*metrics

Do Science Articles in Wikipedia reflect on state-of-the-art Research?

Study of Wikipedia-metrics in articles about Social Sciences

Olga Zagovora

Article Talk

Read View source View history

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Gender pay gap

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Scholarly articles for Gender pay gap

... ceiling over Europe? Exploring the **gender pay ga**...
... international differences in the **gender pay gap** - E...
The US **gender pay gap** in the 1990s: Slowing ... - E...

The **gender pay gap** is the average differen...
between a man's and a woman's **wages** or s...

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Ge...
ec.e...
The ...
prac...
Wha...

Ge...
https...
The ...
Over...

WIKIPEDIA
The Free Encyclopedia

Main page
Contents
Featured content
Current events
Random article
Donate to Wikipedia
Wikipedia store

Interaction

Help
About Wikipedia
Community portal
Recent changes
Contact page

Tools

What links here
Related changes
Upload file
Special pages
Permanent link
Page information

Gender pay gap

From Wikipedia, the free encyclopedia

The **gender pay gap** is the average difference between a man's and a woman's wages or salaries.

There are two distinct numbers regarding the pay gap: *unadjusted* versus *adjusted* pay gap which takes into account differences in hours worked, occupations chosen, education and job experience.

For example, someone who takes time off (e.g. maternity leave) will likely not earn as much as someone who does not take time off from work. Factors like this contribute to lower yearly earnings for women, but when all external factors have been adjusted for, there still exists a gender pay gap in many situations (between 4.8% and 7.1% according to one study). *Unadjusted* pay gaps are much higher. In the United States, for example the unadjusted *average* female's annual salary has commonly been cited as being 78% of the *average* male salary.[1]

The World Economic Forum provides recent data from 2015 that evaluates the gender pay gap in 145 countries. Their evaluations take into account economic participation and opportunity, educational attainment, health and survival, and political empowerment scores.[2]

Contents [show]

Over time

A wide-ranging meta-analysis by Doris Weichselbaumer and Rudolf Winter-Ebmer (2005) of more than 260 published adjusted pay gap studies for over 60 countries has found that, from the 1960s to the 1990s, raw wage differentials worldwide have fallen substantially from around 65 to 30%. The bulk of this decline, however, was due to ... the unexplained component of ... nd Winter-Ebmer found that ... s, implying a slow level of

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Main Steps: 1. Get set of articles about social sciences

*metrics

1. get start point links from Template Social Sciences
   - add links to a list of pages

2. go to each page and find all templates
   - Filter templates

3. Get links from each template
   - add links to the list of pages

Data: 2698 articles

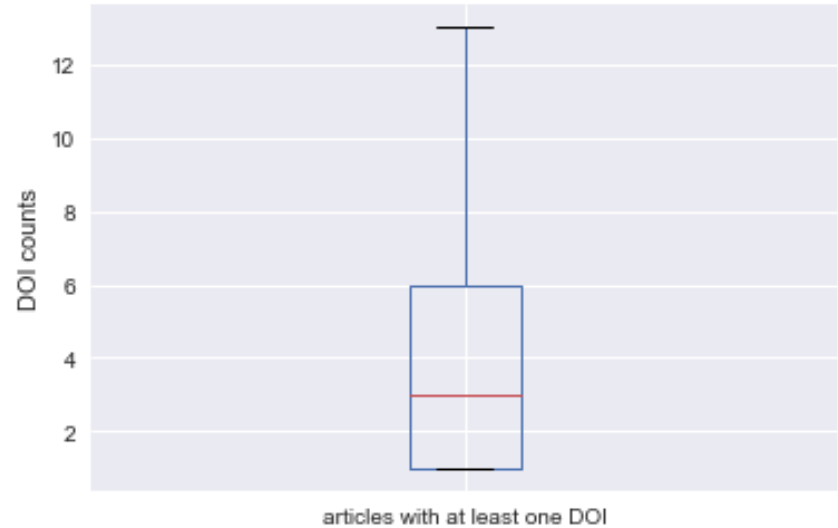| V·T·E	Social sciences	[hide]
Primary	Anthropology (archaeology · cultu... Economics (microeconomics · m... Geography (human · integrative) · ...political · social) · Law (jurisprud... legal systems) · Political science... psephology · public administratio... Psychology (abnormal · biologica... · personality · social) · Sociology... internet · rural · urban)	
Interdisciplinary	Anthrozoology · Area studies · Bu... Cognitive science · Communicati... Community studies · Cultural stu... · Education · Environmental (soci... Food studies · Gender studies · ... History of technology · Human ec... International studies · Media stud... (economics · history · psychology... (land use · regional · urban) · Po... Political economy · Public health... Science and technology studies · ... · Social work	

Anthropology

Outline · History

Types [hide]
Archaeological · Biological · Cultural · Linguistic · Social

Archaeological [hide]
Aerial · Aviation · Battlefield · Biblical · Bioarchaeological · Environmental · Ethnoarchaeological · Feminist · Forensic · Maritime · Paleoethnobotanical · Zooarchaeological

