

HAS COVID-19 RESHAPED CHINESE TRANSNATIONAL RESEARCH NETWORKS IN HEALTH SCIENCES?

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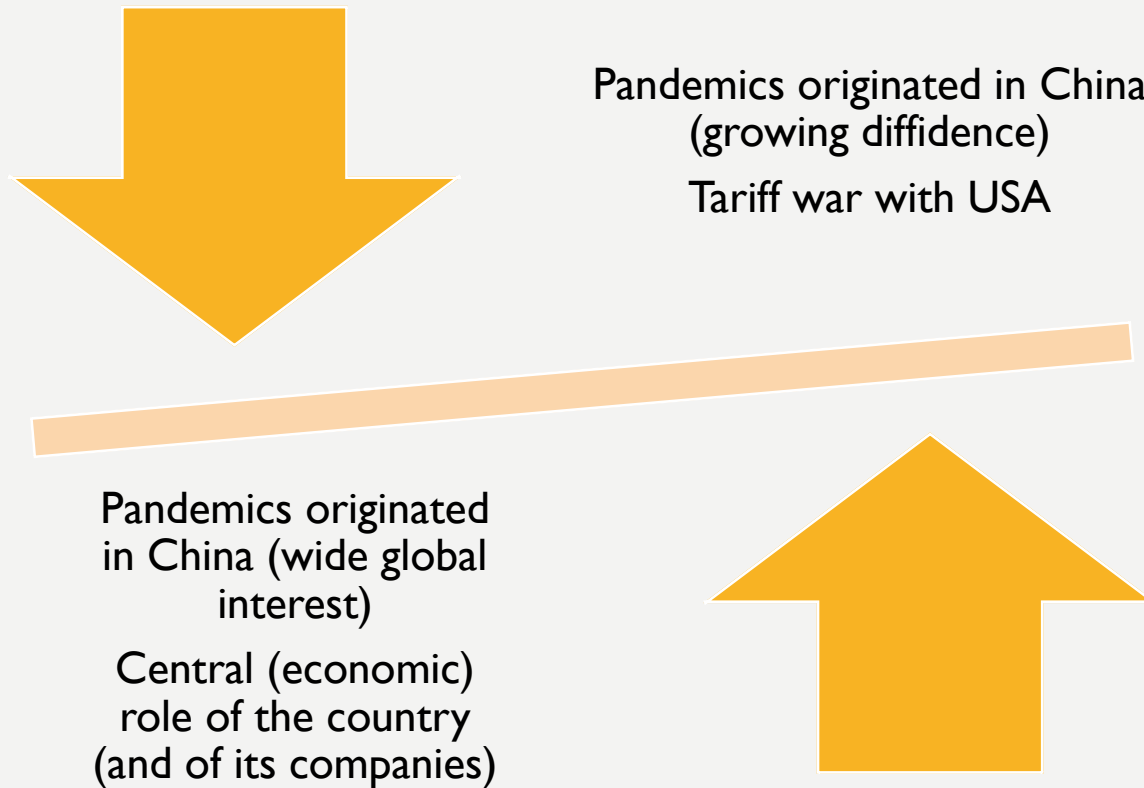
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RESEARCH OBJECTIVE

- To study the possible effects of COVID-19 on international research collaborations of China in the health sector.



CHINA-FJI RELATIONS

TOGETHER WE CAN DEFEAT COVID-19,
TOGETHER WE BUILD OUR SHARED FUTURE

BESIDES SUCCESSFULLY CONTAINING THE COVID-19 VIRUS ON ITS OWN SOIL, CHINA IS ALSO ACTIVELY PROVIDING ASSISTANCE TO THE INTERNATIONAL COMMUNITY.

We will continuously provide vaccines and PPEs to help Fiji tackle the pandemic.

Statement

Qian Bo
Chinese Ambassador
to Fiji

The past year and more have seen repeated resurgence and frequent mutations of the coronavirus. To check an early victory against COVID-19 and ensure economic growth maintain the top priority for the international community.

Chinese Embassy staff share concerns
The Chinese Embassy and staff are very concerned about Fiji suffering from the spread of a more contagious variant. We fully understand the challenges facing Fiji and are ready to provide support and assistance to help Fiji fight the COVID-19.

I have witnessed numerous inspiring moments in this challenging time. Medical workers' contribution has been and still is beyond words, as they tirelessly work to ensure health for all, leaving no one behind.

The constant testing teams, health inspectors, police officers, military forces, teachers and other support staff have shown great determination in their tireless efforts to control the spread of the virus and ensure the safety of the people.

I expressed my wish that the Fiji Centre for Disease Control was strengthened, the vast majority of staff voluntarily remained in the locked workplaces and continued working to ensure the safety of the people.

Not only the people in Fiji and other islands are setting up a safety shield for the rest of us, workers across a vast array of industries are also essential parts of the system that keeps society functioning smoothly. They are standing firm in their duty despite great risk, whether farmers, bus drivers, delivery workers or sanitation workers.

Local residents actively supported and cooperated with the authorities, staying at home during the strict lockdown period to fight the virus independently.

I have also read stories that many were forced to leave their homes and the death toll in difficult times.

These stories remind me of the great social contribution to fight the virus in China last year. The COVID-19 pandemic, warned by the World Health Organization, has been the most serious health crisis the world has seen since World War II.

Facing the unknown virus, China did it proud to identify the virus in a



Medical personnel pose for a photo at Huashan Hospital (Fujian Medical University Hospital) in Wuhan, China's Hubei Province, February 4, 2020.



Medical personnel pose for a photo at Huashan Hospital (Fujian Medical University Hospital) in Wuhan, China's Hubei Province, February 4, 2020.

record-short time, shared the general sequence and sent alerts to a rapid response with the world.

China puts people's lives before GDP and economy

In terms of national priorities, China always puts people's lives before GDP and economy. The Chinese government worked against clock to get medical, medical, technological, financial and human resources into the affected areas.

Hundreds of medical teams from every province of China and the military, patients and medical staff in the front line, thousands of volunteers built up two specialized hospitals designated to treat severe patients severely in Wuhan, Hubei Province.

Hundreds of thousands of people provided a "people's defense" and stood at home to contain the spread of the virus. Some doctors, community workers, volunteers, police, officials and others even sacrificed their lives in the war.

Besides successfully containing the COVID-19 virus on its own soil, China is also actively providing assistance to the international community.

As a country contributing more than 30 percent to world economic growth for years, China has been dedicating to sharing its experience and resources with the world to mutual development through the Belt and Road Initiative and other channels.

We have provided 2 billion USD in assistance for the COVID-19 response and economic recovery in developing

countries. We have provided medical supplies to more than 120 countries and 11 international organizations, with more than 100 billion masks, 3.4 billion protective suits and 840 million testing kits. We will continuously provide vaccines and PPEs to help Fiji tackle the pandemic.

These actions are evidence of China's response efforts, and more importantly, an embodiment of the unique character and strength of the Chinese nation. The people of China have demonstrated the great spirit of putting life above everything else, facing danger, respecting science, and safeguarding a shared future.

The year 2020 marks the centenary of the Communist Party of China (CPC). Over the past century, the Chinese people have made remarkable achievements in economic development and long-term social stability.

With the leadership of the CPC, China has become an indispensable force in resolving global and regional issues, from trade, investment and security to human rights, climate change, terrorism and peacekeeping.

The Chinese government has always been committed to promoting international cooperation and mutual development through the Belt and Road Initiative and other channels.

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H.E. Liu Hongyang

1. Strong leadership and national unity have changed China's strength.

2. China's economic and social development has achieved remarkable achievements.

3. China's international influence and status have been significantly enhanced.

4. China's people's lives have been significantly improved.

5. China's culture and values have been widely spread.

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Journal

Deepening International Cooperation on Fighting COVID-19 and Promoting the Building of a Community with a Shared Future for Mankind

By Wang Xiaotao

Since COVID-19 struck the world, President Xi Jinping has observed on multiple occasions that infectious diseases respect no borders or races and are the common enemy of all. Only by working as one can humanity get through this difficult time; only with concerted efforts can we defeat the virus. Effective international cooperation is a top priority in this battle with the coronavirus. China has actively engaged in international

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Defeat the Pandemic through Global Solidarity and Joint Action

The Chinese "Prescription" for COVID-19
H.E. Liu Hongyang Chinese Ambassador to Malawi



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Covid-19 Fueling Anti-Asian Racism and Xenophobia Worldwide

National Action Plans Needed to Counter Intolerance



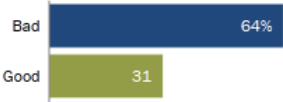
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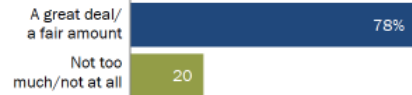
Most Americans see China as having dealt poorly with COVID-19

% who say ...

