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Policy citations

Promises, pitfalls and
practical first steps

BRIC, 7th June 2023



In this talk we'll:

- Describe the Overton dataset
- Think about what we mean when we talk about policy citations & impact
- Show some things – good and bad – that we've learned from the data
- End with some practical next steps

We want to make the evidence that goes into policy transparent

overton

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Stanford University		State	National	International	IGO
20682 policy documents from 439 different sources cite 8682 research articles.		663	7,600	8,854	4,228

Science And Technology 15809	Health 6174	Education 5154	Economy, Business And Finance 417	Environment 3997	Politics 3385	Society 2423	Labour 2234
Social Sciences 7644 Economics 6869 Mathematics 4966 Psychology 1569 Biology 1523	Health Treatment 2388 Diseases And Conditions 1537 Medicine 831 Virus Disease 586 Government Health	School 3173 Further Education 1121 Teaching And Learning 946 Higher Education 871 College 101	Economy 4797 Economic Sector 2540 Business Finance 1479 Agriculture 1114 Computing And Information Technology	Natural Resources 2508 Water 1367 Climate Change 1237 Nature 842 Oceans 369	Government 913 Election 320 International Relations 218 Government Policy 195 Defence 64	Values 879 Poverty 200 Social Condition 132 Ethics 86 Family 81	Employment 695 Retirement 236 Unemployment 172 Pension 45 Labour Relations 37

FEATURE
A safe operating space for humanity

Overton is a large database of policy documents & the people and papers they are connected to

Search **6,775,972** policy documents

e.g. universal credit

Search policy

Search **over 7,313,000** people cited or mentioned in policy

e.g. esther duflo

Search people

OR

Enter list of names

Search **over 4,491,026** scholarly books and articles cited in policy

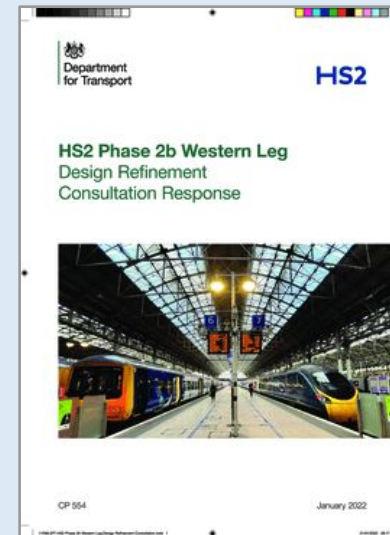
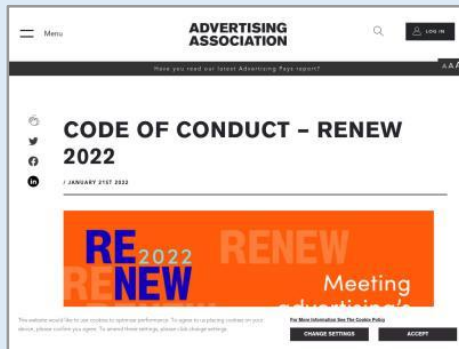
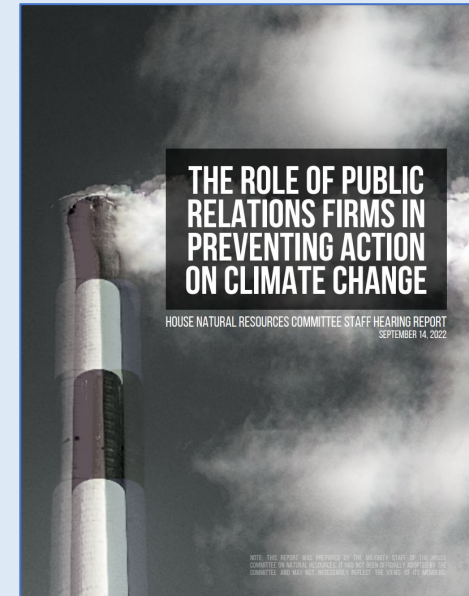
e.g. climate change

Search

OR

Search by DOI, ORCID, PMID or ISBN

We'll search the titles, journals and authors cited in the policy documents that Overton tracks.