Biological [hide]
Anthrozoological · Biocultural · Evolutionary · Forensic · Molecular · Neurological · Nutritional · Palaeoanthropological · Primatological

Social · Cultural [hide]
Applied · Art · Cognitive · Cyborg · Development · Digital · Ecological · Environmental · Economic · Political economy · Historical · Feminist · Kinship · Legal · Media · Medical · Museums · Musical · Political · Psychological · Public · Religion · Symbolic · Transpersonal · Urban · Visual

Linguistic [hide]
Anthropological · Descriptive · Ethnological · Ethnopoetical · Historical · Semiotic · Sociological

Research framework [hide]
Anthropometry · Ethnography (online) · Ethnology · Cross-cultural comparison · Participant observation · Holism · Reflexivity · Thick description · Cultural relativism · Ethnocentrism · Emic and etic

Key concepts [hide]
Culture · Development · Ethnicity · Evolution (sociocultural) · Gender · Kinship and descent · Meme · Prehistory · Race · Society · Value · Colonialism / Postcolonialism

Key theories [hide]
Actor–network theory · Alliance theory · Cross-cultural studies · Cultural materialism · Culture theory · Diffusionism · Feminism · Historical particularism · Boasian anthropology · Functionalism · Interpretive · Performance studies · Political economy · Practice theory · Structuralism · Post-structuralism · Systems theory

Lists [hide]
Anthropologists by nationality · Anthropology by year · Bibliography · Journals · List of indigenous peoples · Organizations

Main Steps: 2. Mine references and DOIs

- 6739 DOI
- 968 articles with at least one DOI

Article name	DOI counts	ISBN counts	<Ref> counts
Ecology	193	38	574
Hinduism	7	201	432
Evolution	247	2	389

Main Steps: 3a. Important articles in the field

- WoS highly cited papers
  - 1% of the most cited articles in the year
  - published during last 10 years
  - Field: Social Sciences (7679 articles with DOI), Economics (2194 articles with DOI)
- Altmetric.com articles with the highest altmetric score
  - first 800 scientific

- Most cited papers from Scopus
  - published during last 10 years
  - first 2000 articles sorted by citation counts
  - Field: Social Sciences and ...338 artic...

About this Attention Score

In the top 5% of all research outputs scored by Altmetric

MORE...

256

Mentioned by
- **10** news outlets
- **9** blogs
- **115** tweeters
- **1** weibo user
- **6** Facebook pages
- **2** Google+ users

Readers on
- **49** Mendeley

Main Steps: 3b.Compare set of highly cited articles in the field and *metrics Wikipedia citations

- Scopus: overlap of 11 papers

- WoS Social Sc.: overlap of 54 papers

- WoS Economics: overlap of 9 papers

- Altmetric.com: overlap of 57 papers

- Is the "overlap of papers" drawn randomly from highly cited papers?

  - calculate sum of ranks

  - Simulation:

    - 10 000 random flips of labels (paper is cited in Wikipedia or not) in WoS/Scopus/Altmetrics

    - compute sum of ranks for new labeled as „cited in Wikipedia"

