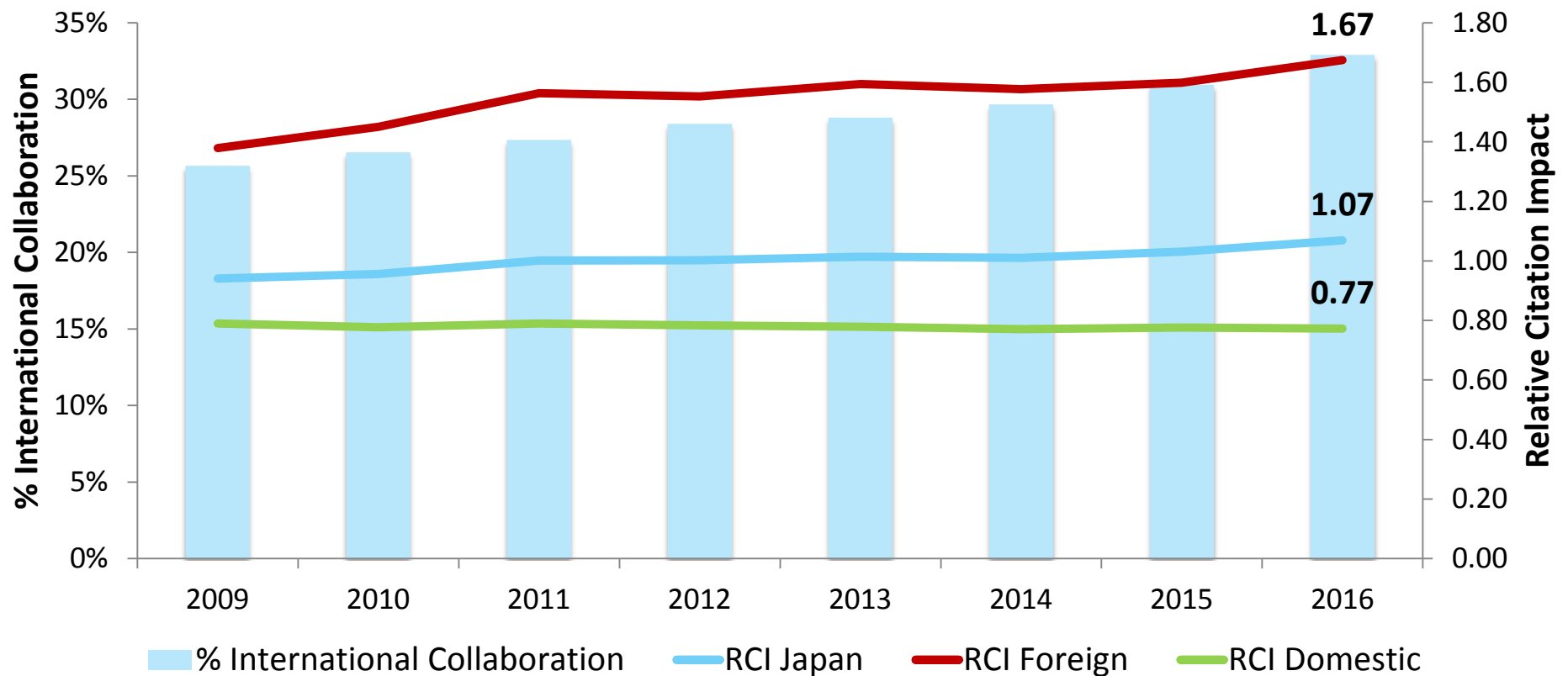
Percentage of articles with overseas co-author(s) 2016



Source: Clarivate Analytics WoS, Wiley EBAC

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Collaboration Drives Impact Growth for Japanese papers



Japan in the Global Research Landscape

1

Growth in global **readership** of published research



Japanese journals have ~**85%** global readership

2

Growth in global **publication** of research



Japanese research publication is growing at a rate of **0.5%**

3

Growth in global **collaboration** to conduct and publish research



33% of Japanese research is the product of global collaboration

4

Growth in **impact** through global collaboration



Globally authored papers have a higher impact (**1.67 vs 0.77 RCI**)

Thank you!



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