Sustainability: Science, Practice and Policy

ISSN: (Print) 1548-7733 (Online) Journal homepage: <https://www.tandfonline.com/loi/tsus20>

Toward a gender diverse workforce in the renewable energy transition

Rebecca Pearl-Martinez & Jennie C. Stephens

To cite this article: Rebecca Pearl-Martinez & Jennie C. Stephens (2016) Toward a gender diverse workforce in the renewable energy transition, Sustainability: Science, Practice and Policy, 12:1, 8-15, DOI: 10.1080/15487733.2016.11908149

To link to this article: <https://doi.org/10.1080/15487733.2016.11908149>

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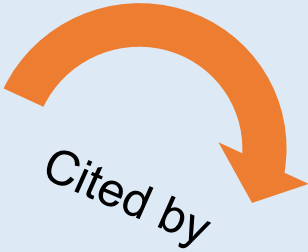
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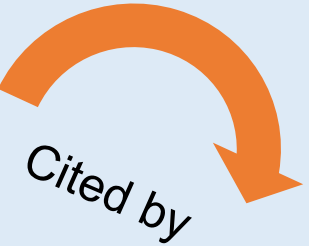
Powering Equality

Women's entrepreneurship transforming Asia's energy sector

ΣmPower
Women for Climate-Resilient Societies

UN
environment
programme

Policy



Cited by

GENDER-INCLUSIVE LEGISLATIVE FRAMEWORK AND LAWS TO STRENGTHEN WOMEN'S RESILIENCE TO CLIMATE CHANGE AND DISASTERS

DECEMBER 2021

ASIAN DEVELOPMENT BANK

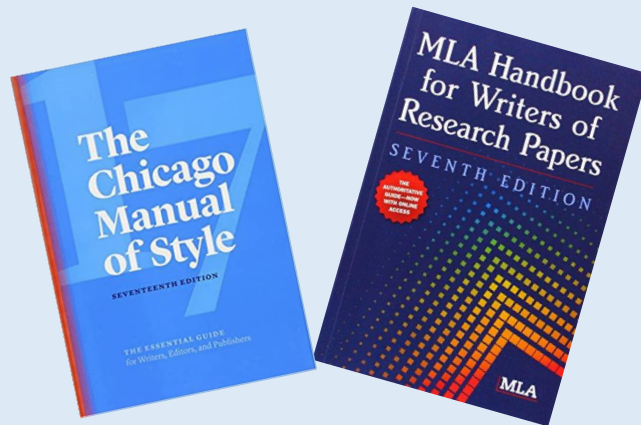
ADB

Policy

Bear in mind

- The use of evidence by policymakers is inconsistent, with no norm or expectations for what to reference, when and in what format

Scholars



Policymakers



Vilkins et al., Scientometrics, 2017 Types of evidence cited in Australian Government publications

