

Appendix B: Luxembourg Research Institute Evaluation 2022: Mapping of Knowledge Structure: Department internal

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1 Introduction: LISER Department LC

1.1 Purpose & Structure

This document provides additional analysis and visualizations regarding the Luxembourg Research Institute Evaluation 2022 of LISER Department LC. Its purpose is:

- To map the broader research community and distinct research field the department contributes to.
- Identify core knowledge bases, research areas gtrends and topics.
- Highlight the positioning of the department within this dynamics.

It is structured as follows:

1. **Topics:** Further information regarding the departments research topics and their development

2. **Knowledge Bases:** Further information regarding the departments knowledge bases and their development
3. **Research Areas:** Further information regarding the departments research areas and their development
4. **KB-RA-TP interaction:** Joint visualization of knowledge bases, research areas, and topics.
5. **Specialization:** Departments research area and topic specialization compared to the broader research field.
6. **Collaboration:** Co-Authorship networks to other research institutions.
7. **TEchnical description:** Further guidance regarding concepts, methods, indicators, techniques, and workflows.

1.2 Further resources

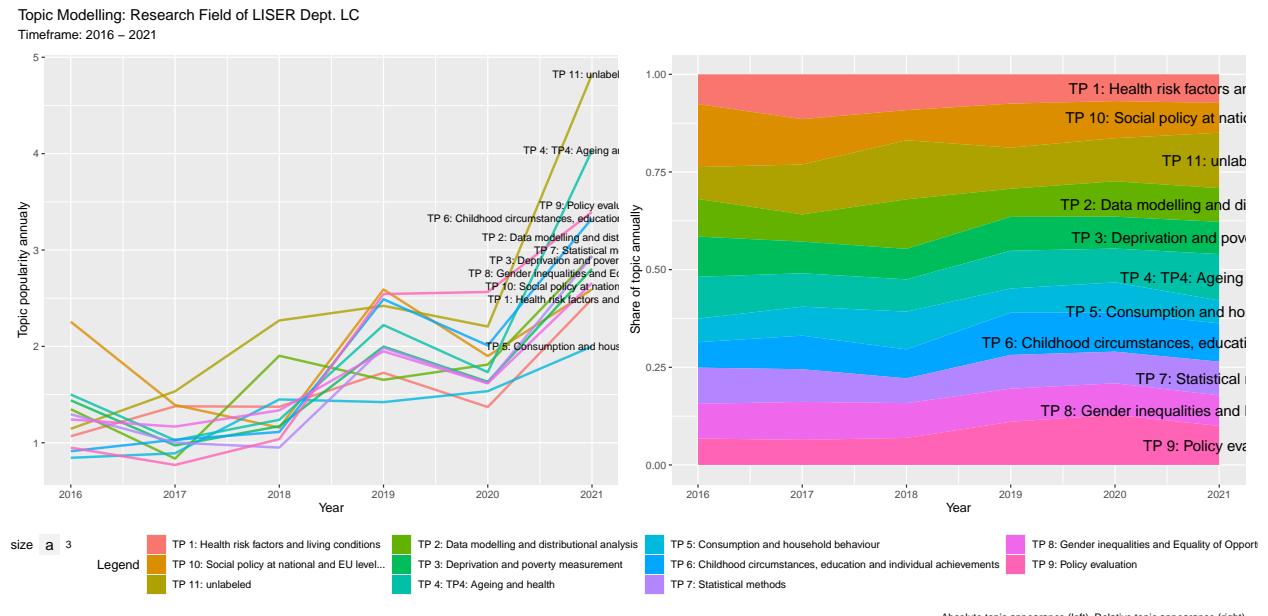
This document and further facilitating information can be found online under:

- This document: https://daniel-hain.github.io/biblio_lux_2022/output/field_mapping/field_mapping_liser_lc.html
- Mapping of broad research field: https://daniel-hain.github.io/field_mapping/biblio_lux_2022/output/field_mapping_dept_liser_lc.html
- Interactive Topic Modelling: https://daniel-hain.github.io/biblio_lux_2022/output/topic_modelling/LDAviz_liser_lc.rds/index.html#topic=1&lambda=0.60&term=
- The method for the research-field-mapping can be reviewed here: Rakas, M., & Hain, D. S. (2019). The state of innovation system research: What happens beneath the surface?. *Research Policy*, 48(9), 103787.

