Luxembourg Research Evaluation 2022: Field Mapping of Knowledge Structure

Daniel S. Hain

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Introduction: Mapping of broad research field around LISER Department UD

Here are preliminary results of the bibliometric mapping of the 2022 Luxembourg research evaluation. 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.

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.

Note: The analysis in this document depicts the *larger research field* around the department, thereby all analysis results are based on the publications of the department plus related

Seed Articles

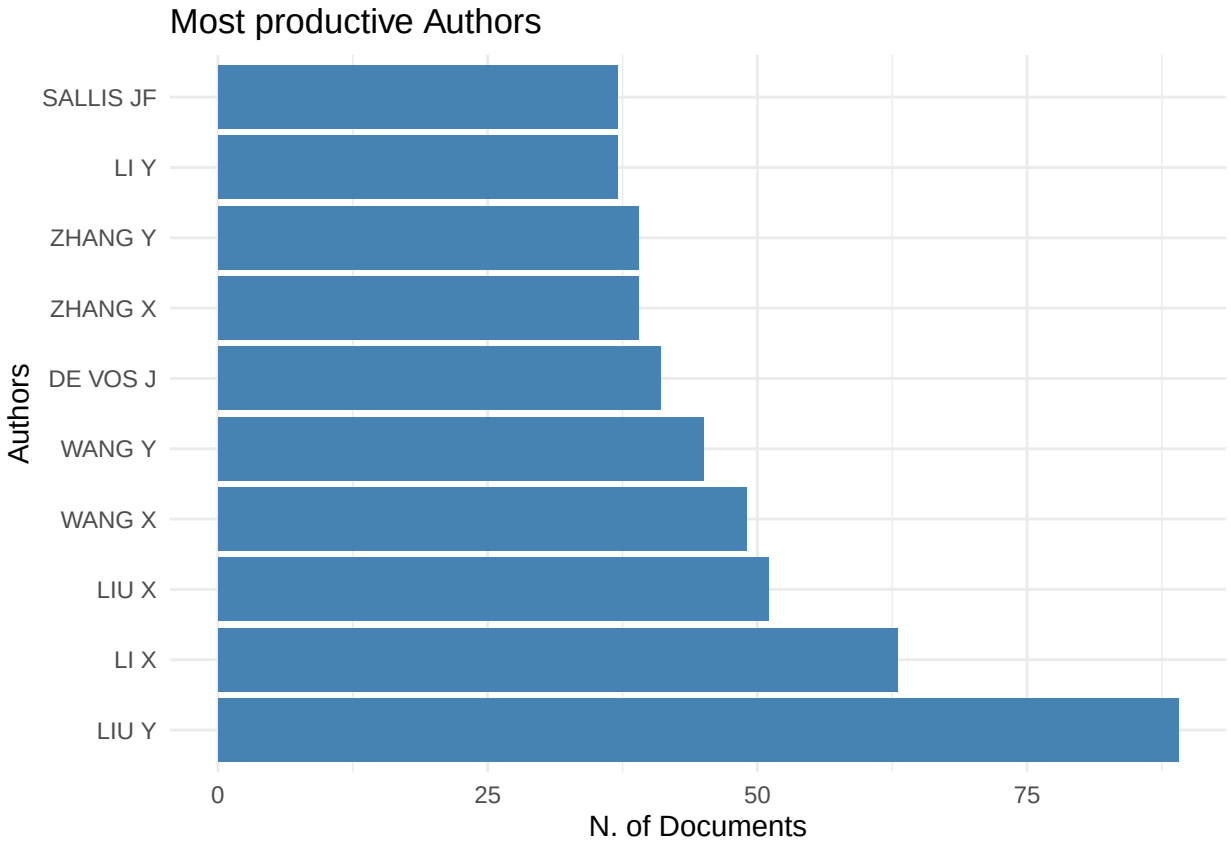
Note: The seed articles deemed representative for the active areas of research in the institution, and include authors affiliated with the institution. The departments research field is identified by selecting the 2000 most similar publications to the selected seed articles. See `Technical description`for additional explanations.