Sense about Science, 2018 Transparency of evidence: spot check

Documents connected to University of Ottawa

Summary report for 23,670 policy documents from 913 different sources



Click to show search filters

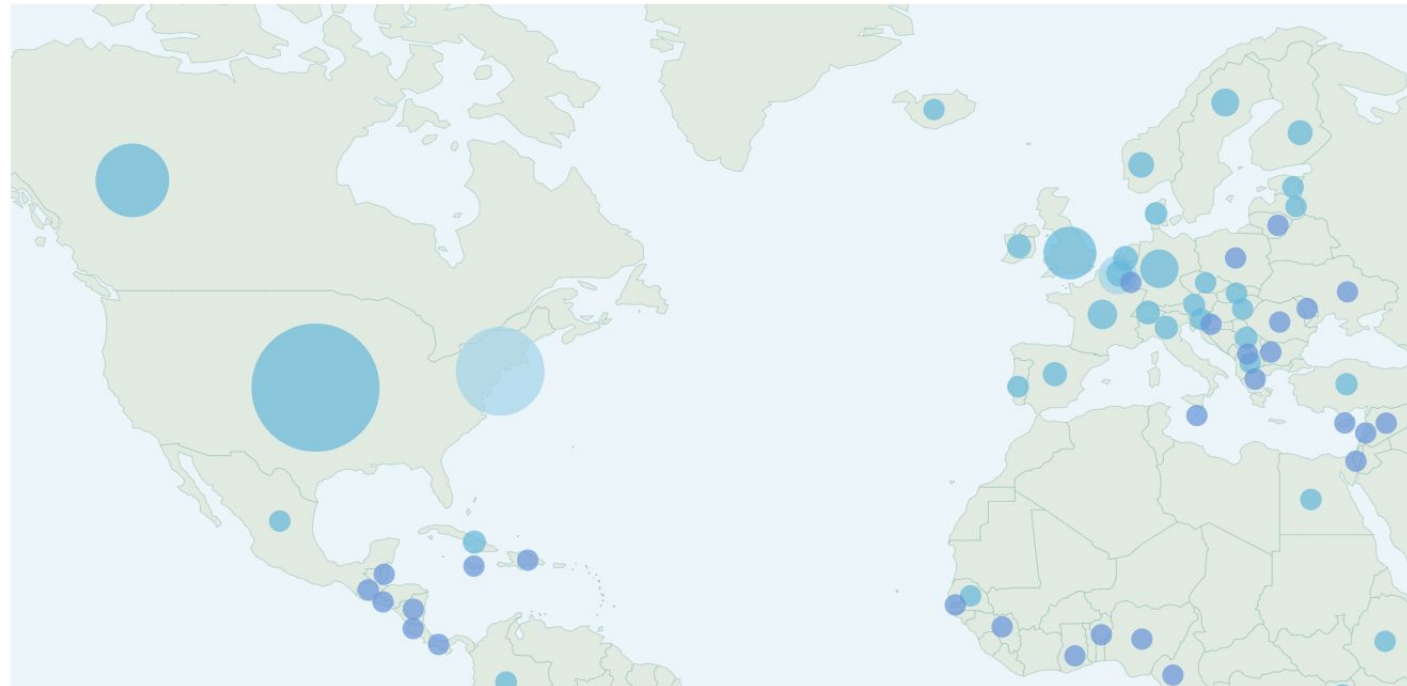
 See underlying documents

 Export ▾

Document count
23,670

Countries
104

Sources
913



Policy document



The Chasm Widens:

 Canadian Centre for Policy Alternatives on May 25th 2023

Publication

Income inequality is getting worse in Manitoba: the market income of the bottom 20 percent of Manitoba families declined while the top 20 percent of Manitoba families received greater income increases

ECONOMIC INEQUALITY

TAX

MINIMUM WAGE

 Tag this

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Cause-specific mortality by occupational skill level in Canada: a 16-year follow-up study

M Tjepkema et al. (2013) *Chronic Diseases and Injuries in Canada*

Author from University of Ottawa is Richard Wilkins

“ In an attempt to quantify the impact of income on health, a report funded by the PUBLIC Health Agency of Canada estimated that from 1991 to 2006, at least 40,000 premature deaths in Canada each year were due to income inequality (Raphael & Bryant, 2014; Tjepkema et al., 2013). ”

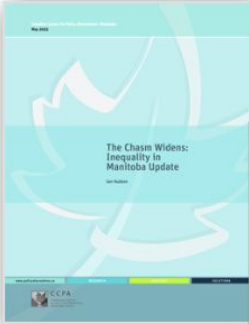
On page 5

Tjepkema, M., Wilkins, R., Long, A. 2013. Cause-specific mortality by income adequacy in Canada: A 16-year follow-up study. *Health Reports*, 247, 1422.

On page 17



Policy document



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[Publication](#)

Income inequality is getting worse in Manitoba: the market income of the bottom 20 percent of Manitoba families declined while the top 20 percent of Manitoba families received greater income

Policy document



Hansard Transcript 2023-Apr-17

 Hansard Ontario on April 17th 2023

[Transcript](#)[LANDLORD](#)[BRADFORD BYPASS](#)[LANDLORD AND TENANT BOARD](#)[Tag this](#)  [Download PDF](#)

Carolyn Whitzman at University of Ottawa

This name and affiliation were mentioned in this document.

The research that I have, which comes from the great *Carolyn Whitzman*, the housing professor at the University of Ottawa, shows us that for every one unit of affordable housing—"affordable" defined by the Canada Mortgage and Housing Corp.