2 Topic modelling

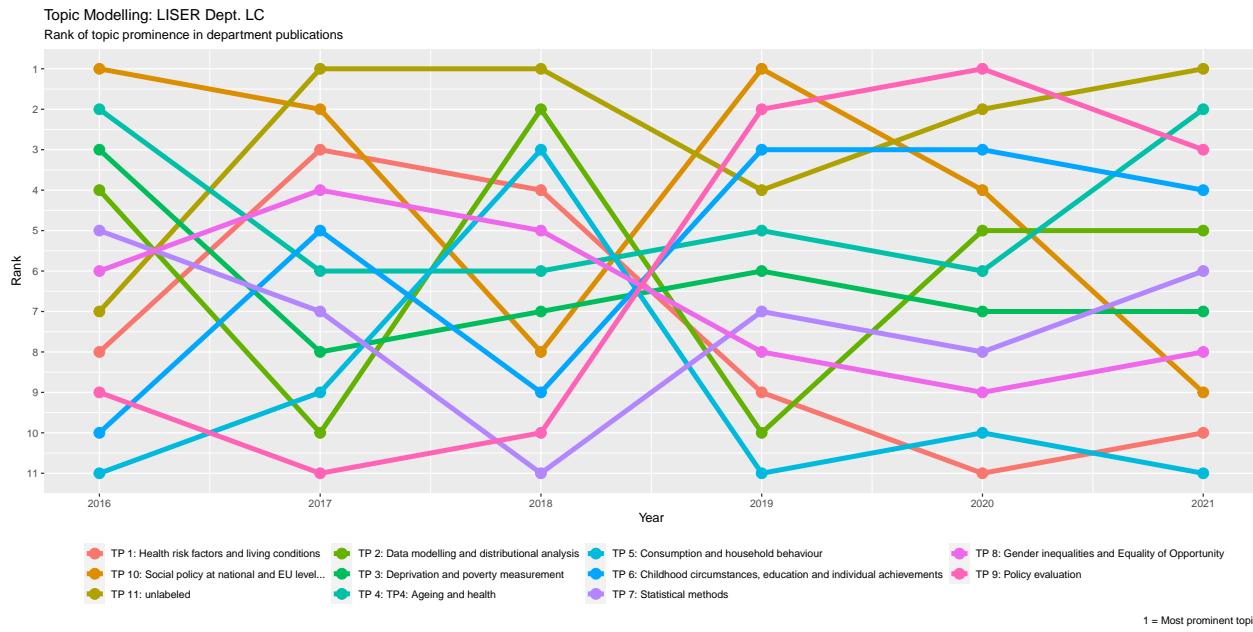
2.1 Topic Development

Shows changes in topical focus of the department over time.