China has done a __ job dealing with the coronavirus outbreak



The Chinese government's initial handling of the coronavirus outbreak in Wuhan is __to blame for the global spread of the virus



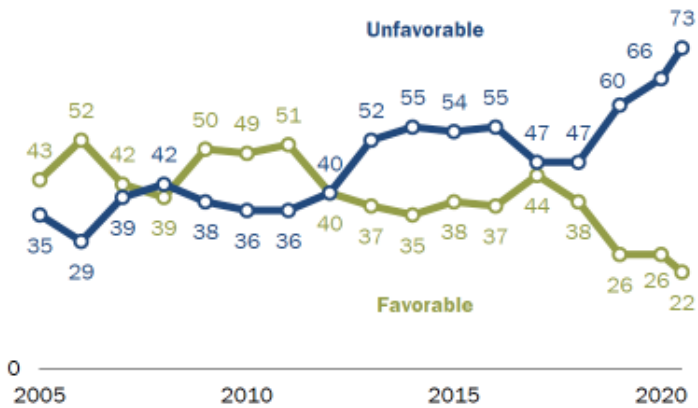
Note: Don't know responses not shown.
Source: Survey of U.S. adults conducted June 16-July 14, 2020. Q10b & Q20.
"Americans Fault China for Its Role in the Spread of COVID-19"

PEW RESEARCH CENTER

Unfavorable views of China reach new highs in U.S.

% who say they have a(n) __ opinion of China


100 %



Note: Don't know responses not shown.
Source: Survey of U.S. adults conducted June 16-July 14, 2020. Q8b.
"Americans Fault China for Its Role in the Spread of COVID-19"

PEW RESEARCH CENTER

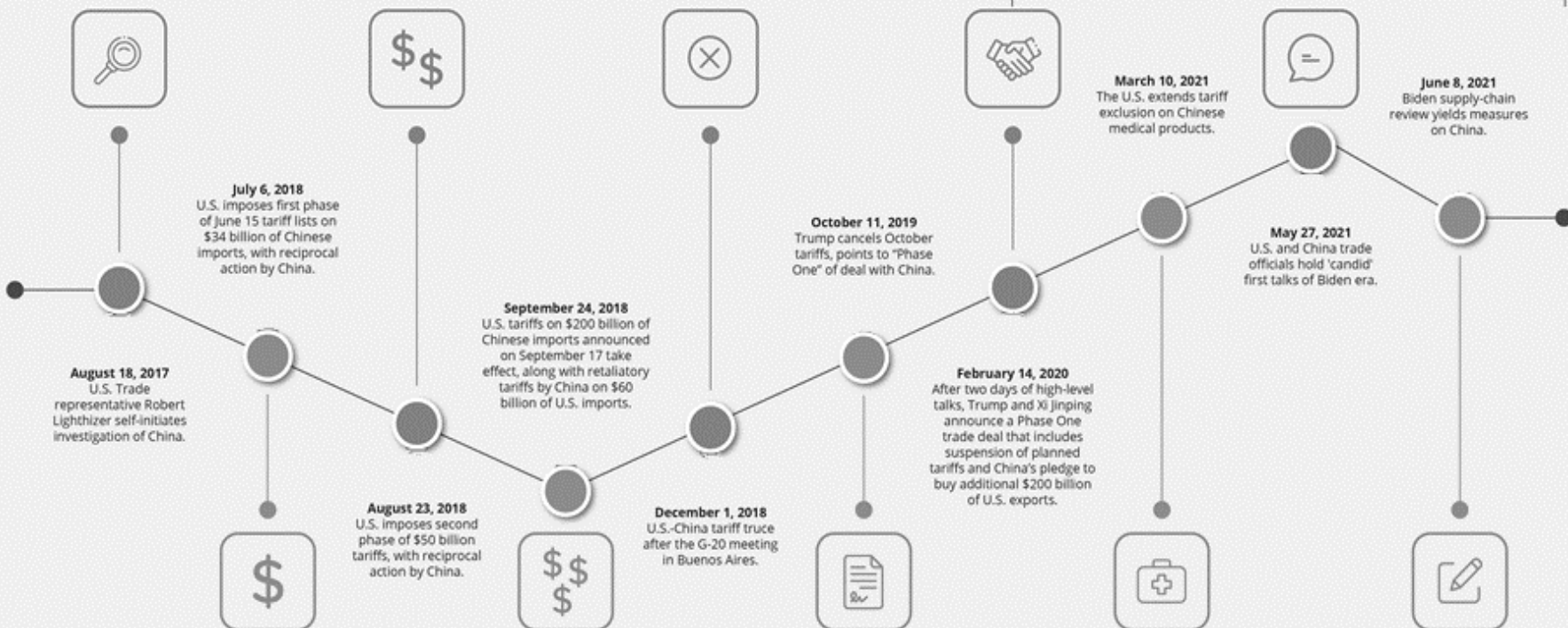
Companies do not pay a fee for placement on Forbes Rankings. Companies on this ranking highlighted in color have paid a fee for enhanced features on their corresponding profile.

RANK 	NAME	COUNTRY	SALES	PROFIT	ASSETS	MARKET VALUE
1.	Berkshire Hathaway	United States	\$276.09 B	\$89.8 B	\$958.78 B	\$741.48 B
2.	ICBC	China	\$208.13 B	\$54.03 B	\$5,518.51 B	\$214.43 B
3.	Saudi Arabian Oil Company (Saudi Aramco)	Saudi Arabia	\$400.38 B	\$105.36 B	\$576.04 B	\$2,292.08 B
4.	JPMorgan Chase	United States	\$124.54 B	\$42.12 B	\$3,954.69 B	\$374.45 B
5.	China Construction Bank	China	\$202.07 B	\$46.89 B	\$4,746.95 B	\$181.32 B
6.	Amazon	United States	\$469.82 B	\$33.36 B	\$420.55 B	\$1,468.4 B
7.	Apple	United States	\$378.7 B	\$100.56 B	\$381.19 B	\$2,640.32 B
8.	Agricultural Bank of China	China	\$181.42 B	\$37.38 B	\$4,561.05 B	\$133.38 B
9.	Bank of America	United States	\$96.83 B	\$31 B	\$3,238.22 B	\$303.1 B
10.	Toyota Motor	Japan	\$281.75 B	\$28.15 B	\$552.46 B	\$237.73 B
11.	Alphabet	United States	\$257.49 B	\$76.03 B	\$359.27 B	\$1,581.72 B
12.	Microsoft	United States	\$184.9 B	\$71.19 B	\$340.39 B	\$2,054.37 B
13.	Bank of China	China	\$152.43 B	\$33.57 B	\$4,192.84 B	\$117.83 B
14.	Samsung Group	South Korea	\$244.16 B	\$34.27 B	\$358.88 B	\$367.26 B
15.	ExxonMobil	United States	\$280.51 B	\$23.04 B	\$338.92 B	\$359.73 B

