



Het
denken
onderwerpt
zich
niet.

EXPLORING SCIENTIFIC PUBLICATIONS
IN POLICY DOCUMENTS USING
THE OVERTON ALTMETRICS DATABASE

THE CASE OF UNIVERSITIES IN FLANDERS, BELGIUM

Hans JONKER

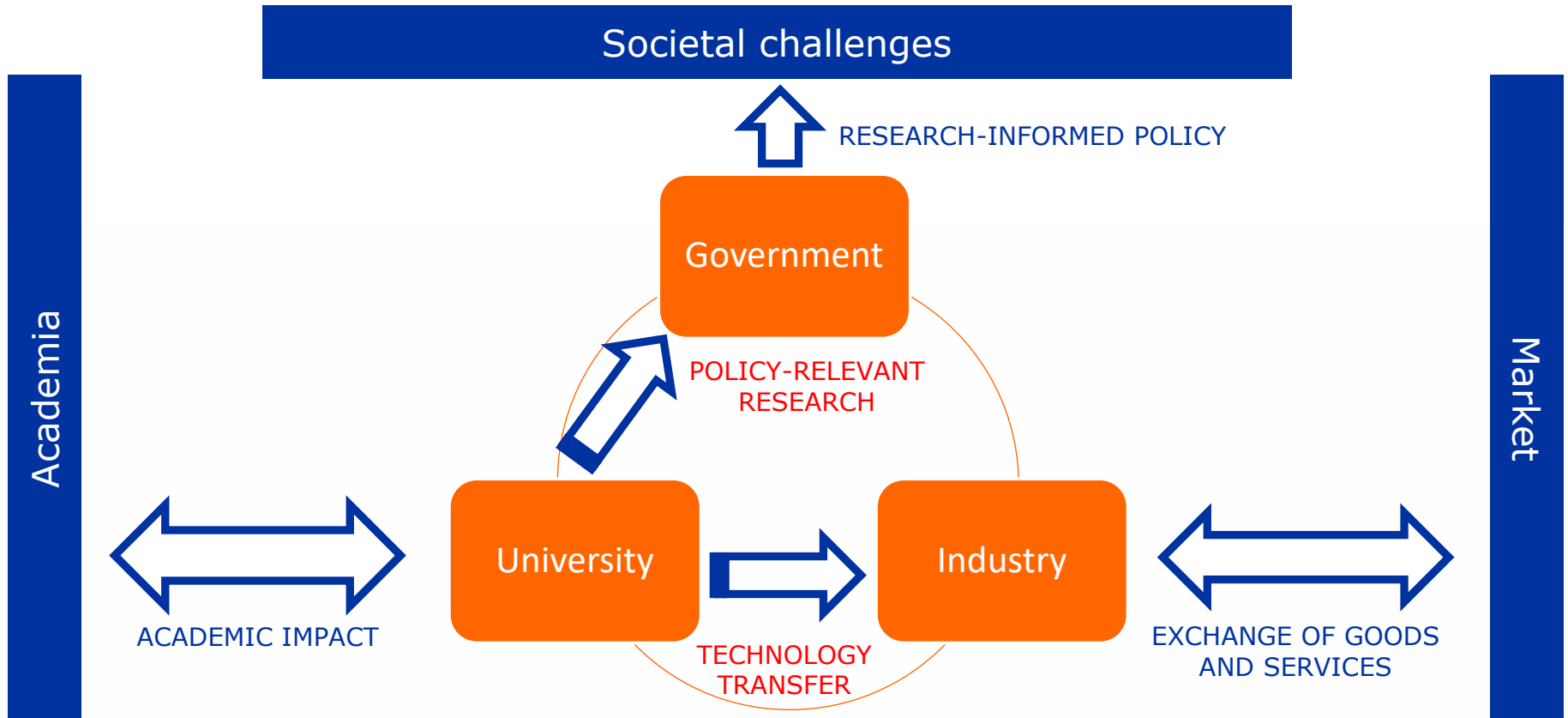


VRIJE
UNIVERSITEIT
BRUSSEL

ecoom

CONTEXT

WHY CITED RESEARCH IN POLICY DOCUMENTS MATTERS



CONTEXT

WHY CITED RESEARCH IN POLICY DOCUMENTS MATTERS

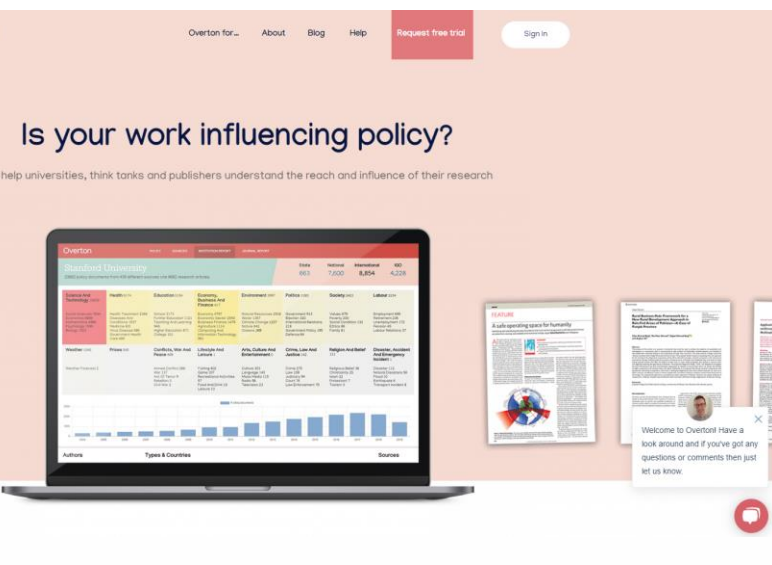
Scientific and academic impact → **societal impact**

- **Expectation** from institutions
- **Broadening** the modalities for researchers to excel

Rise of alternative indicators, techniques and technologies: altmetrics

- Scientific publications in non-scholarly sources → societal recognition

Scientific publications cited in policy documents → policy-relevant research → attribution of societal impact



Overton is the world's largest searchable index of policy documents, guidelines, think tank publications and working papers.

It collects data from 182 countries and over a thousand sources worldwide with more being added all the time.

