

Are citations driven by journal impact?

CWTS, Leiden University

6 September 2017

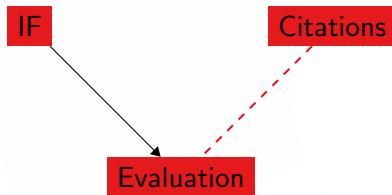
V.A. Traag & R. Costas

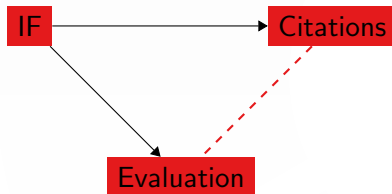


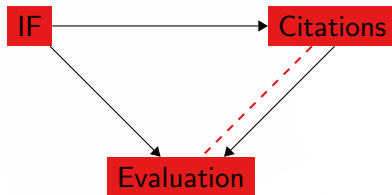
IF

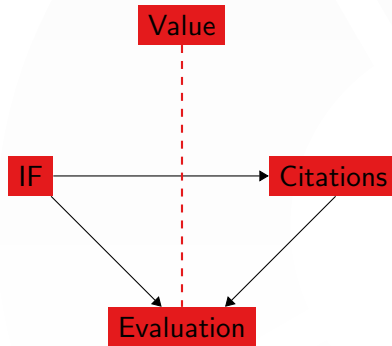
Citations

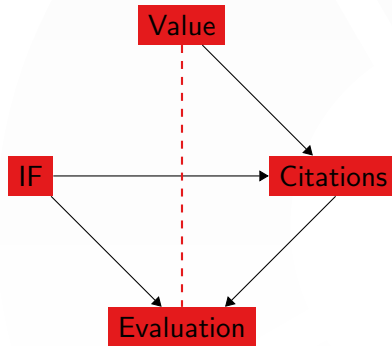
Evaluation

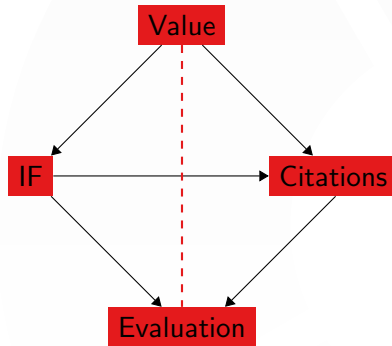


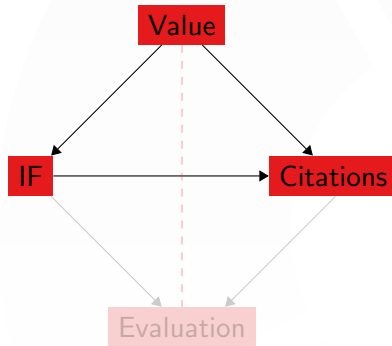












- ① Is high value work published in high impact journals?
- ② Are citations driven by journal impact?

arXiv

- Pre-publication citations not influenced by venue of publication.
- Count number of citations to arXiv version of paper.
- Take this as proxy for 'value'.

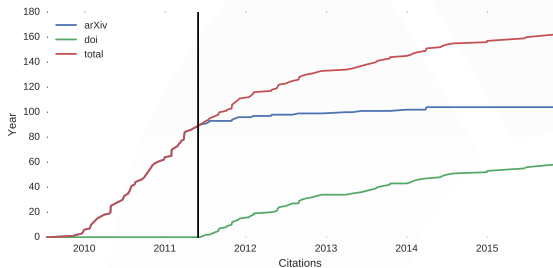
arXiv

- Identify arXiv identifier in raw reference string.
- Raw reference string available in Scopus (not WoS).
- Only consider arXiv citations for which no reference to published version.
 - ▶ e.g. F Radicchi Phys. Rev. E 88, 010801 (2013) arxiv:1306.1102
- In total about 3.5 million citations.

DOI

- Identify DOI identifier in raw reference string.
- In total about 37 million citations.

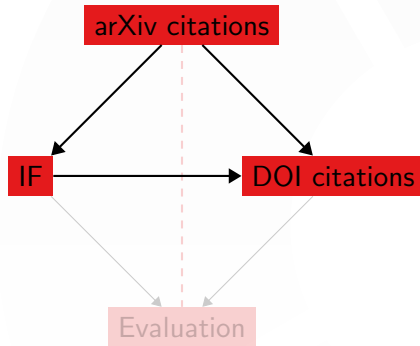
- Use OpenAIRE to match arXiv with DOI.
- Get publication date of arXiv from OpenAIRE. (Preprint date)
- Get issue date of DOI from CrossRef. (Publication date)
- Many publications have same preprint date as publication date.
- Only consider publications put on arXiv pre-publication.



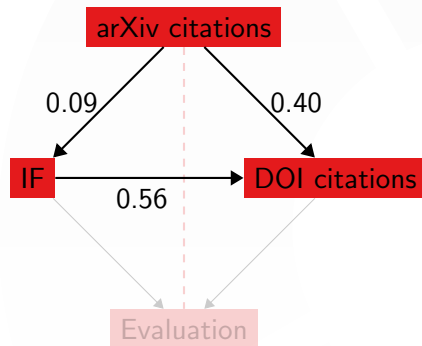
Citations influenced by

- Year of publication
- Duration of pre-publication time
- ...

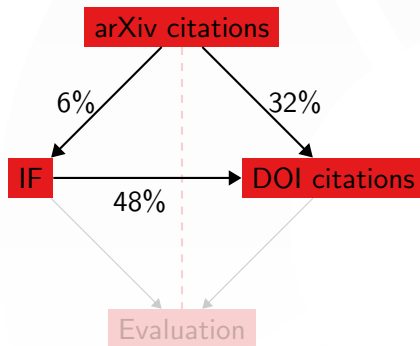
Difficult to normalise, control by fixed effects.



Regression parameters



Regression parameters (doubling)



Conclusions

- 'Better' research ends up in higher impact journals.
- 'Better' research cited more often.
- Publications in high impact journals are cited more often, independently of whether they are 'better'.

Caveats

- Field effects.
- Time dependence.
- Difficult to quantify effect size.

Thank you!

Questions?

✉ v.a.traag@cwts.leidenuniv.nl

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