—that is being built in Canada right now, we are losing seven. When large real estate investment trusts swoop into a community, buy up a property that a landlord has not maintained effectively— in some cases, for decades—and turfs them out on the street, it's called a renoviction, and it's one of the things that my friends in government are talking about addressing with this bill. But it's one thing to increase fines on individuals or companies—\$100,000 for individuals; \$500,000 for companies. That's negative liberty. That's one thing. But where's the positive liberty? Where's the support you give people? It's through rental protection bylaws.

[On page 48 \(or quick view this section\)](#)



SEARCH POLICY DOCUMENTS

SEARCH PEOPLE

SEARCH SCHOLARLY ARTICLES

e.g. universal credit

Search policy

or

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DATA NOTES Some notes on limitations and potential biases are available for these results, click this bar to see them.

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citing funder Deutsche Forschungsgemeinschaft

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279

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CITES OR MENTIONS INSTITUTION

	University of Cambridge	2,073
	Harvard University	3,325
	Stanford University	2,843
	University of Oxford	2,684
	University of California, Berkeley	2,501

show more

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<input type="checkbox"/>	overton	5,763
<input type="checkbox"/>	bmj	5,642

SOURCE TYPE

government	2,356
think tank	2,053
igo	1,107
government > healthcare agency	382

Policy document



État du climat en Europe 2021 (WMO–N 1304)

State of the climate in Europe 2021 (WMO–No. 1304)

World Meteorological Organization on January 12th 2023

Publication

CLIMATE CHANGE

IPCC SIXTH ASSESSMENT REPORT

CLIMATE CHANGE MITIGATION

Tag this Download PDF

Seasonal predictability of European summer climate re-assessed

Nele–Charlotte Neddermann et al. (2019) Climate Dynamics

Funded by Deutsche Forschungsgemeinschaft

“ Le deuxième mode (configuration météorologique) de la variabilité atmosphérique dans l'Europe nord-atlantique est la structure Est-Atlantique (EA) 50 et sa manifestation estivale (SEA), cette dernière étant liée aux anomalies printanières de la SST dans le nord de l'Atlantique tropical 51 . ”

On page 16

51 Neddermann, N.-C.; Müller, W. A.; Dobrynin, M. et al.: Seasonal Predictability of European Summer Climate ReAssessed, Clim. Dyn. 2019, 53 5, 30393056. <https://doi.org/10.1007/s00382-019-04678-4>.