We parse each document, finding references, people and key concepts, and then link them to the relevant news stories, academic research, think tank output and other policy.

Our products allow you to search these documents and see where your ideas, papers, reports and staff are being cited or mentioned.

We can help you to discover where your work may be influencing or changing practice in the real world.

Source: <https://www.overton.io/>

CONTEXT

WHY CITED RESEARCH IN POLICY DOCUMENTS MATTERS

Overton characteristics: source type, publication year, region, language, countries (Szomszor & Adie, 2022) and cross-disciplinary research (Pineiro et al., 2021)

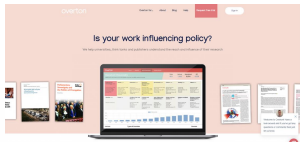
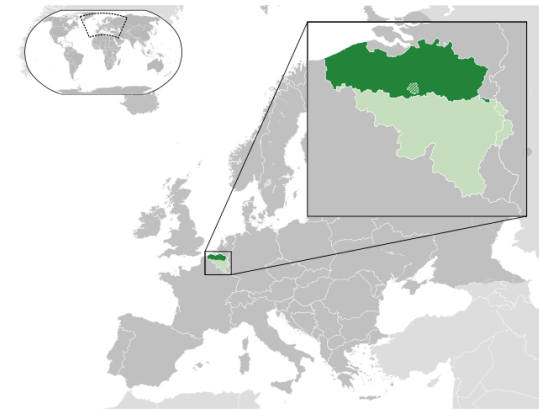
Tendency to cite more from social sciences and humanities, biomedical and health sciences, and life and earth sciences (Fang et al., 2020, Szomszor & Adie, 2022)

Research has not yet looked at **individual researchers** embedded in universities

- Individual characteristics of researchers?
- Gender? Seniority?
- What does this mean for Science and Technology Indicators?