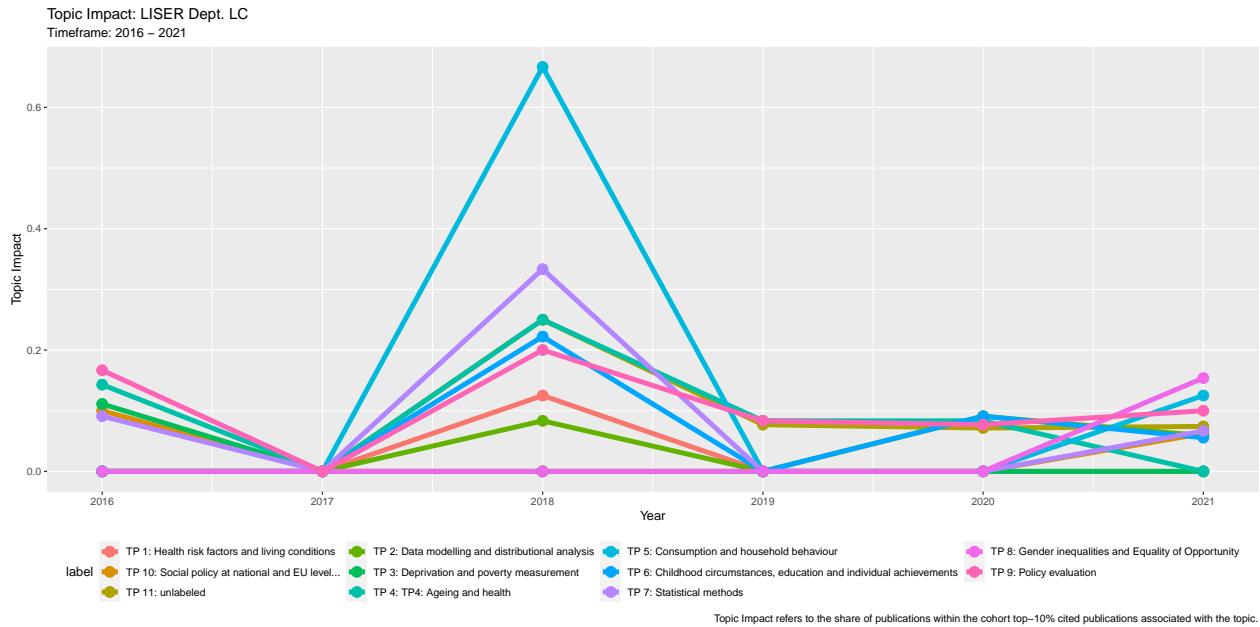
2.2 Topic Ranking

Shows changes in topical focus of the department over time (ranking).



Topic Impact

Shows which topics were particularly impactful (cohort citation percentile) over time.



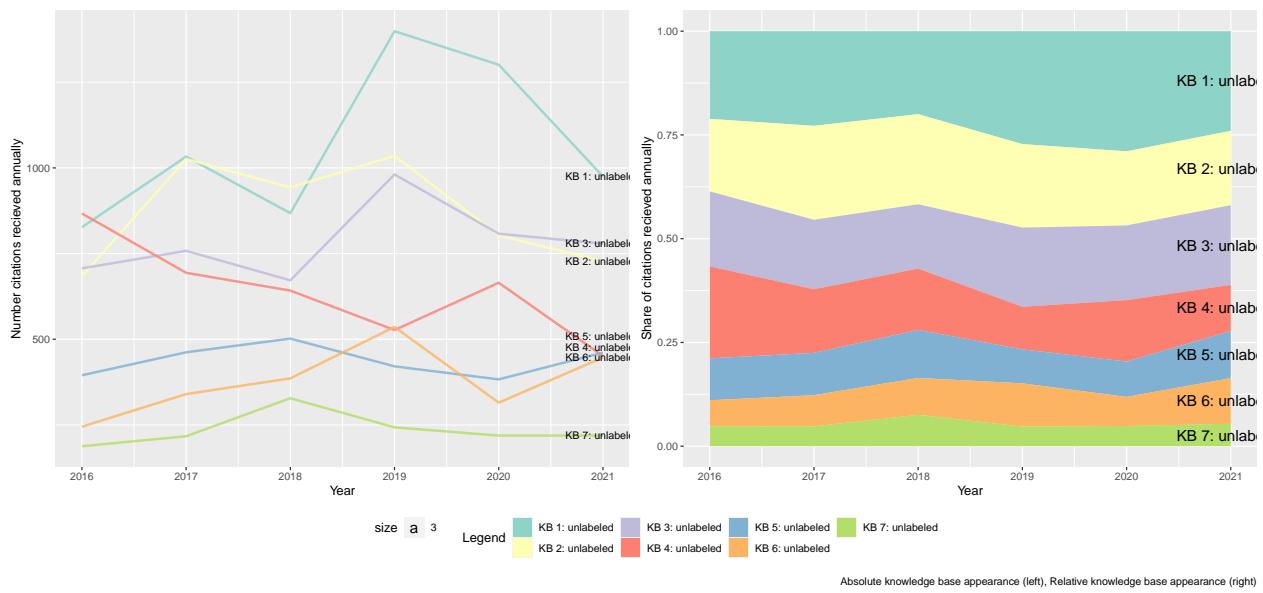
3 Knowledge Bases: Co-Citation network analysis

3.1 Knowledge Base development

Shows the development of citations to the knowledge bases by department publications.