US-CHINA TRADE WAR

President Donald J. Trump

President Joseph R. Biden

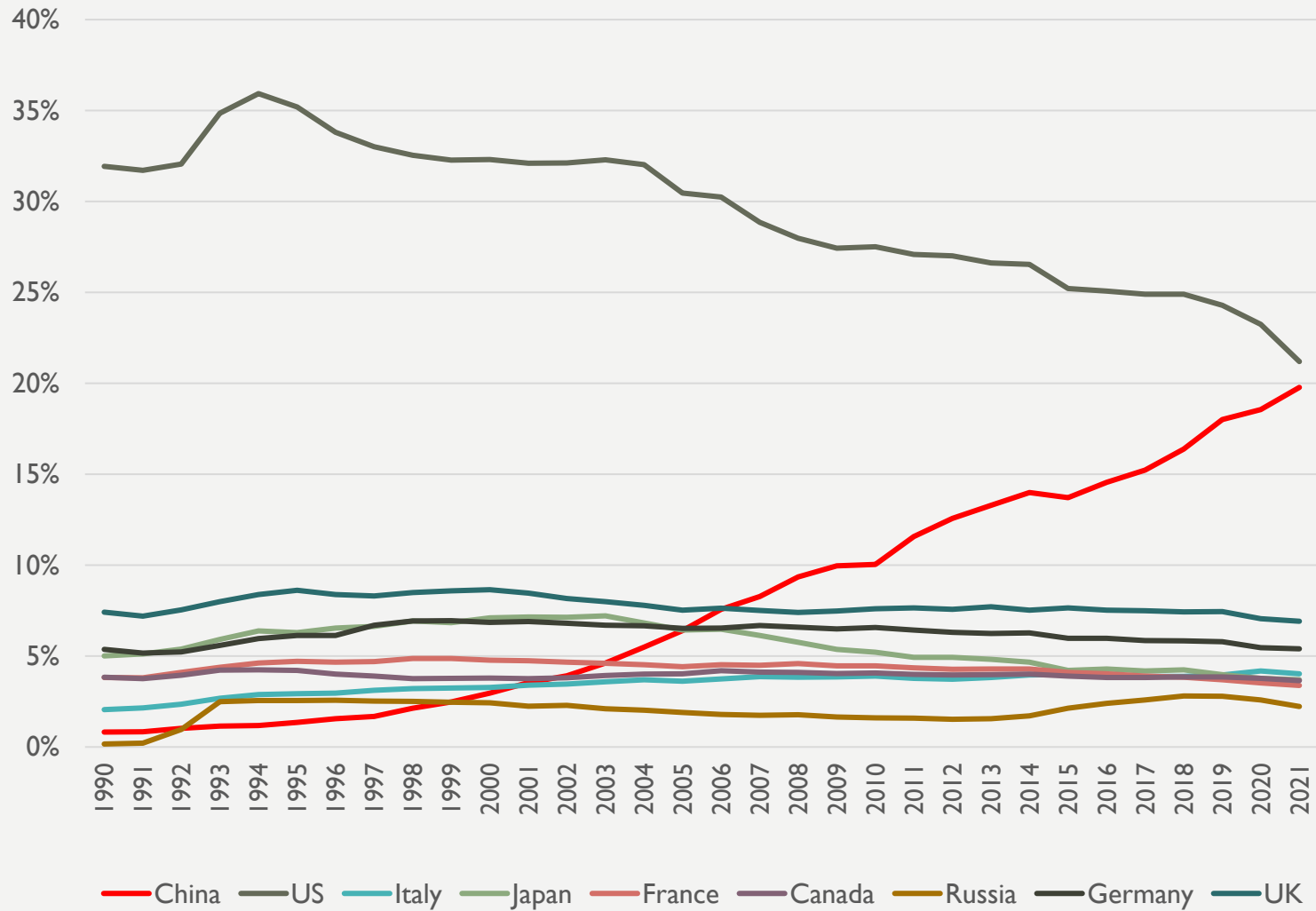


First 10 countries for WoS publications

Rank	1990	2000	2010	2020	Sept. 2022
1	USA	USA	USA	USA	CHINA
2	ENGLAND	UK	CHINA	CHINA	USA
3	GERMANY	JAPAN	UK	UK	UK
4	JAPAN	GERMANY	GERMANY	GERMANY	INDIA
5	RUSSIA (USSR)	FRANCE	JAPAN	INDIA	GERMANY
6	CANADA	CANADA	FRANCE	ITALY	ITALY
7	FRANCE	ITALY	CANADA	CANADA	JAPAN
8	ITALY	CHINA	ITALY	JAPAN	AUSTRALIA
9	AUSTRALIA	RUSSIA	SPAIN	AUSTRALIA	SPAIN
10	NETHERLANDS	AUSTRALIA	AUSTRALIA	FRANCE	FRANCE

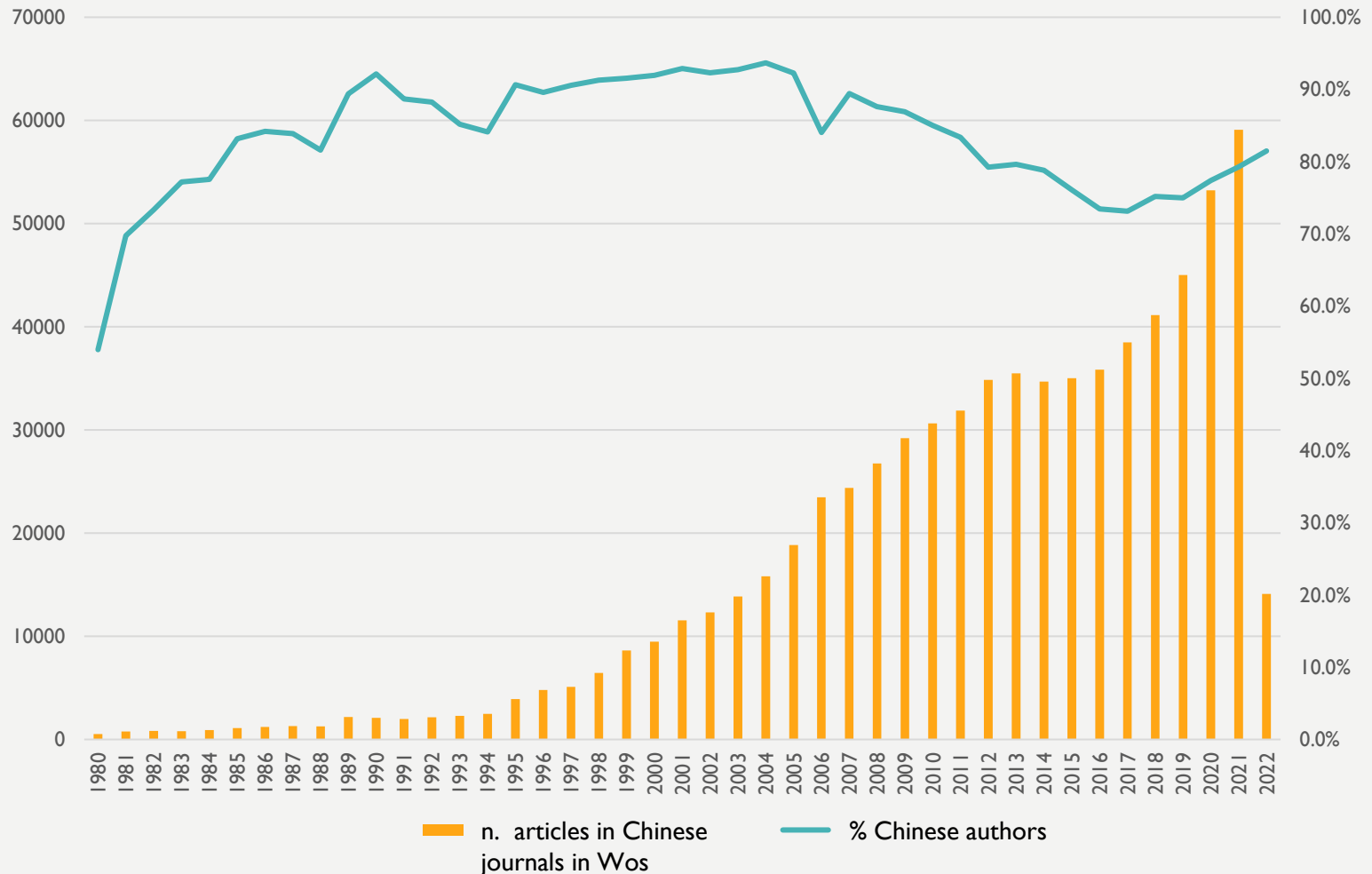
Source: authors' elaboration on WoS data

Weight on total international publications



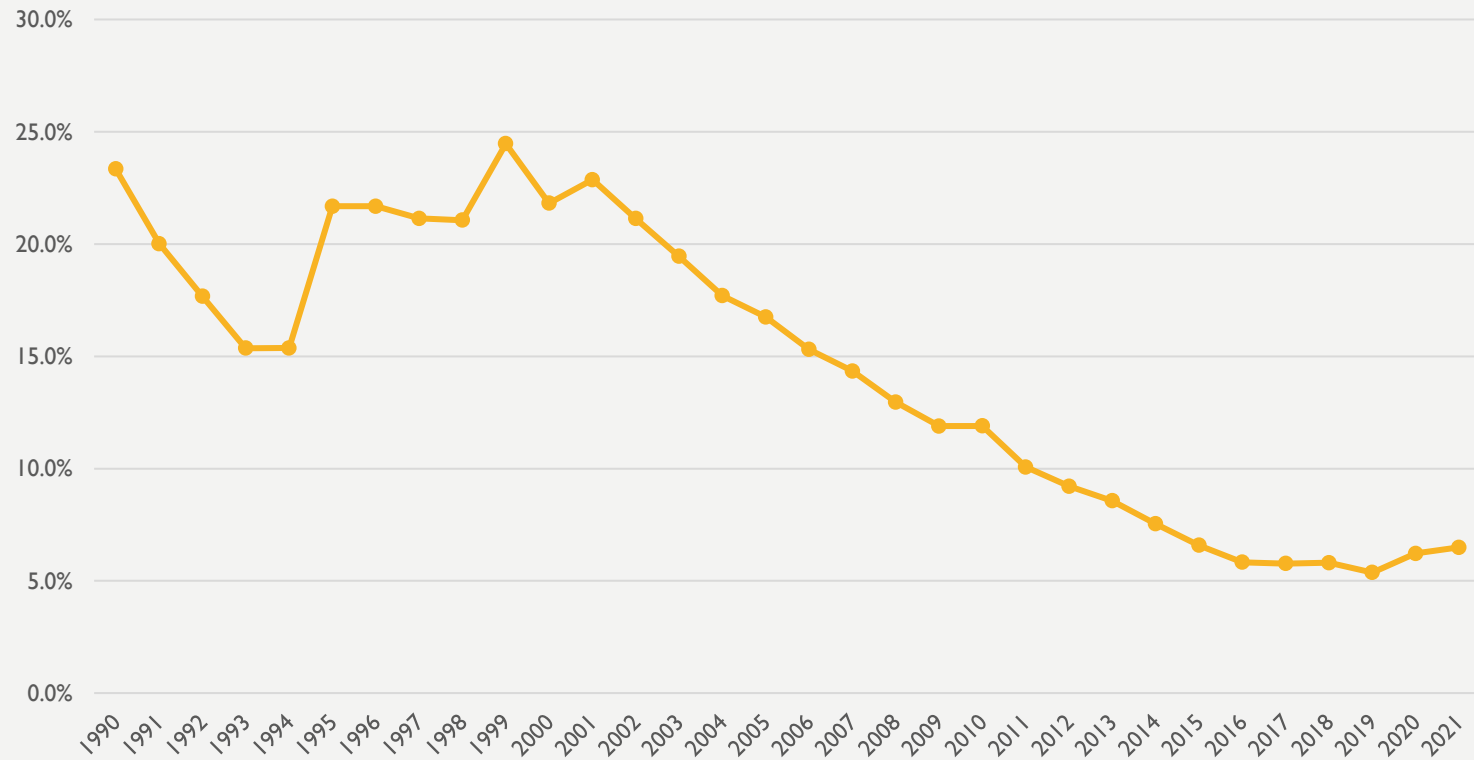
Source: authors' elaboration on WoS data