METHODS

EXPLORATIVE ANALYSES



Download from Overton.io

- KU Leuven: 10000 most cited names
- UAntwerpen: 4212
- UGent: 8261
- UHasselt: 629
- VUB: 2721
- Total: 25823



Aggregation and cleaning

- 25823 entries
- 8764 duplicates deleted and merged
- KU Leuven: deleted UCL affiliations
- VUB: deleted ULB affiliations
- Incomplete names, unable to identify: 1601



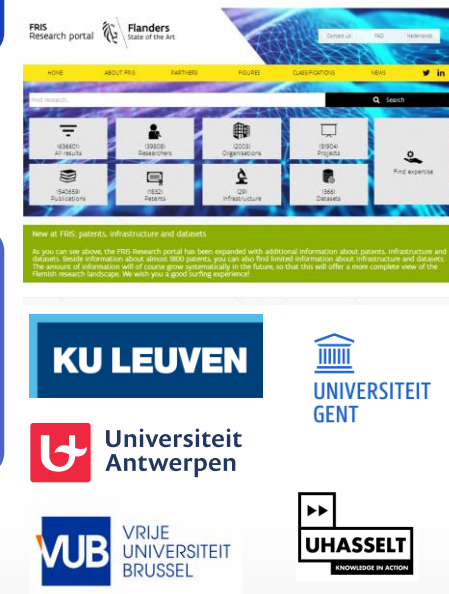
Matching with FRIS database

- FRIS currently active: 41420
- Matches found: 5399 (7,7%)
- Current affiliation added