Knowledge Bses: LISER Dept. LC

Timeframe: 2016 – 2021



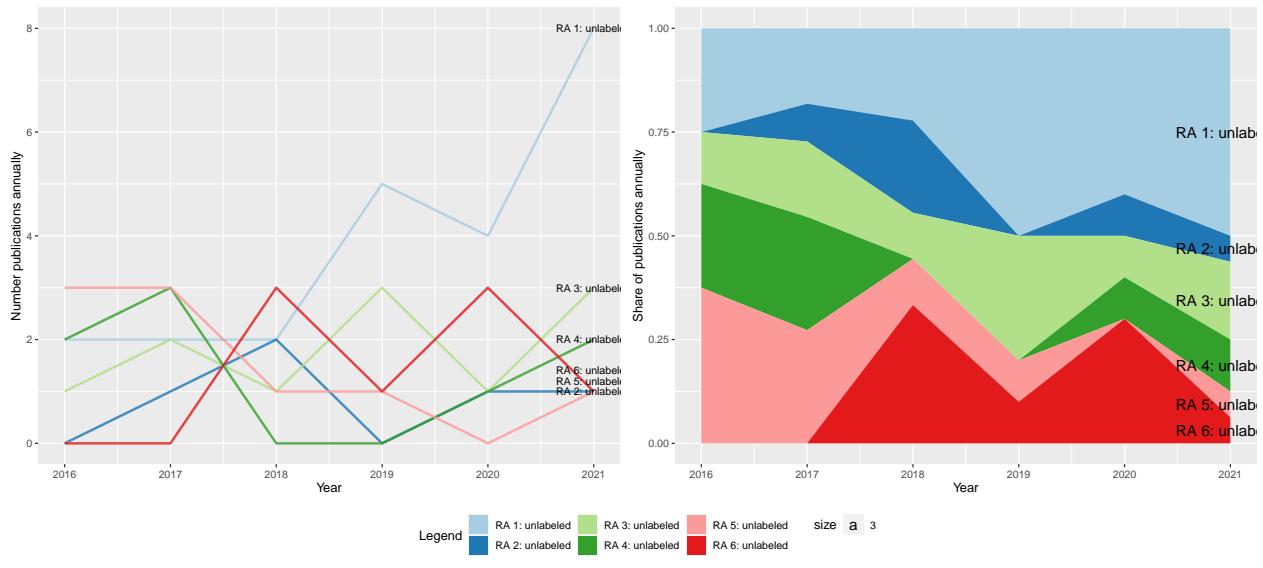
4 Research Areas: Bibliographic coupling analysis

4.1 Research Area Development

Shows development of department publications in the research areas over time.