On page 47



<http://bit.ly/overtonpapers>

- **Coevolution of policy and science during the pandemic** – Yin et al, Science
- **The spread of retracted research into policy literature** – Malkov et al, QSS
- **Tracking the impact of research on education policy during the COVID-19 pandemic** – Mahfouz et al, UCL STEAPP
- **How relevant is climate change research for climate change policy? An empirical analysis based on Overton data** – Bornmann et al, PloS ONE
- **Translating Scientific Discovery Into Health Policy Impact** – Llewellyn et al, Academic Medicine
- **Exploring structural patterns in the uptake of scientific publications in policy-related documents using the Overton altmetrics database: the case of universities in Flanders, Belgium** – Jonker et al, preprint

A brief aside – citations vs impact

Actual policy impact is complicated




- Citations are generally accepted as the currency of scholarly influence*, with books and papers as discrete units of progress
- But policy contributions aren't usually discrete events or objects and having an impact on policy may involve different projects, interlocutors and back and forth interactions over years...


* *Not necessarily a good thing*

Context is critical with policy citations

Policy document





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 Canadian Centre for Policy Alternatives on May 25th 2023 Publication

Income inequality is getting worse in Manitoba: the market income of the bottom 20 percent of Manitoba families declined while the top 20 percent of Manitoba families received greater income increases

ECONOMIC INEQUALITY TAX MINIMUM WAGE

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Cause-specific mortality by occupational skill level in Canada: a 16-year follow-up study

M Tjepkema et al. (2013) *Chronic Diseases and Injuries in Canada*
Author from University of Ottawa is Richard Wilkins

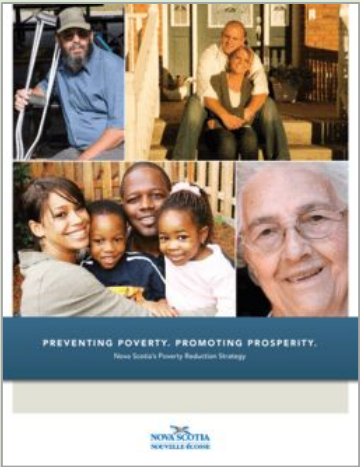
“ In an attempt to quantify the impact of income on health, a report funded by the PUBLIC Health Agency of Canada estimated that from 1991 to 2006, at least 40,000 premature deaths in Canada each year were due to income inequality (Raphael & Bryant, 2014; Tjepkema et al., 2013). ”

[On page 5](#)

Tjepkema, M., Wilkins, R., Long, A. 2013. Cause-specific mortality by income adequacy in Canada: A 16-year follow-up study. *Health Reports*, 247, 1422.

[On page 17](#)

At what point might a citation 'become' impact?



Step 1

Step 2?

Step 2?

Step 2?