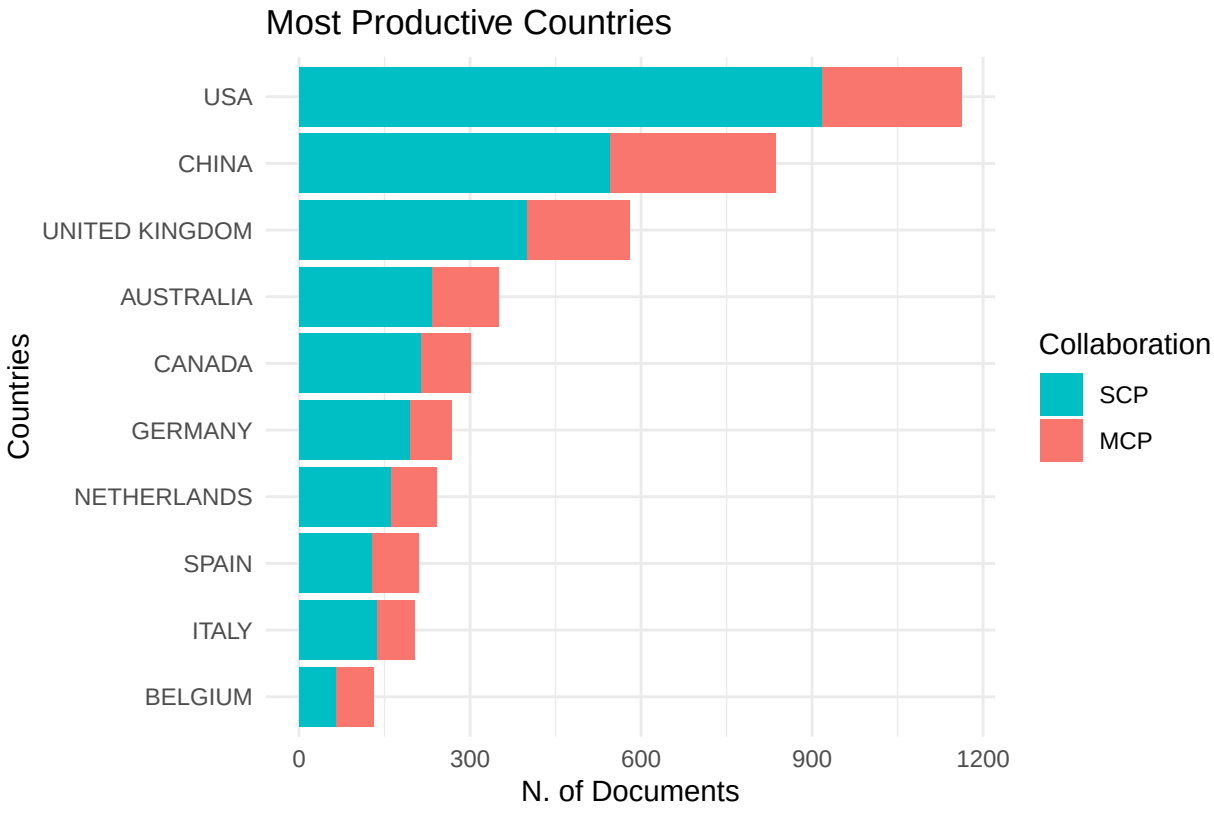
General Overview over the research field

Note: This section provides basic descriptives of th identified research fielld, including number of articles over time, countries, institutions, and authors. See `Technical description`for additional explanations.