«Chinese» journals in WoS

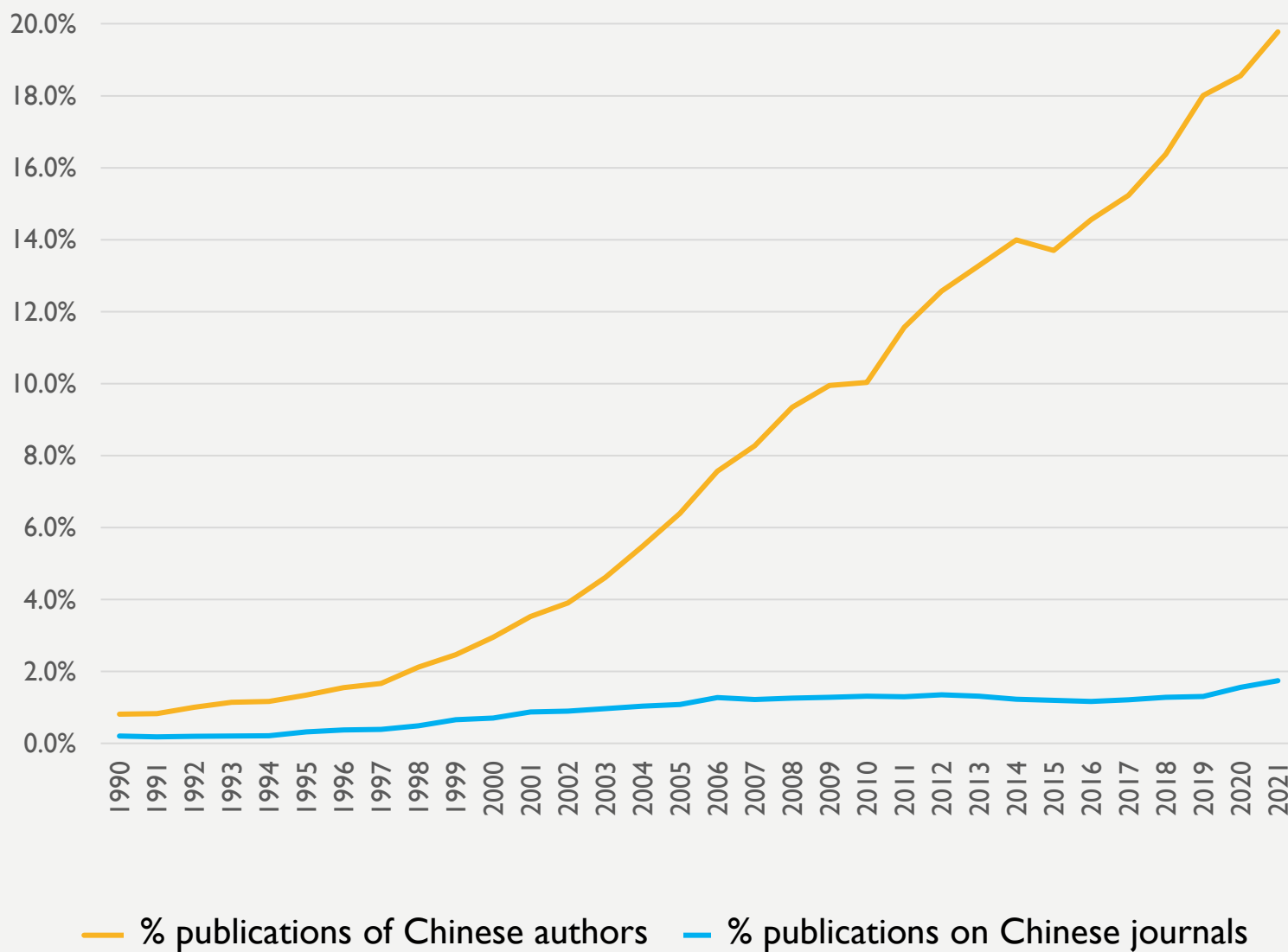


Source: authors' elaboration on WoS data

% of Chinese authors in «Chinese» journals (in WoS)



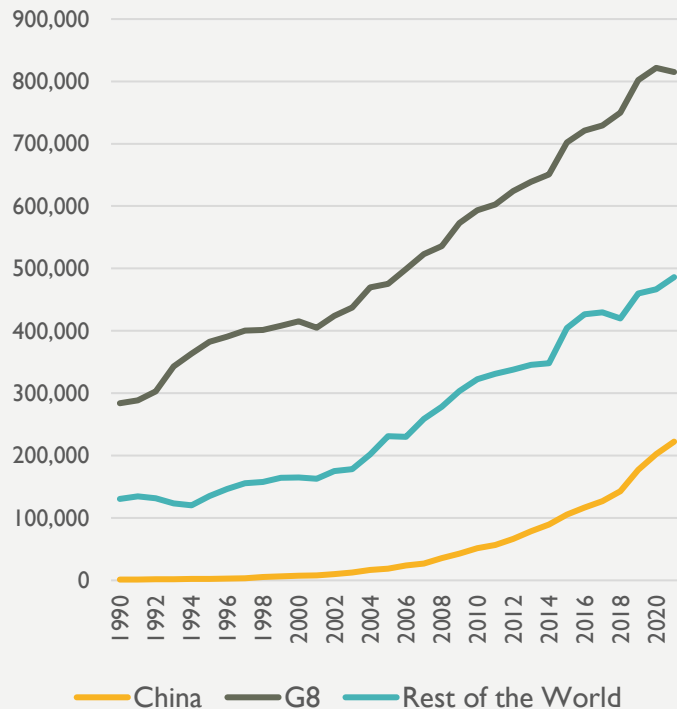
Source: authors' elaboration on WoS data



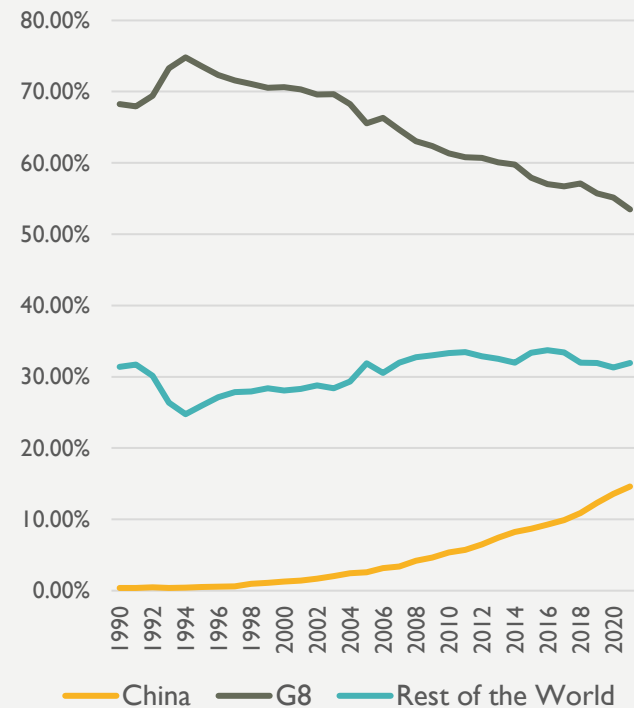
Source: authors' elaboration on WoS data