Enriched data

- Sector and discipline
- Gender
- Seniority

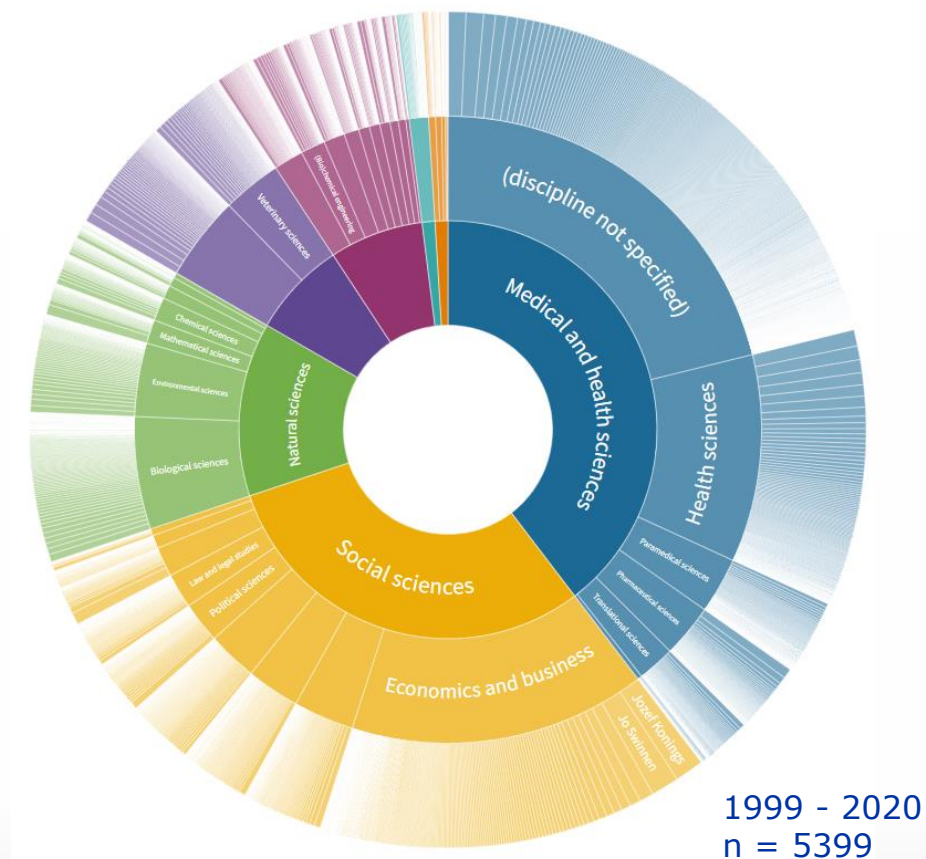
n = 5399



RESULTS

UNIVERSITY AS KNOWLEDGE SUPPLIER FOR DECISION-MAKERS

	FRIS n = 41420	Cited in Overton n = 5399
(sector not specified)	3,1%	1,98%
Agricultural, veterinary and food sciences	4,0%	4,27%
Engineering and technology	19,5%	11,80%
Humanities and the arts	10,5%	3,34%
Medical and health sciences	25,1%	35,81%
Natural sciences	15,2%	13,34%
Social sciences	22,7%	29,47%
Eindtotaal	100,0%	100,0%



RESULTS

UNIVERSITY AS KNOWLEDGE SUPPLIER FOR DECISION-MAKERS

Gender

- Almost double of men's publications (63,6%) got cited compared to women's publications (36,4%) got cited in policy-related documents
- BUT: spurious relationship
 - More men in higher status academia positions
 - Less women in STEM

Seniority: professors most prominent

Universities: citations closely follow size of university

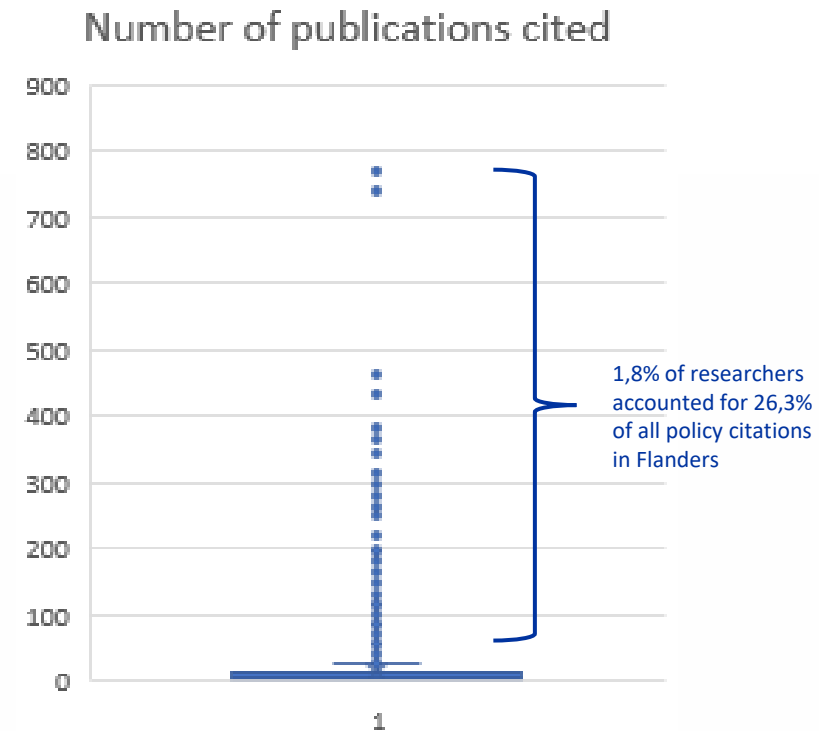
Sample descriptions (n = 5399)	n	%	M	SD
Gender				
Female	1965	36,4	8,7	18,6
Male	3434	63,6	15,0	37,5
Seniority				
Predoc	729	13,5	4,1	6,6
Postdoc	1087	20,1	6,6	10,4
Professor	2992	55,4	17,5	39,3
Emeritus	239	4,4	22,9	48,0
Other	352	6,5	1,4	0,6
University				
KU Leuven	1951	36,1	14,6	37,4
UAntwerpen	792	14,7	13,8	35,0
UGent	1666	30,9	12,7	30,5
UHasselt	258	4,8	8,2	21,6
VUB	732	13,6	7,8	14,6