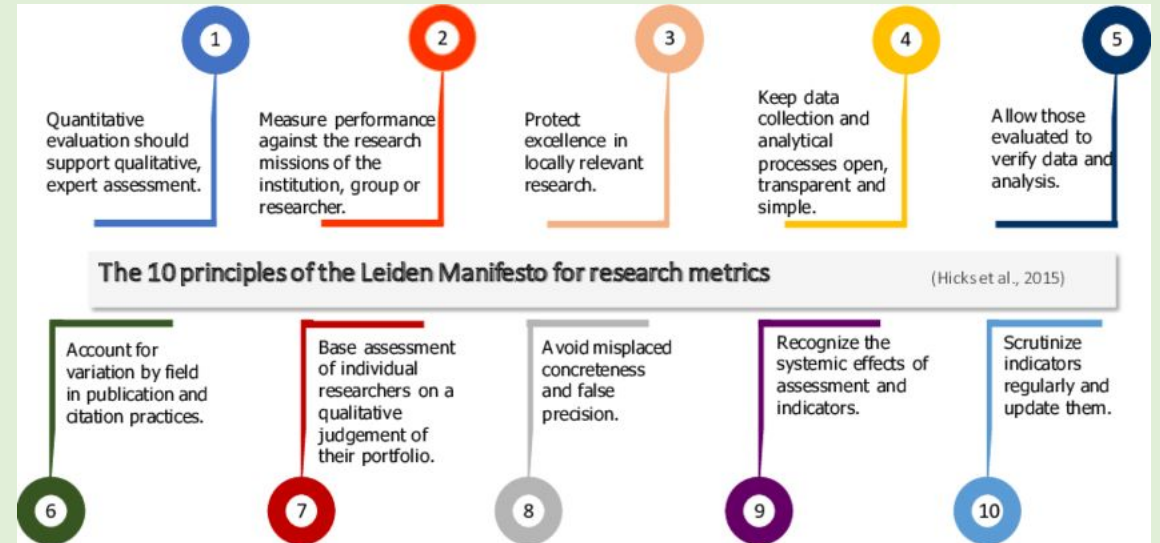


All that said

- Broadly speaking we can use policy citations as supporting evidence, and in aggregate for indicators
- Policy citations can't show us all contributions & not all policy citations represent impact
- ... but this is OK as long as we recognize those limitations




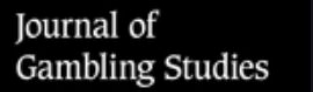

Speaking of which.... whose responsibility is responsible use?

- New field, there is little implicit understanding
- We need a knowledge infrastructure to sit with the data one
- Data providers know their data best – the quirks, biases, promises – but investing in this takes time and effort
- What does a good partnership with research & the broader community look like?



Seven things we've learned

1. What % of papers are ever cited in policy?

	<i>Papers in 2015</i>	<i>% cited by policy, 2015 - 2020</i>
	233	2%
	29k	7%
	2k	23%
	116	30%
Review of Faith & International Affairs	48	37%
	374	45%

Source: Overton.io and PubMed, October 2020

May 10 2021

A large-scale validation of the relationship between cross-disciplinary research and its uptake in policy-related documents, using the novel Overton altmetrics database

Henrique Pinheiro , Etienne Vignola-Gagné , David Campbell  

> Author and Article Information

Quantitative Science Studies 1–40.

https://doi.org/10.1162/qss_a_00137 [Article history](#)

Science cited in policy documents: Evidence from the Overton database

Zhichao Fang^{1*}, Jonathan Dudek¹, Ed Noyons¹, Rodrigo Costas^{1,2}

* Corresponding author

- Coverage:
 - (CWTS) 3.9% of all articles in WoS database
 - (Pinherio) 5.8% of all articles in Scopus database between 2008 and 2016
 - 47% of random sample in Development Studies
 - 0.1% of random sample in Drama & Theatre

Direct relationships do exist

 Springer Link

Home > Administration and Policy in Mental Health and Mental Health Servi... > Article

Original Article | [Published: 28 March 2014](#)

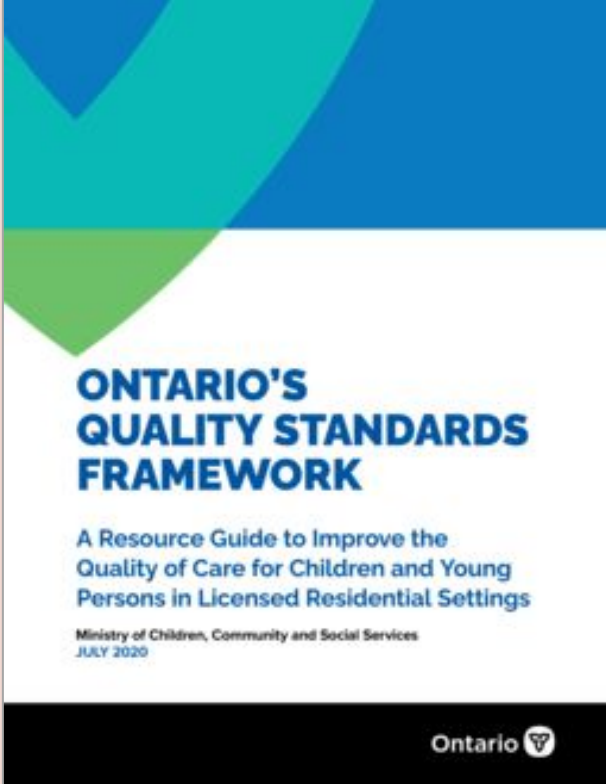
Out-of-Home Placement Decision-Making and Outcomes in Child Welfare: A Longitudinal Study

[Ka Ho Brian Chor](#) , [Gary M. McClelland](#), [Dana A. Weiner](#), [Neil Jordan](#) & [John S. Lyons](#)

[Administration and Policy in Mental Health and Mental Health Services Research](#) **42**, 70–86 (2015) | [Cite this article](#)