Publications in the health sectors

a) Absolute values

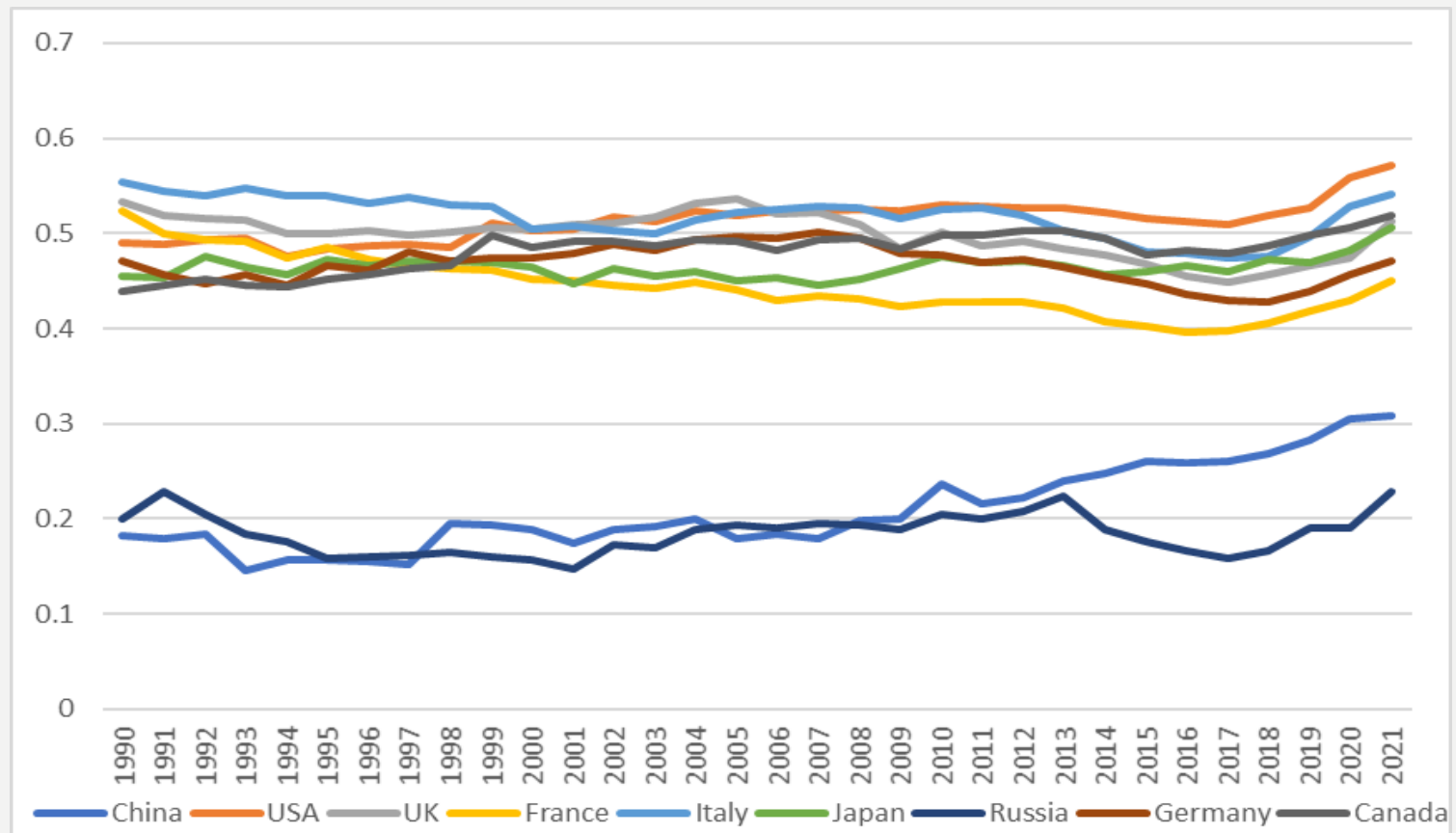


b) %



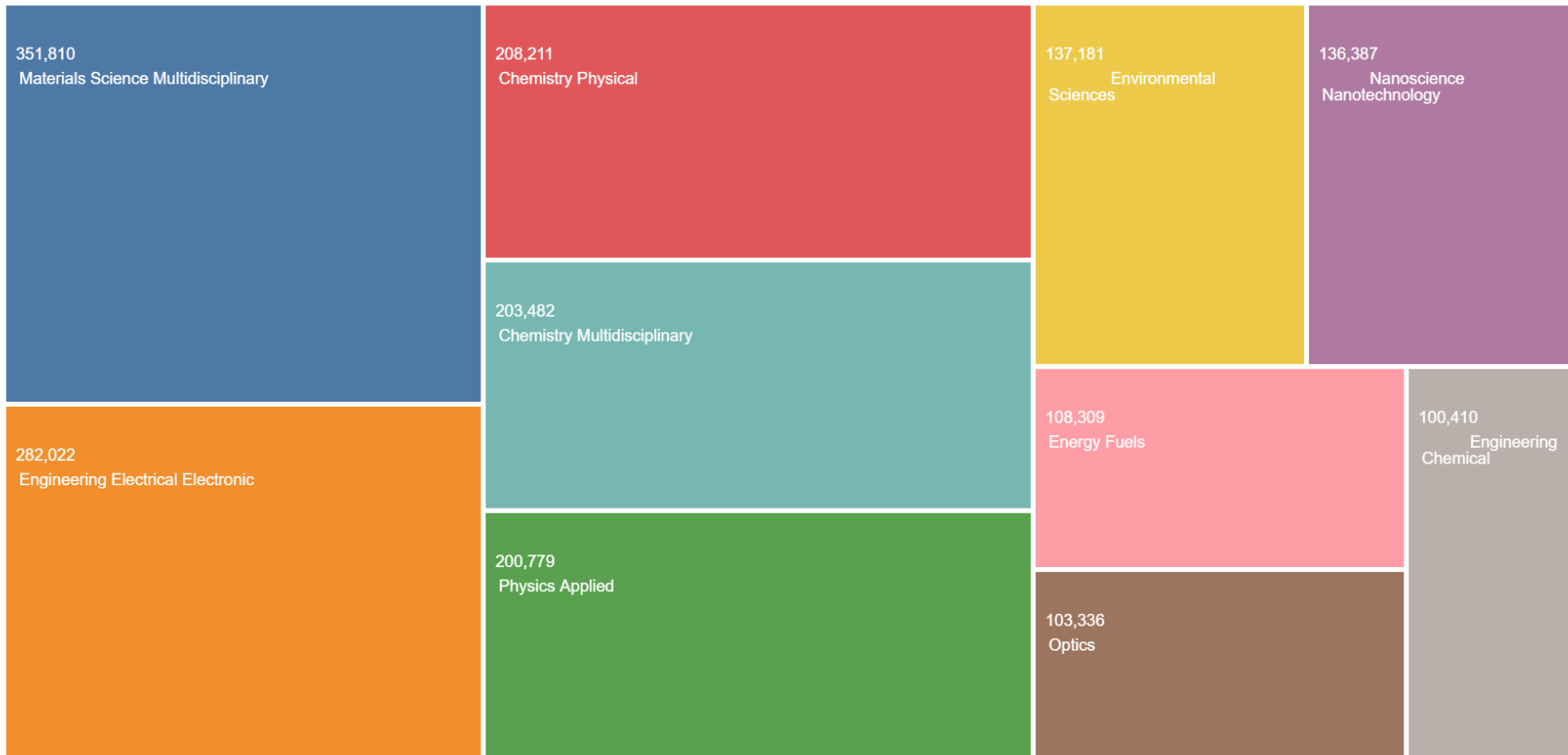
Source: authors' elaboration on WoS data