RESULTS

UNIVERSITY AS KNOWLEDGE SUPPLIER FOR DECISION-MAKERS

Almost three quarters (74,9%) of researchers' publications were cited ten times or less in policy-related documents; 1,8% were cited 100 times or more

- 85,4% of them were male
- 100% of them were professor or emeritus

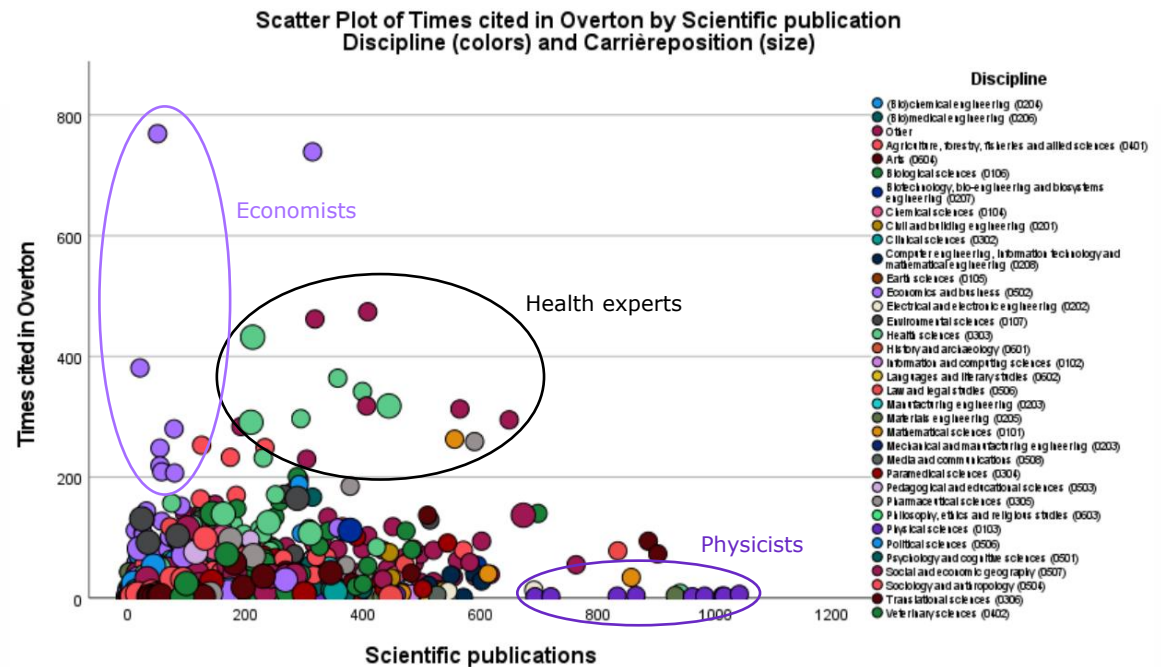


RESULTS

UNIVERSITY AS KNOWLEDGE SUPPLIER FOR DECISION-MAKERS

Relationship between policy citations and scientific publication seems evident, but not as strong as expected ($r^2 = .09$, $F(1, 5392) = 572.67$, $p = < .001$)

Matthew effect?



DISCUSSION AND CONCLUSION

WHAT DOES THIS MEAN FOR SCIENCE AND TECHNOLOGY INDICATORS?

Advantages

- Making policy relevance concrete and understandable
- Allows for time-analysis and progress towards performance or outcomes

Disadvantages

- “Policy-related documents” can be too broad
- Matching names labor intensive

Useful on an institutional level: shows which knowledge spreads to policy

Not useful as “alternative excellence indicator”

Future research avenues: social capital and content analysis

THANK YOU

HANS.JONKER@VUB.BE



VRIJE
UNIVERSITEIT
BRUSSEL

ecoom