1604 Accesses | 17 Citations | 5 Altmetric | [Metrics](#)


is cited by



ONTARIO'S QUALITY STANDARDS FRAMEWORK

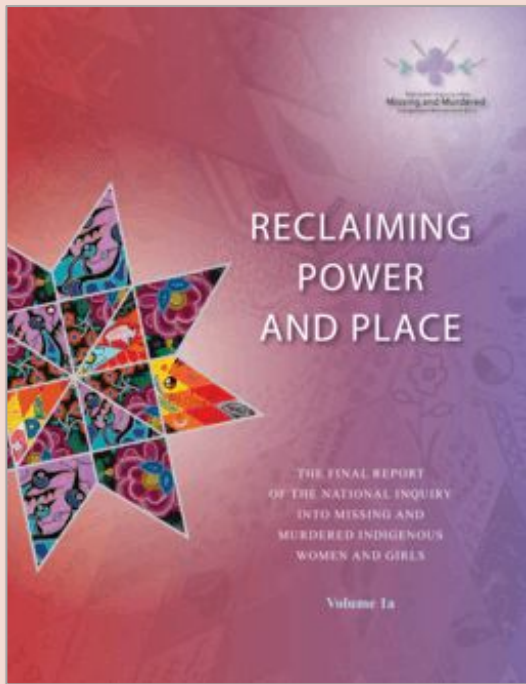
A Resource Guide to Improve the
Quality of Care for Children and Young
Persons in Licensed Residential Settings

Ministry of Children, Community and Social Services
JULY 2020

Ontario 

But “second order” citations are more common

Translation / broker step



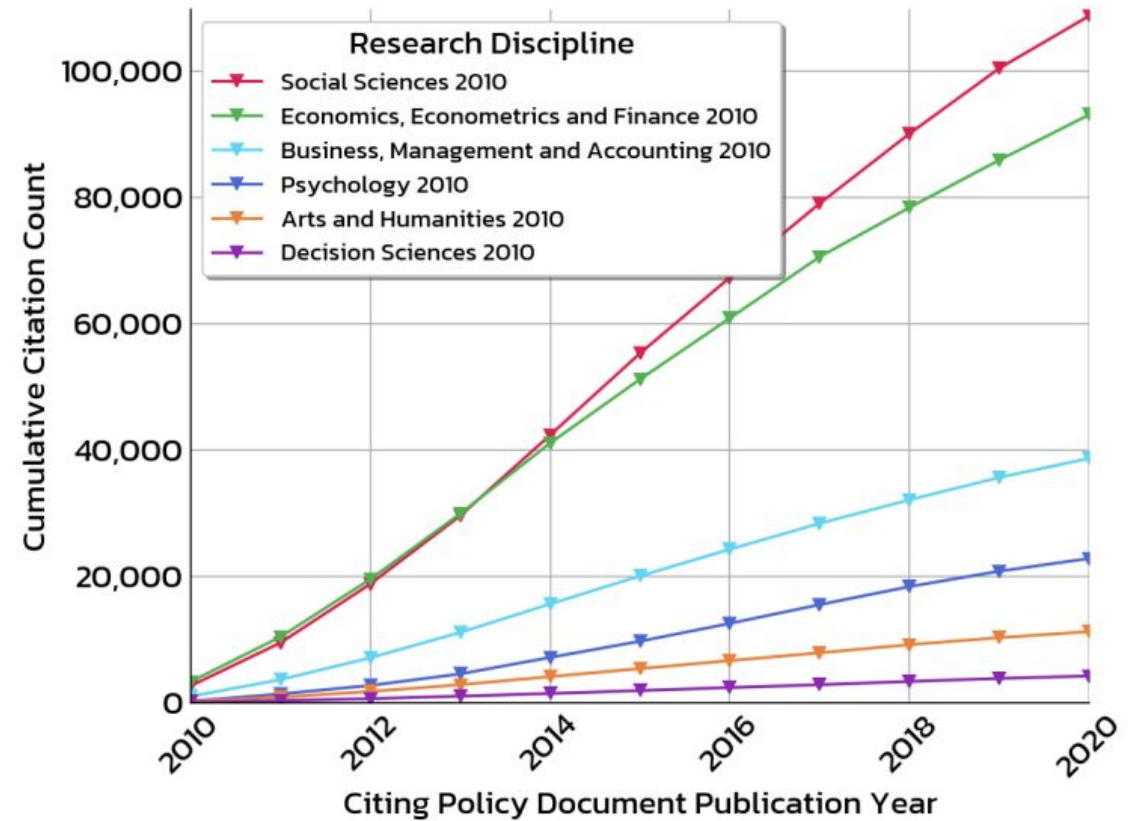
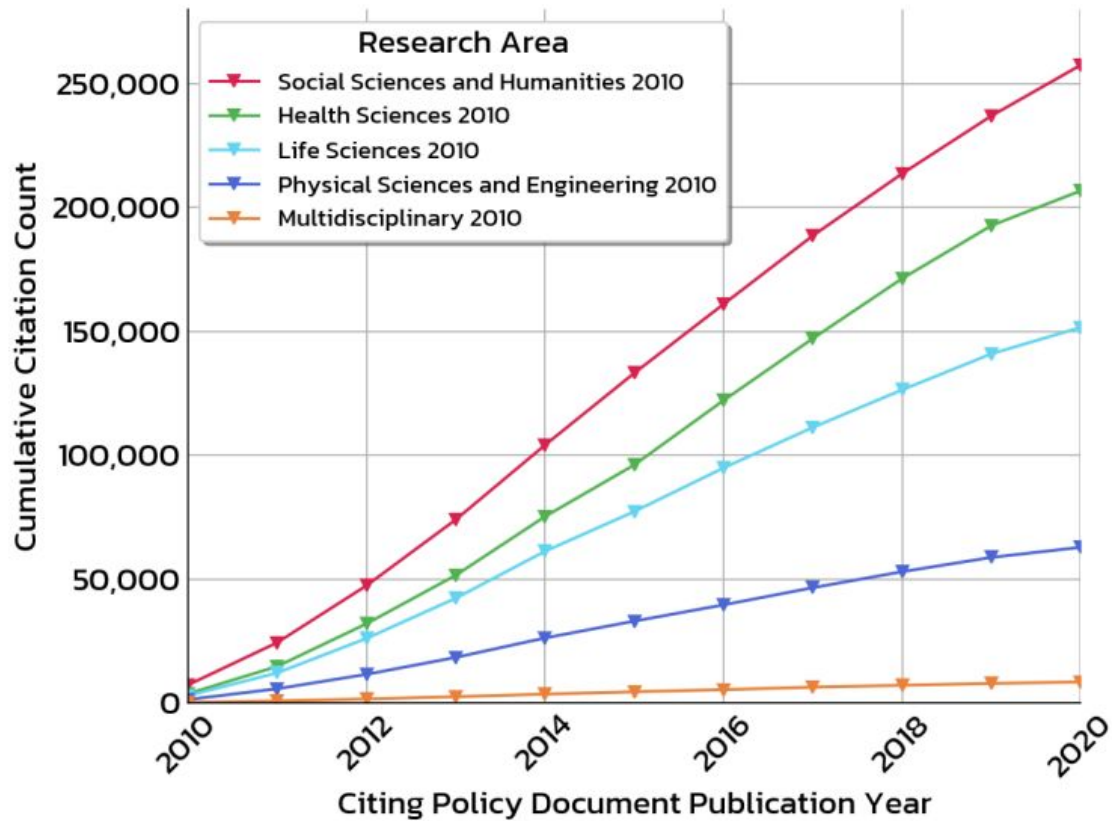
cites