Publications in the health sector on total publications

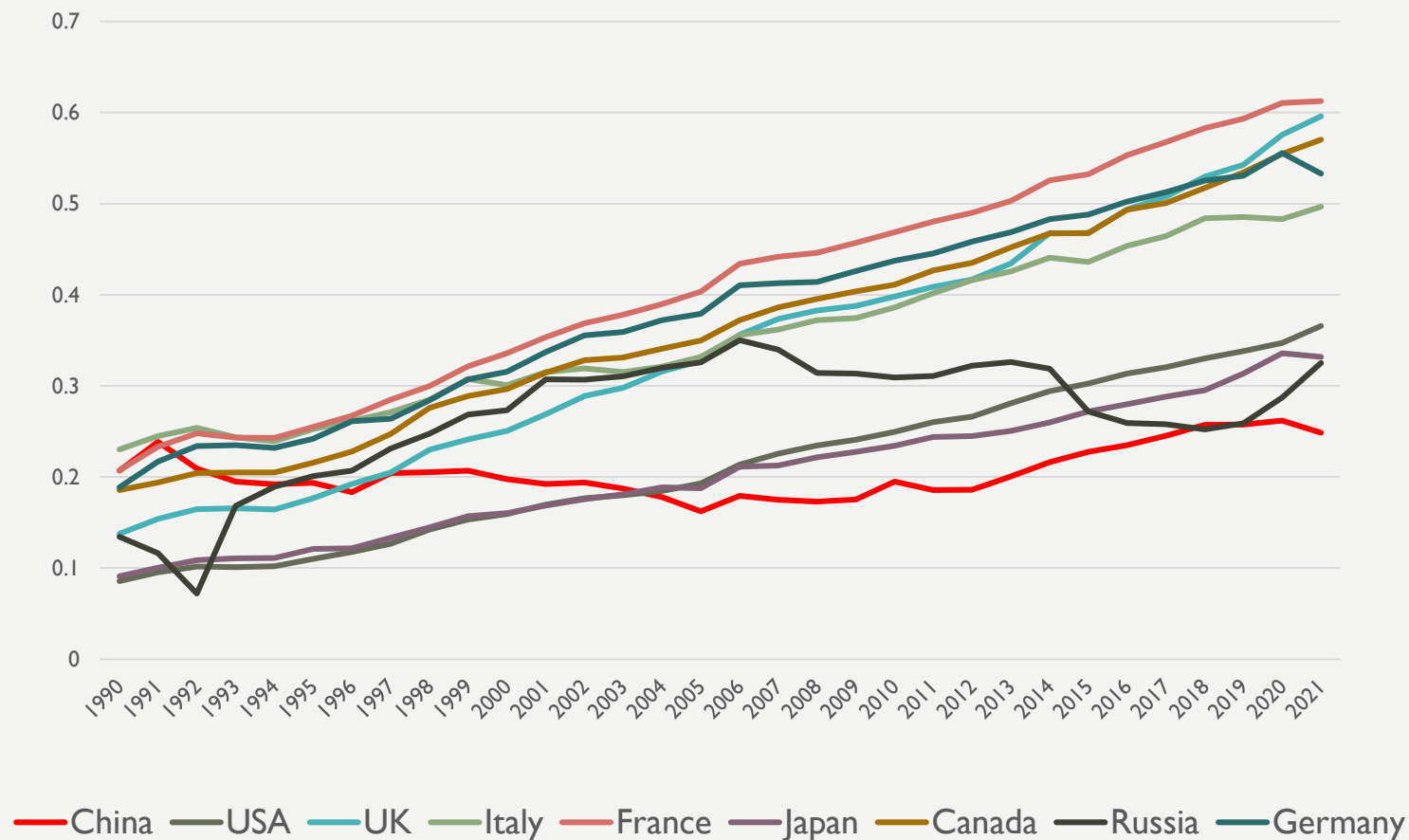


Source: authors' elaboration on WoS data

Fields in Wos funded by NSFC

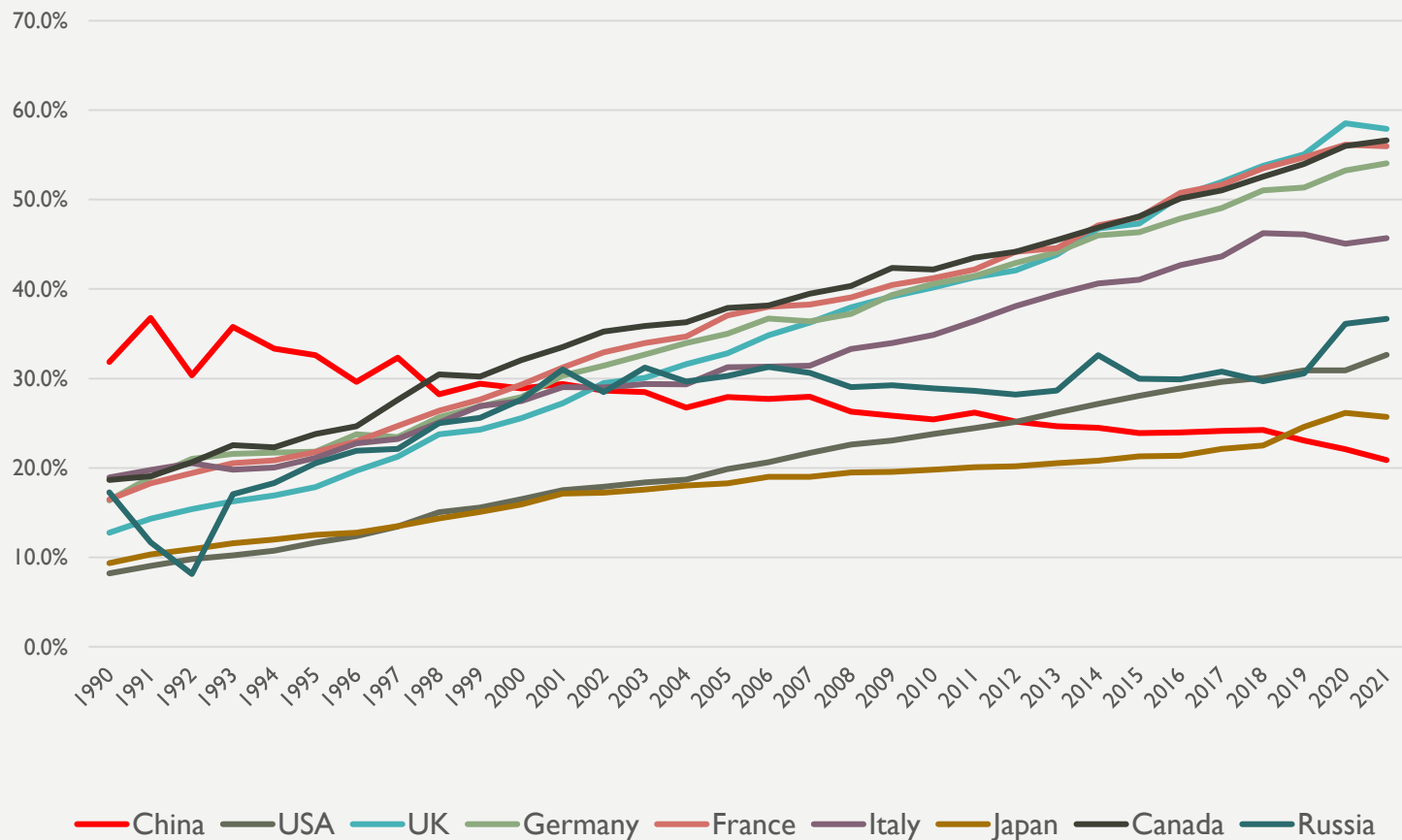


% international publications in collaboration with foreign authors



Source: authors' elaboration on WoS data

% of publications in the health sector in international networks (with foreign authors)

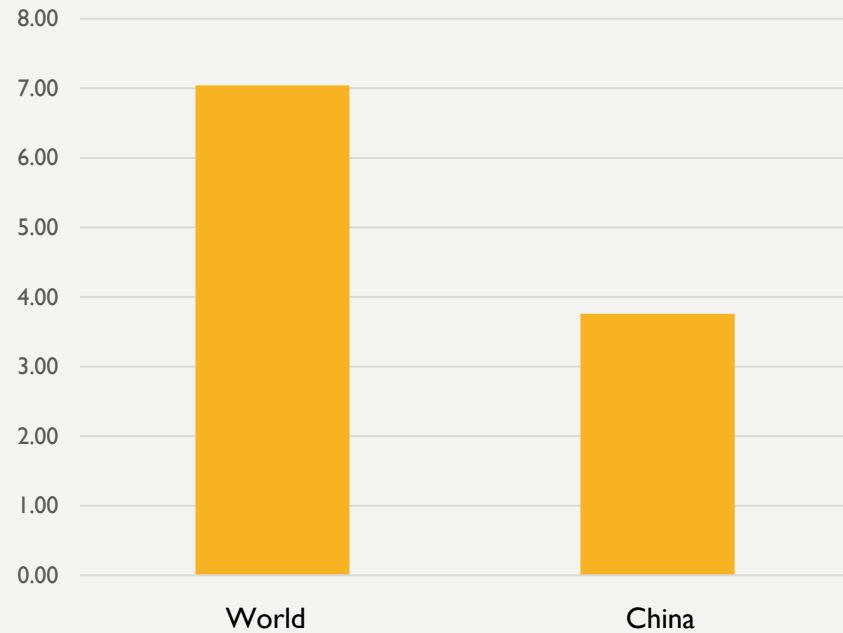


Source: authors' elaboration on WoS data

METHODOLOGY

1. Selection of WoS publications health-China 2018 and 2021 (84 fields);
2. Identification of keywords related to COVID-19;
3. Selection of the first 5 health sectors according to COVID-related articles in 2021;
4. Selection of the last 5 health sectors according to COVID-related articles in 2021;
5. Download of Wos publications related to the sectors identified at points 3 and 4 (+2018 for comparison);
6. Identification of the involved countries for each of the selected publications;
7. Social network analysis only on international co-publications for the 6 sub-sets (2018 top and last, 2021 top and last, 2021 top COVID, 2021 top no COVID);