Research Areas: LISER Dept. LC

Timeframe: 2016 – 2021

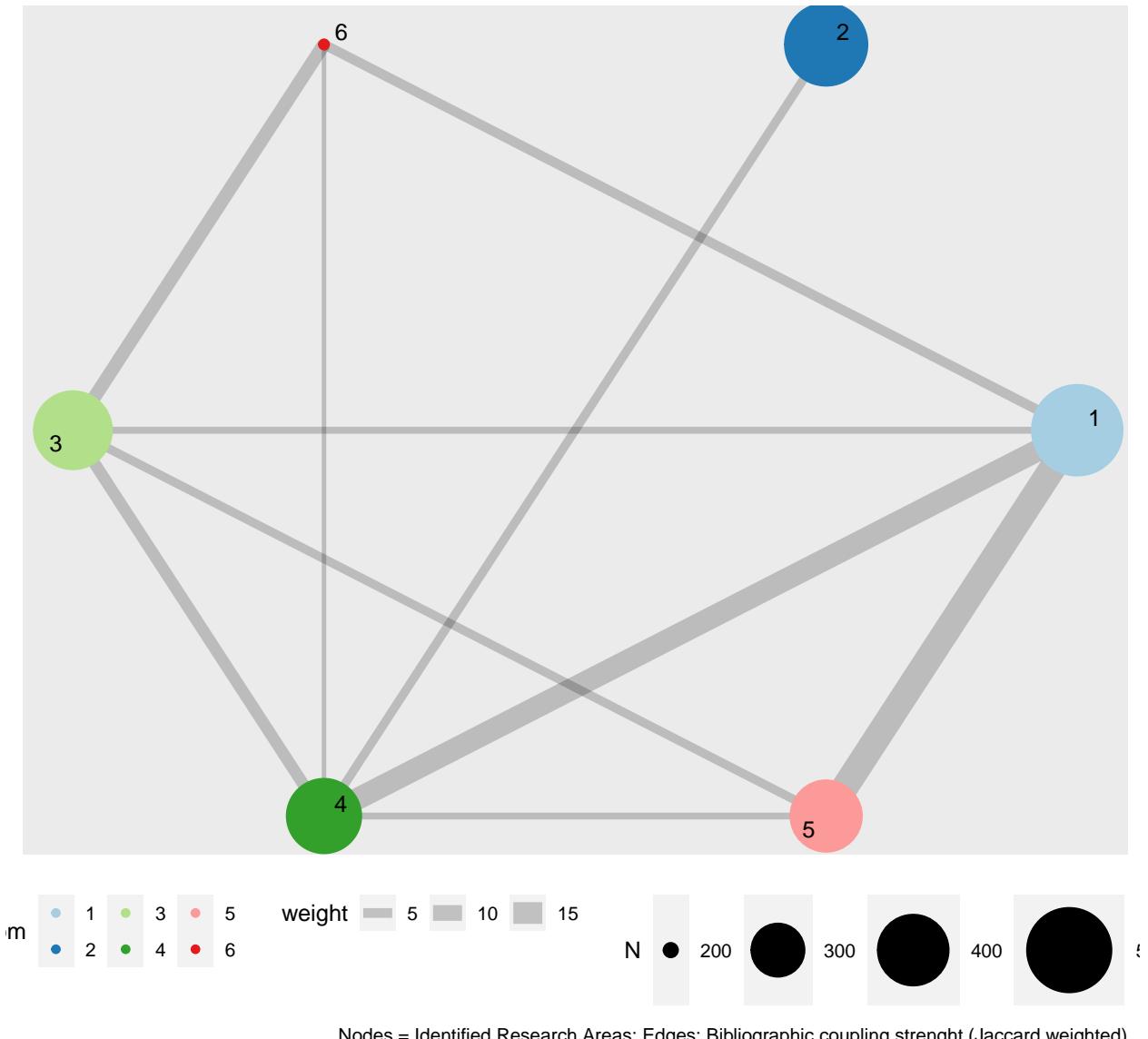


4.2 Research Area Similarity

Shows the similarity of the departments research areas ()by bibliographic coupling strength).