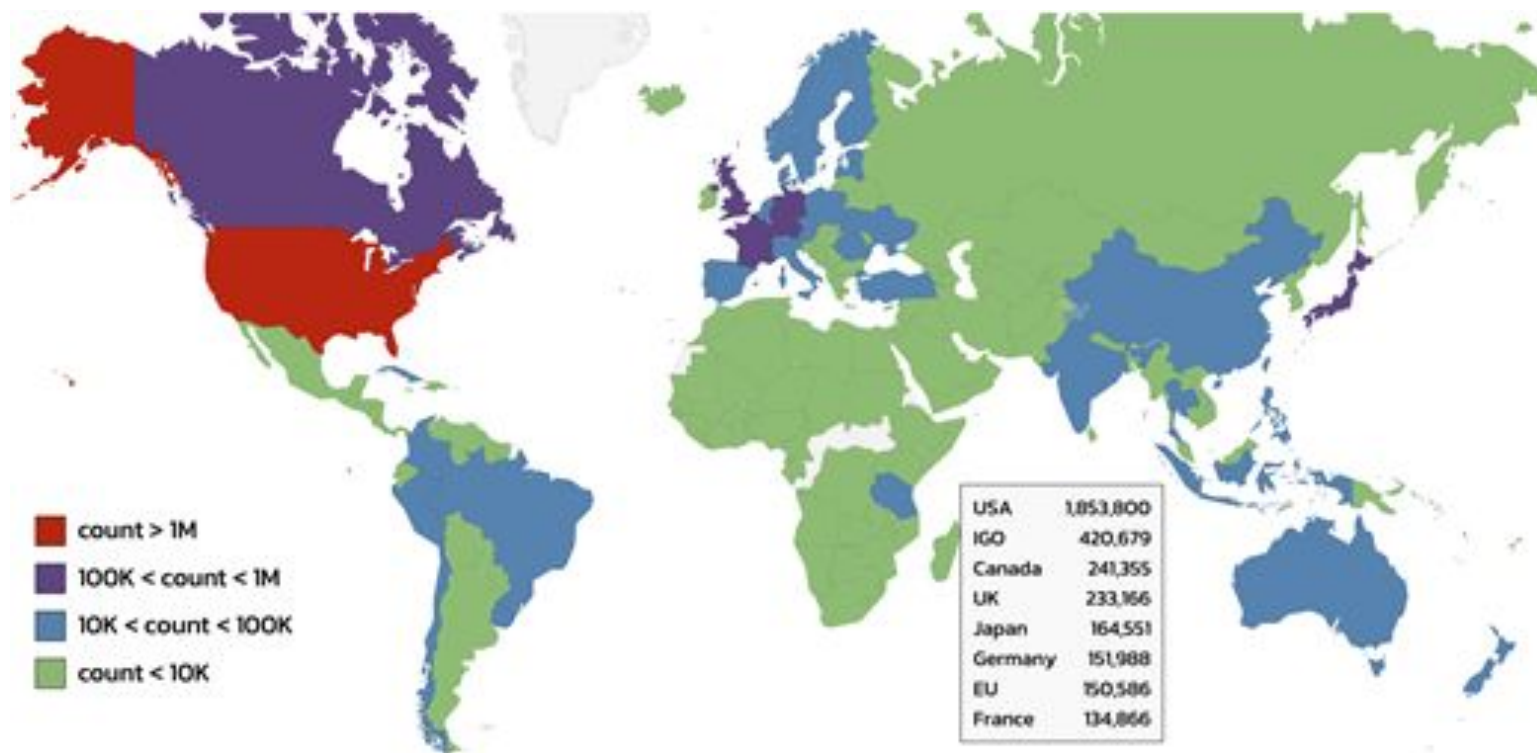
cites



The social sciences are cited... a lot



There's an availability bias in policy online



Some countries have fewer policy related documents online than others (e.g. Togo, Ghana, South Sudan...)

Others don't put up policy or use references in the same way (e.g. China)

Governments tend to cite local

In policy from ...



The three most cited universities are ...

University of Tokyo Kyoto University Harvard	Harvard Stanford University of Washington	UBC University of Toronto University of Washington	University of Sao Paulo University of Brasilia University of Minas Gerais
----------------------------------------------------	-------------------------------------------------	----------------------------------------------------------	---------------------------------------------------------------------------------

Source: Overton.io database, April 2023

Papers cited in policy are often from “top” journals

- Papers cited in policy often from "first quartile" journals by rank
- Pronounced in COVID-19 policy (Yin et al.) and climate change (Bornmann et al.). Yin found policy cited set had 67.72 average citations versus 1.67 in non-policy cited set
- Is this a "quality" thing, perceived or otherwise?
- Or a factor of journal outreach: the Lancet and SAGE both work extensively with policymakers

Bornmann et al., PLoS One, 2022 How relevant is climate change research for climate change policy? An empirical analysis based on Overton data

Yin et al, Science, 2021 Coevolution of policy and science during the pandemic

But predatory journals (bad) and preprints (good) are cited too

Policy document



EU Single-Use Plastics Directive – analysis of provisions and potential measures regarding extended producer responsibility

🇩🇪 Umwelt Bundesamt on April 20th 2022 Publication

MANUFACTURING WORLD TRADE ORGANIZATION WASTE ELECTRICAL AND ELECTRONIC EQUIPMENT DIRECTIVE

Tag this Download PDF

Extended Producer Responsibility and Product Stewardship for Tobacco Product Waste
Curtis C Collins S et al. (2014) International Journal of Waste Resources

“ Clean-up phase measures Globally, tobacco product filters are the most common waste items found on beaches during clean-ups (Curtis et al. 2014, Novotny and Slaughter 2014). ”

On page 186

Curtis, C., Collins, S., Cunningham, S., Stigler, P., Novotny, T. E. 2014: Extended Producer Responsibility and Product Stewardship for Tobacco Product Waste. International Journal of Waste Resources, 0403. <https://doi.org/10.4172/2252-5211.1000157>

On page 158

As we're wrapping up

- We're collecting new data, but....
- Everything's connected – we rely on other bits of infrastructure!
- CrossRef & OpenAlex and Wikipedia / Wikidata
- And in the past:
 - GRiD
 - MS Academic
- Support open infrastructure!



Some practical next steps

Have an interesting research question?

- Access is free for academic research purposes
- See other research at <http://bit.ly/overtonpapers>

Or want to see what data there is for your organization?

- Trials are free, interested in your feedback

Ideas on how to develop access, coverage, best practice together?

- Come say hi! Or email euan@overton.io

Enjoy the rest of the conference!

Lots of subjective choices to be made

- What's a policy document?
- What counts as government?
- Is it OK to collect paywalled or hidden content?
- What makes something citable?
- What indicators or metrics make sense?