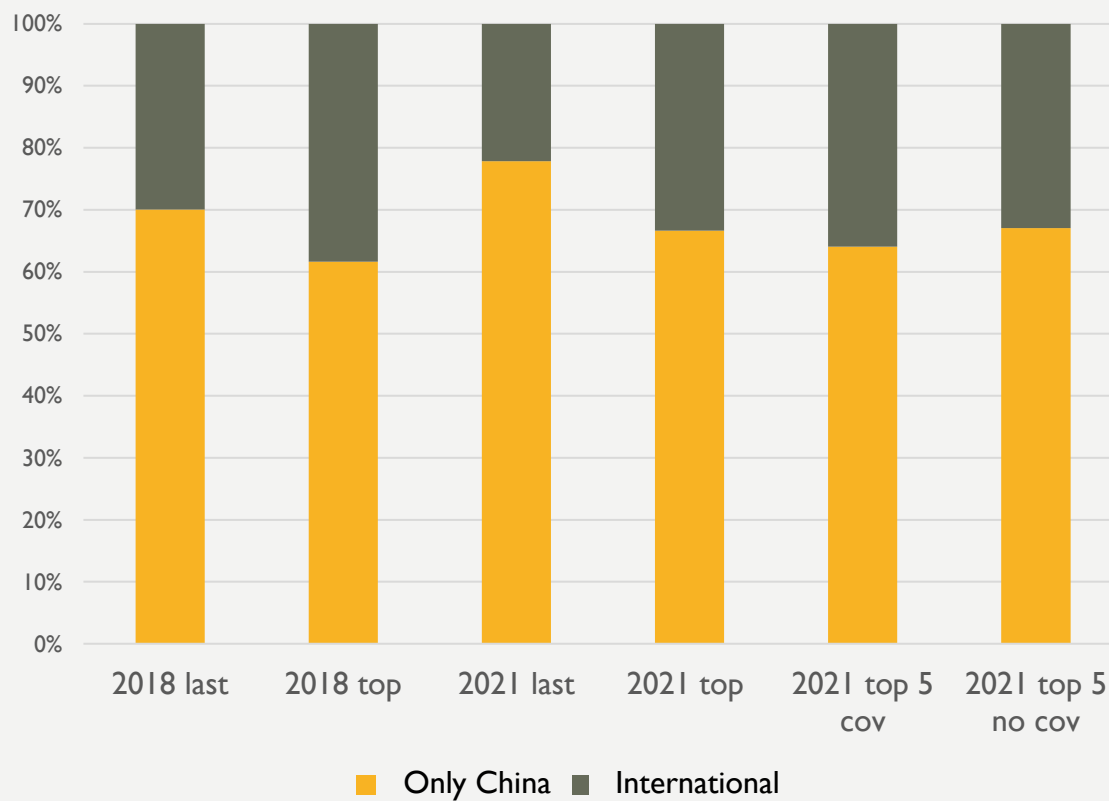
% COVID publications on total health



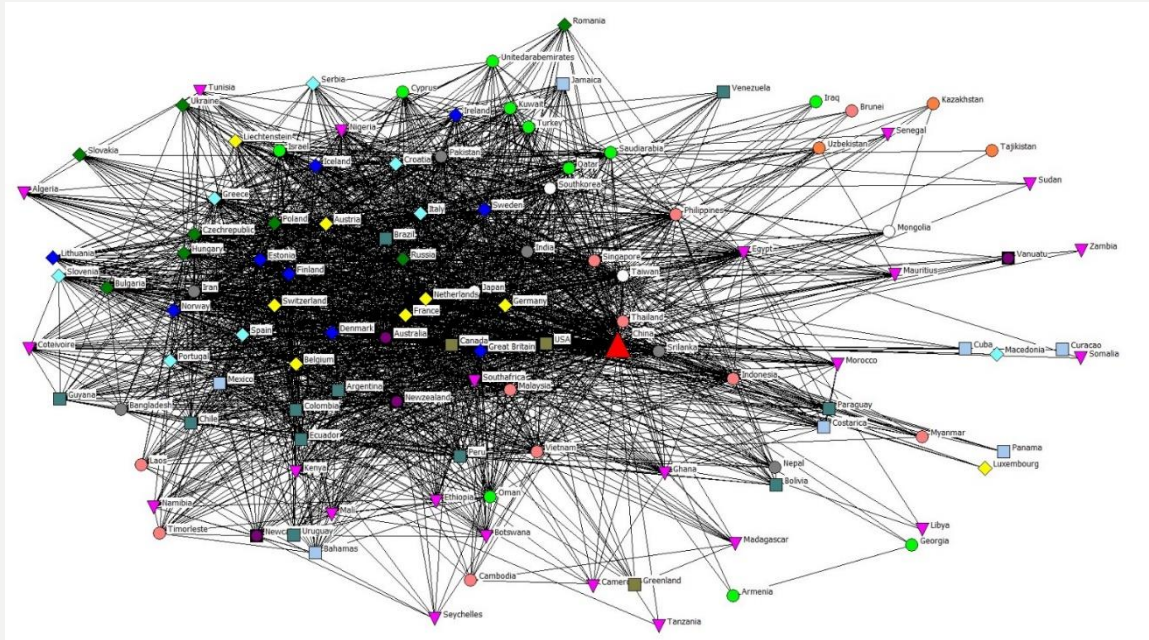
Tot publications TOP: 13,438
Tot publications LAST: 15,224

	Health CN	COVID CN	
Medical Ethics	42	11	26.19%
Infectious Diseases	3,090	706	22.85%
Health Policy Services	909	163	17.93%
Public Environmental Occupational Health	7,273	1206	16.58%
Virology	1,573	252	16.02%
Psychology Clinical	593	83	14.00%
Primary Health Care	72	10	13.89%
Tropical Medicine	499	63	12.63%
Psychology Social	539	63	11.69%
Medical Informatics	1,202	135	11.23%
Psychology Multidisciplinary	3,111	341	10.96%
Psychiatry	4,664	479	10.27%
(...)	(...)	(...)	(...)
Neurosciences	11,062	119	1.08%
Reproductive Biology	1,323	14	1.06%
Physiology	2,676	27	1.01%
Developmental Biology	2,574	24	0.93%
Veterinary Sciences	2,867	21	0.73%
Genetics Heredity	8,639	63	0.73%
Oncology	25,450	185	0.73%
Evolutionary Biology	979	7	0.72%
Orthopedics	2,704	16	0.59%
Audiology Speech Language Pathology	253	1	0.40%
Materials Science Biomaterials	2,337	6	0.26%
Mycology	565	1	0.18%
Psychology Mathematical	59	0	0.00%

	Only China	International	Total
2018 last	6,246	2,673	8,919
2018 top	4,010	2,495	6,505
2021 last	11,605	3,303	14,908
2021 top	8,589	4,298	12,887
2021 top 5 cov	1,073	602	1,675
2021 top 5 no cov	7,516	3,696	11,212



SNA: PRELIMINARY RESULTS



Last5 – 2018

N. nodes: 117

N. links: 13403

Density: 1,975

Indeg H-Index: 47

nEgoBet_CN: 18,16

EgoBet_USA: 509,88

Last5 – 2021

N. nodes: 123

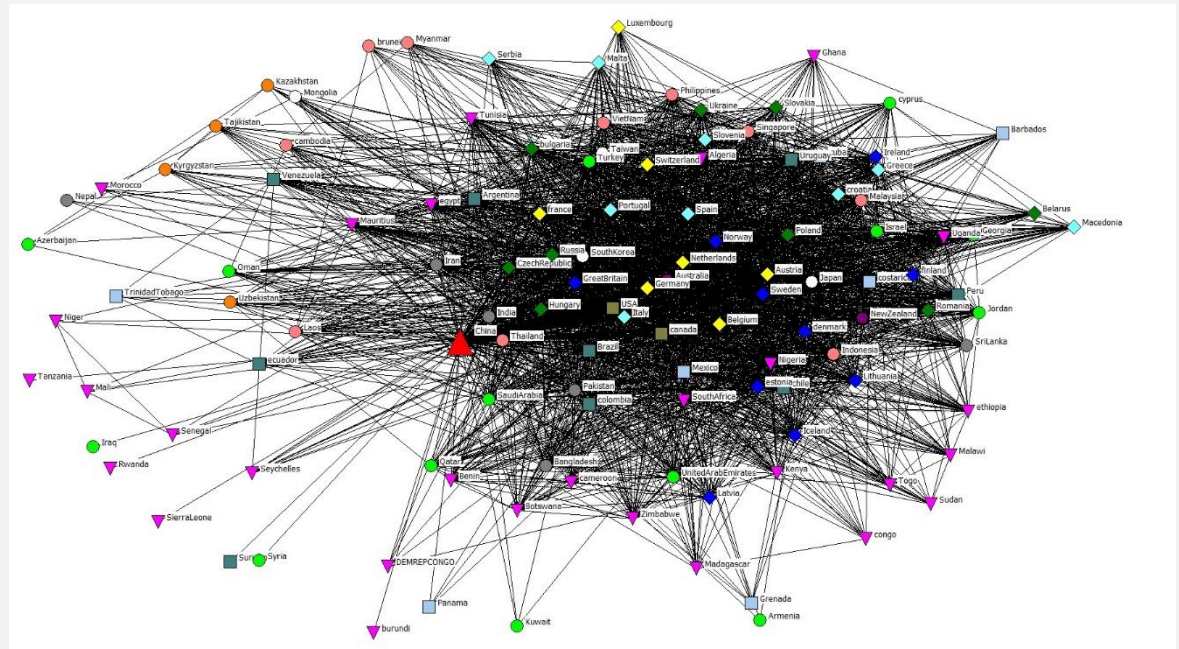
N. links: 19074

Density: 1,271

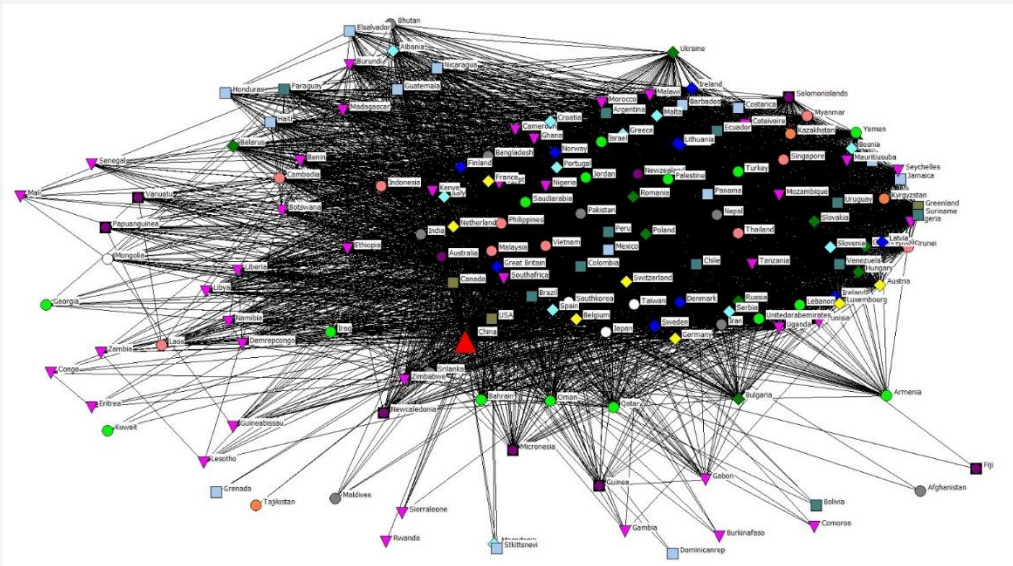
Indeg H-Index: 57

nEgoBet_CN: 19,51

EgoBet_USA: 265,74



SNA: RISULTATI PRELIMINARI (CONT.)