Research Area Similarity: LISER Dept. LC

Timeframe: 2016 – 2021

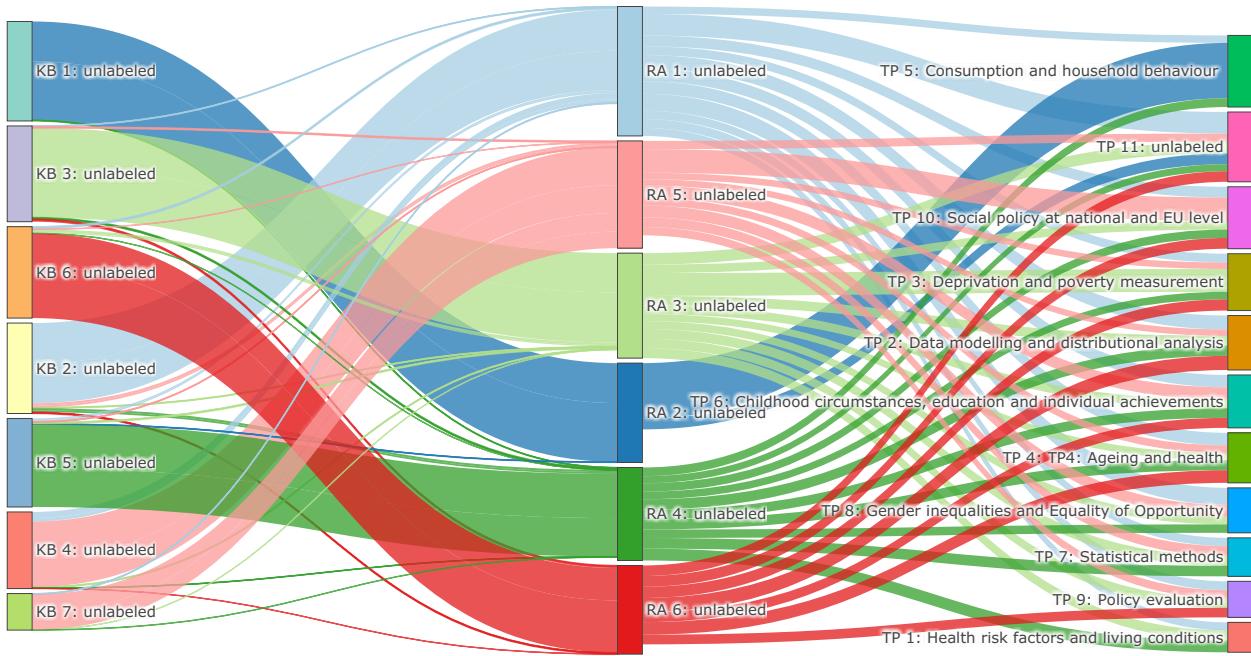


5 Knowledge Bases, Research Areas & Topics Interaction

5.1 Joint Overview over Knowledge Bases, Research Areas, and Topics

This plot shows the connection of publications in the research areas to knowledge bases (by citations) and topics (by gamma, document-topic weight)

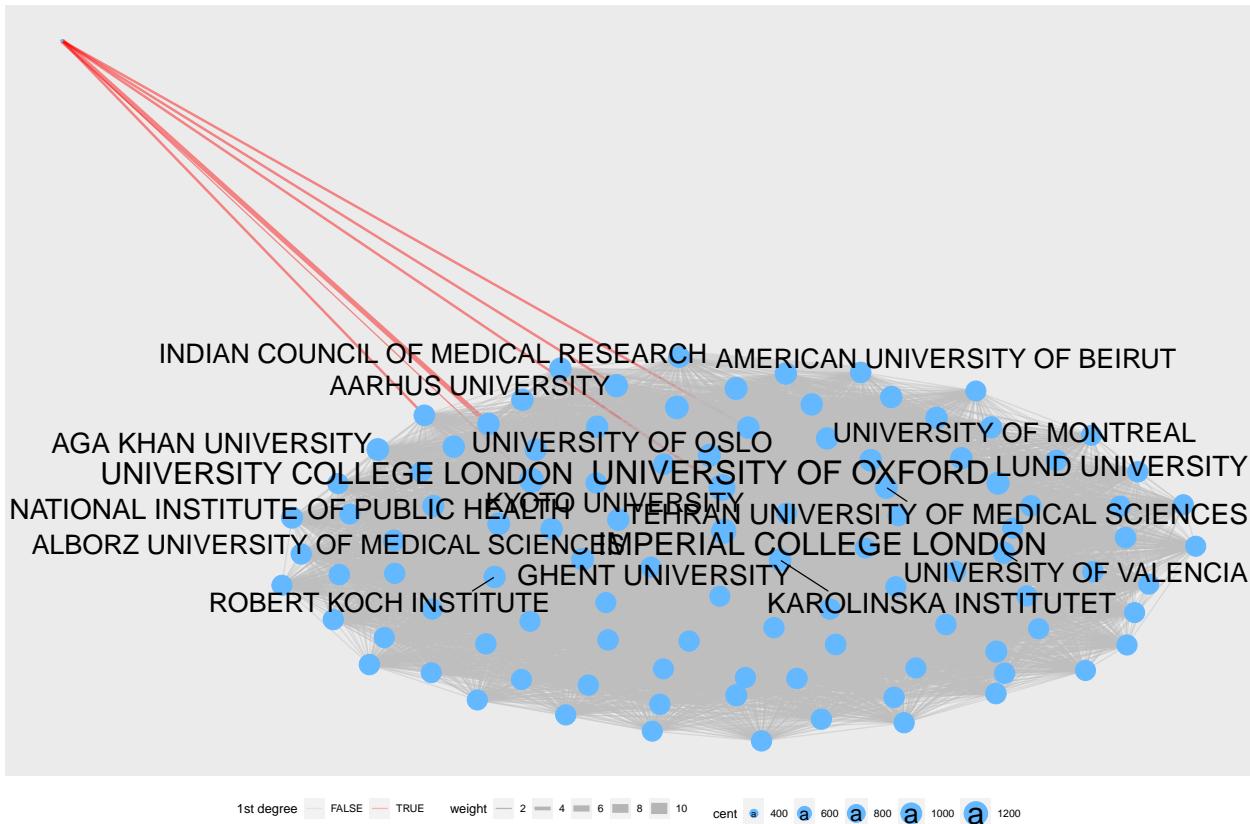
Knowledge Bases, Research Areas & Topics: LISER Dept. LC