Wikipedia citations that are in WoS, Social Sciences

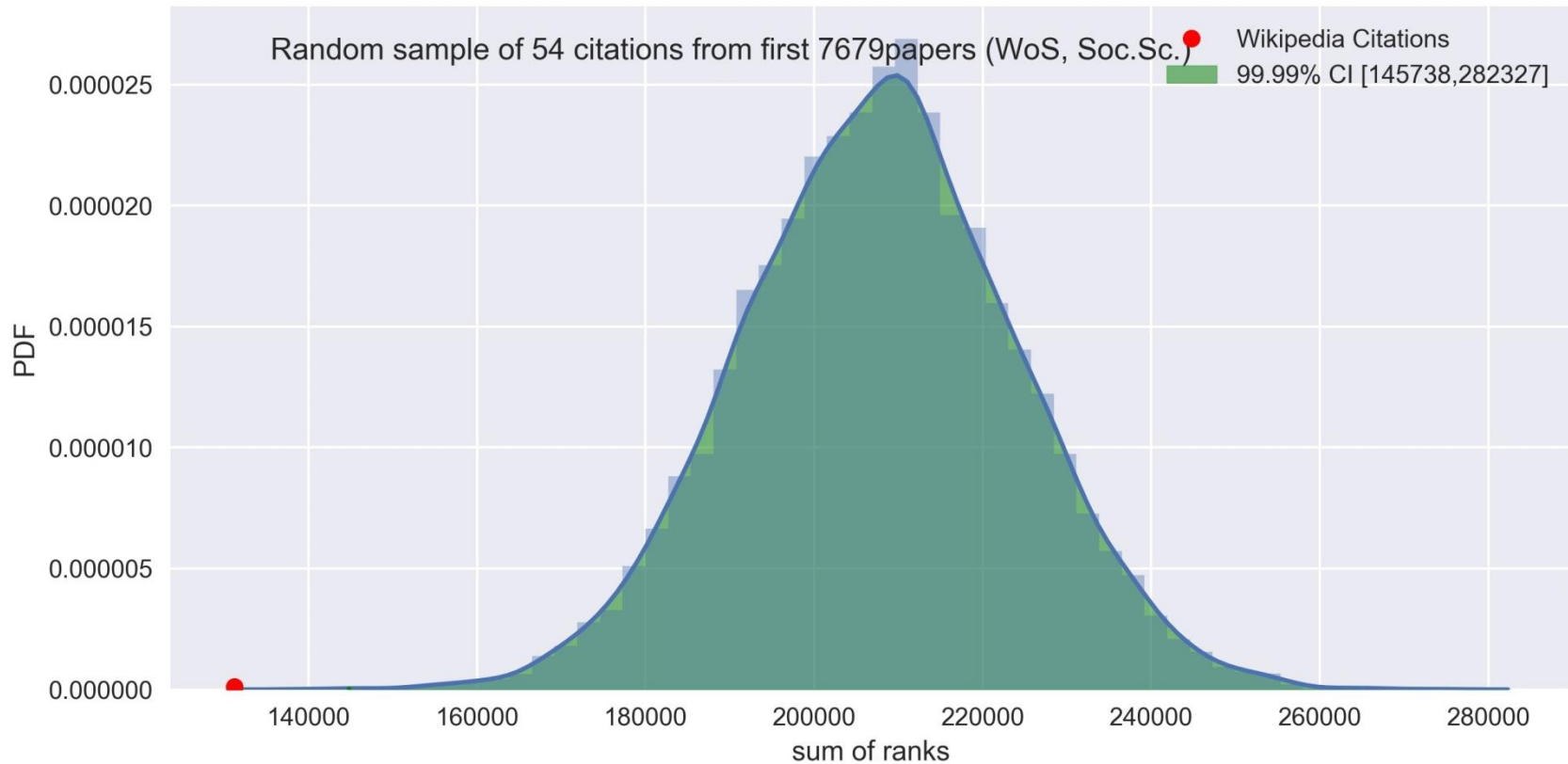| Article name	Citation counts	rank	Is cited in Wikipedia?
QUALITATIVE DATA ANALYSIS FOR HEALTH SERVICES ...	556	39	Yes
MECHANISMS LINKING SOCIAL TIES AND SUPPORT TO ...	380	111.5	Yes
HUMANS HAVE EVOLVED SPECIALIZED SKILLS OF SOCI...	315	175	Yes
EARLY HUMAN USE OF MARINE RESOURCES AND PIGMEN...	312	177	Yes
...	...	...	...

Simulation 1: WoS, Social Sciences

Article name	Citation counts	rank	Is cited in Wikipedia?
QUALITATIVE DATA ANALYSIS FOR HEALTH SERVICES …	556	39	No
…	…	…	…
ARTICLE1 name	420	65	Yes
ARTICLE2 name	417	66	Yes
…	…	…	…
MECHANISMS LINKING SOCIAL TIES AND SUPPORT TO …	380	111.5	No
…	…	…	
HUMANS HAVE EVOLVED SPECIALIZED SKILLS OF SOCI…	315	175	
ARTICLE3 name	314	176	Yes
EARLY HUMAN USE OF MARINE RESOURCES AND PIGMEN…	312	177	No
ARTICLE4 name	210	198	Yes
…	…	…	…

Repeat 10 000 times

Simulations: WoS, Social Sciences

*metrics

Random sample of 54 citations from first 7679papers (WoS, Soc.Sc.)

Wikipedia Citations
99.99% CI [145738,282327]

PDF

sum of ranks

Findings and Future Work

- Wikipedia citations tend to have higher
  - number of citations
    - from Web of Science DB
    - for most data chunks of Scopus
  - altmetric score
- Overlap of articles from Wikipedia and highly cited set is very small

- probability of getting exactly x citations from set of highly cited papers was omitted
- only papers with DOI were considered in all datasets
- only social science and economics were studied
- only English

-**ME**asuring **T**he **R**eliability and perceptions of **I**ndicators for interactions with s**C**ientific product**S**

- Objective:
  - develop a deeper understanding of *metrics (aka altmetrics / social media metrics), in terms of their general significance and their perception amongst stakeholders.

- Key considerations:
  - will include the quality of *metrics' underlying data (in terms of validity and reliability),
  - their ability to adequately assess scientific outputs against the background of disciplinary specificities.

Facts

Status: active

Project duration: 2017-01-01 - 2018-12-31

Key words

Electronic Publishing

Open Access

Metrics

Funding

Funding duration 2017-01-01 – 2019-12-31

German Research Foundation (DFG)

https://metrics-project.net/

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  - Twitter @metrics_project
  - Facebook @metricsproject

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