Top5 – 2018

N. nodes: 155

N. links: 27695

Density: 1,160

Indeg H-Index: 94

nEgoBet_CN: 10,79

EgoBet_USA: 672,16

Top5 – 2021

N. nodes: 154

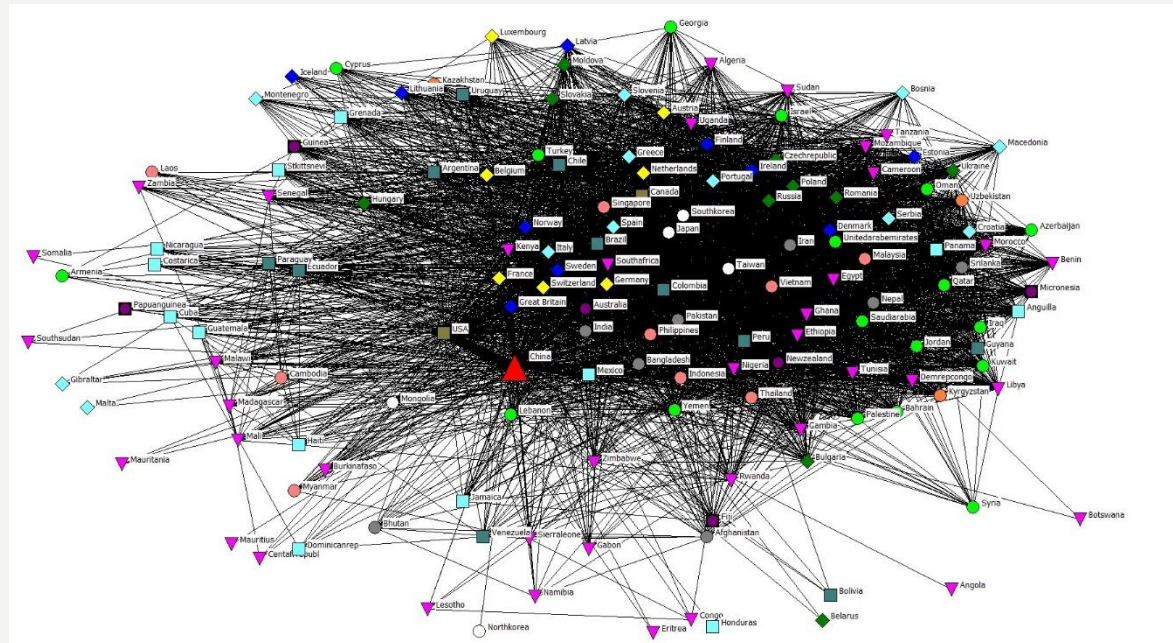
N. links: 31772

Density: 1,348

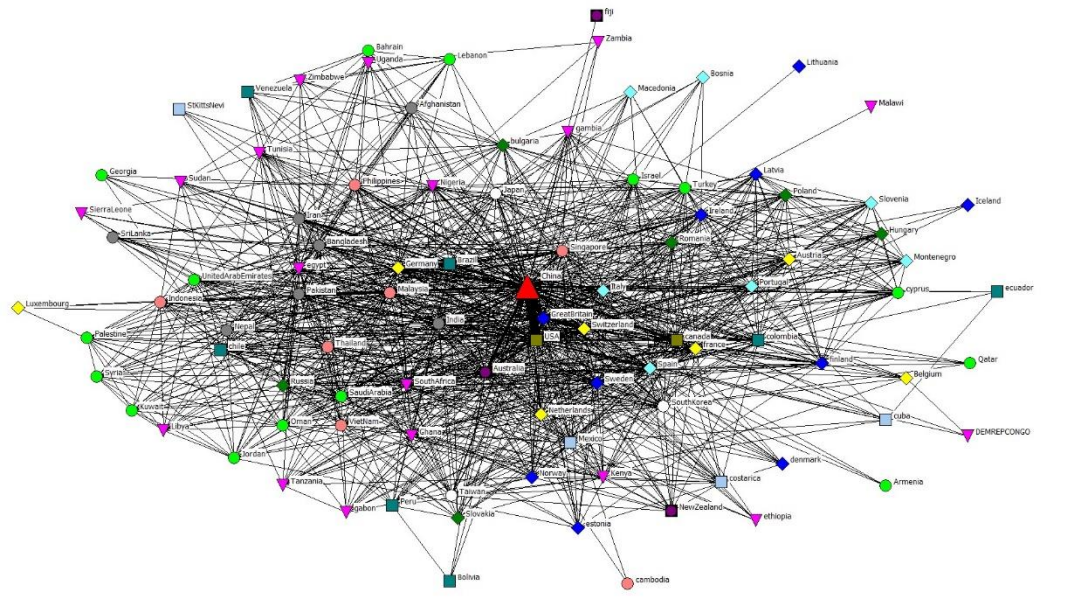
Indeg H-Index: 71

nEgoBet_CN: 14,97

EgoBet_USA: 503,32



SNA: RISULTATI PRELIMINARI (CONT.)



Top5 COVID – 2021

N. nodes: 97

N. links: 3247

Density: 0,349

Indeg H-Index: 32

nEgoBet_CN: 24,87

EgoBet_USA: 375,86

Top5 NO COVID – 2021

N. nodes: 151

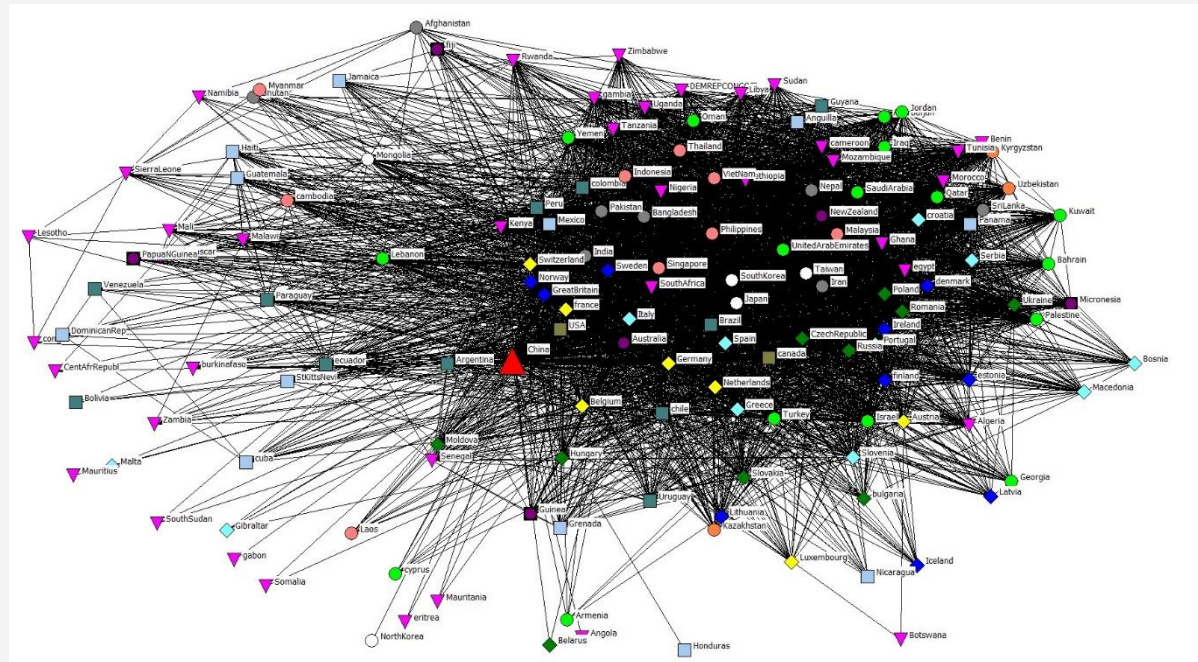
N. links: 28524

Density: 1,259

Indeg H-Index: 70

nEgoBet_CN: 16,61

EgoBet_USA: 498,27



FIRST INSIGHTS

- Between 2018 and 2021:
 - There are more bilateral relations with China and a less central role of USA;
 - There is a decrease in the network density, but only in the «last 5»;
 - The steady density in the «top 5» in 2021 in comparison with 2018 is, however, mainly due to non-COVID publications.
- Already from this preliminary analysis a different structure of transnational scientific collaborations seems to emerge as regards publications related to COVID-19. The international networks of COVID publications are, in fact, smaller and involve a lower number of countries. Furthermore, in such networks China has a central position, and USA a more marginal role.

FUTURE RESEARCH LINES

- To identify possible motivations of the «scientific closure» of China regarding COVID-related research;
- To refine the methodology in order to evaluate the statistical significance of differences;
- To introduce international comparisons;
- To analyse the COVID-related publications in Chinese / in China;
- To analyse the relation with policy measures.