6 Collaboration

6.1 Collaboration network 2nd Degree

Shows overl collaboration (co-authorship) structure of the department.



7 Missing Publications

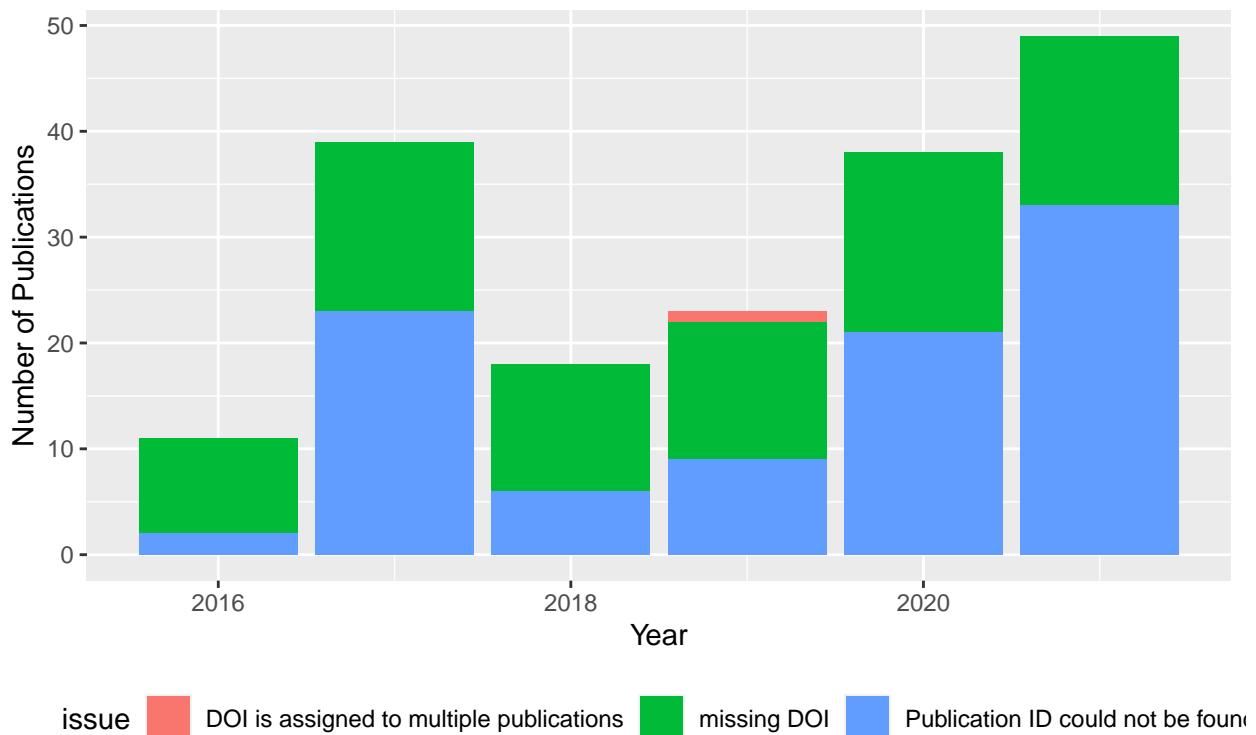
The bibliometric part of the 2022 research evaluation is based on Scopus data, one of the most comprehensive providers of academic publications. However, some potentially relevant scholarly output is not covered. Reasons might be that the publication outlet is not Scopus indexed. While most academic journals are, the coverage of bookchapters and conference proceedings is less exhaustive. In rare cases, errors in the database can also lead to underreporting.

To get an exhaustive overview covering all scholarly output, find below a breakdown of publications not matched with Scopus, and therefore not included in the overall evaluation.

7.1 By Reason

LISER publications dept. LC not included in reporting

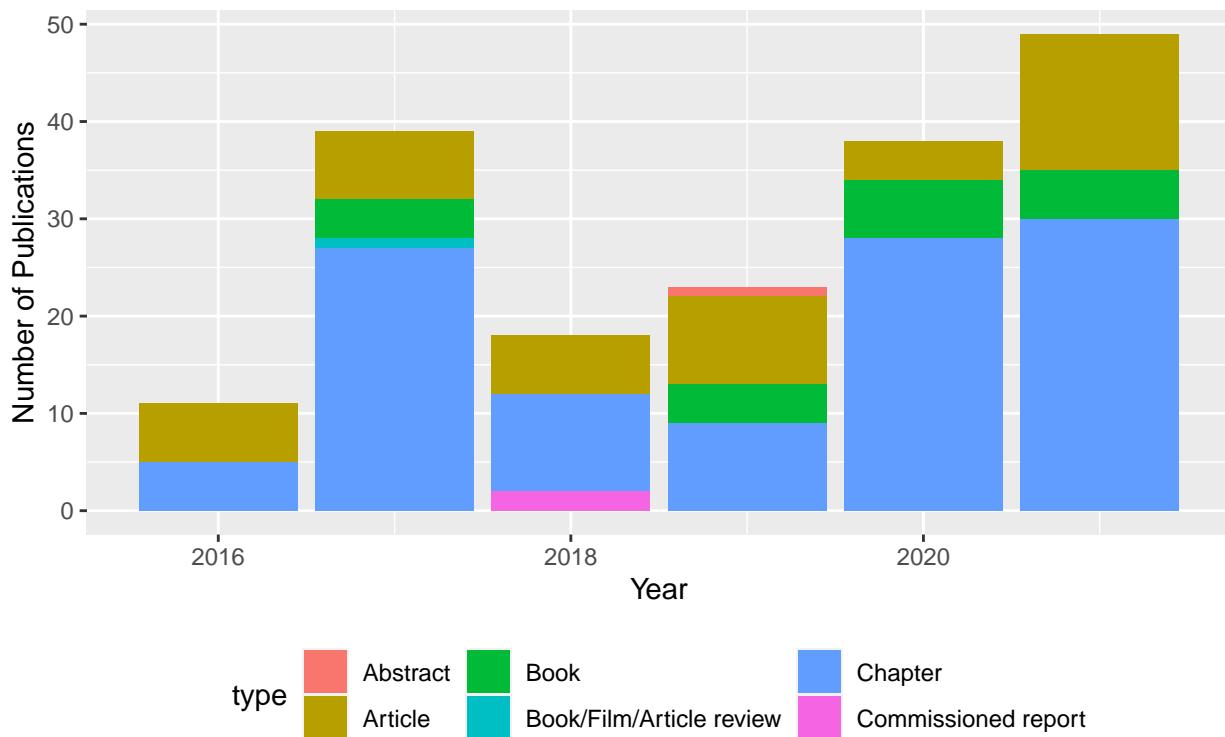
By reason



7.2 By Type

LISER publications dept. LC not included in reporting

By publication type



7.3 By outlet (Journal articles only)

Table 1: Outlet of unmatched journal publication

journal_title	n
Bulletin de la Societe des Sciences Medicales du Grand Duche de Luxembourg	4
Data in Brief	4
International Journal of Communication	4
Economia	3
Health	3
European Capitals of Culture The Art of Reimagining	2
Gates Open Research	2
Geographische Rundschau	2
Justice spatiale Spatial Justice	2
Revue Belge de S curit Sociale RBSS	2
Revue Europ enne de l Action Publique REAP	2
Socio Economic Review	2
Apuntes Revista de Ciencias Sociales	1
Cartes g omatique	1
CESifo Forum	1
Economic and Social Review	1
Economics Bulletin	1
Ifo DICE Report	1
International Journal of Central Banking	1
IZA Journal of Development and Migration	1
Journal of Educational Sciences	1
Nordic Tax Journal	1
R gion et D veloppement	1
Revue Economique	1
Revue Juridique Personnes et Famille	1
Warsaw Forum of Economic Sociology	1