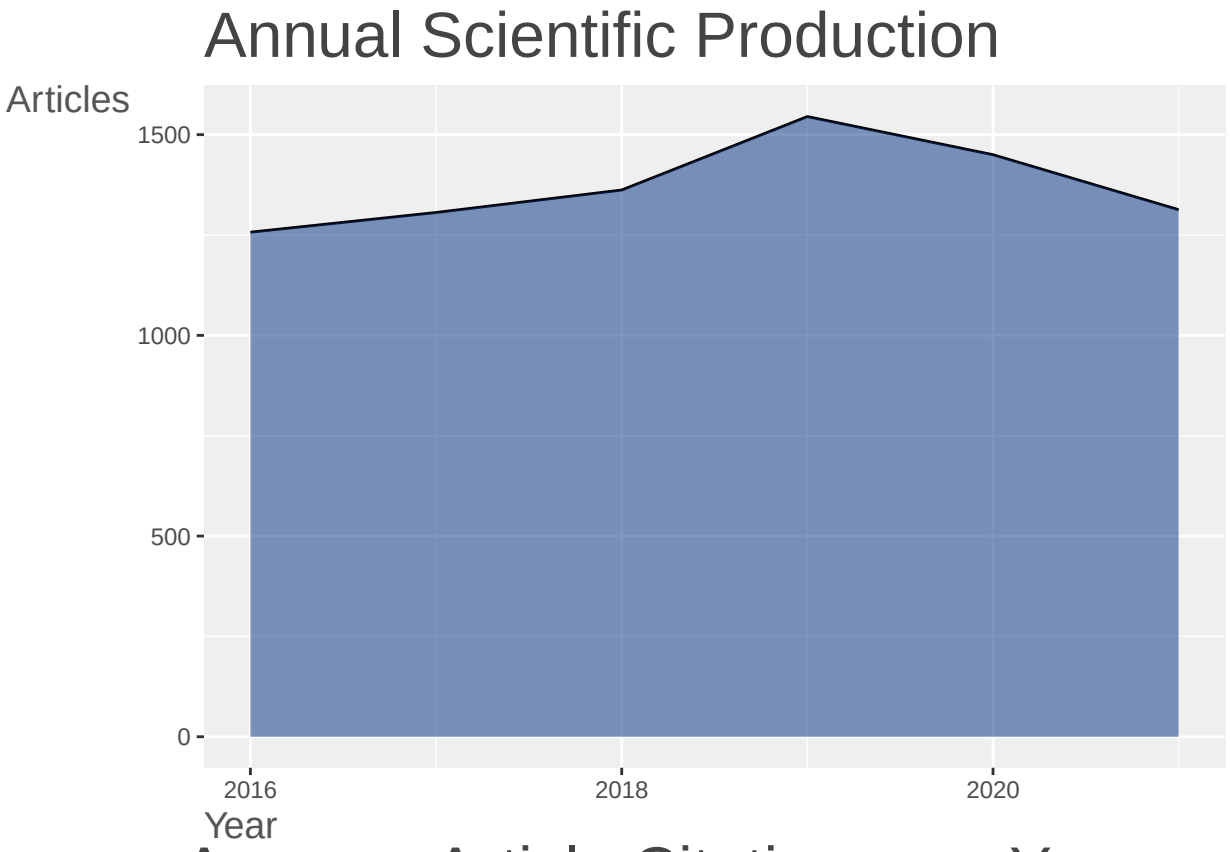
AU	PY	TI
WÓJCIK D;URBAN M;DÖRRY S	2022	LUXEMBOURG AND IRELAND IN GLOBAL FINANCIAL NETW
GLUMAC B;DES ROSIERS F	2020	PRACTICE BRIEFING – AUTOMATED VALUATION MODELS (A
BURZYNSKI M;DEUSTER C;DOCQU...	2020	GEOGRAPHY OF SKILLS AND GLOBAL INEQUALITY
DECOVILLE A;DURAND F	2019	EXPLORING CROSS-BORDER INTEGRATION IN EUROPE: HOV
DE VOS J;SCHWANEN T;VAN ACK...	2019	DO SATISFYING WALKING AND CYCLING TRIPS RESULT IN M
TAYYEBI A;TAYYEBI AH;PEKIN ...	2018	MODELING HISTORICAL LAND USE CHANGES AT A REGIONA
LAMOUR C	2017	THE NEO-WESTPHALIAN PUBLIC SPHERE OF LUXEMBOURG
CARLIN A;PERCHOUX C;PUGGINA...	2017	A LIFE COURSE EXAMINATION OF THE PHYSICAL ENVIRONI

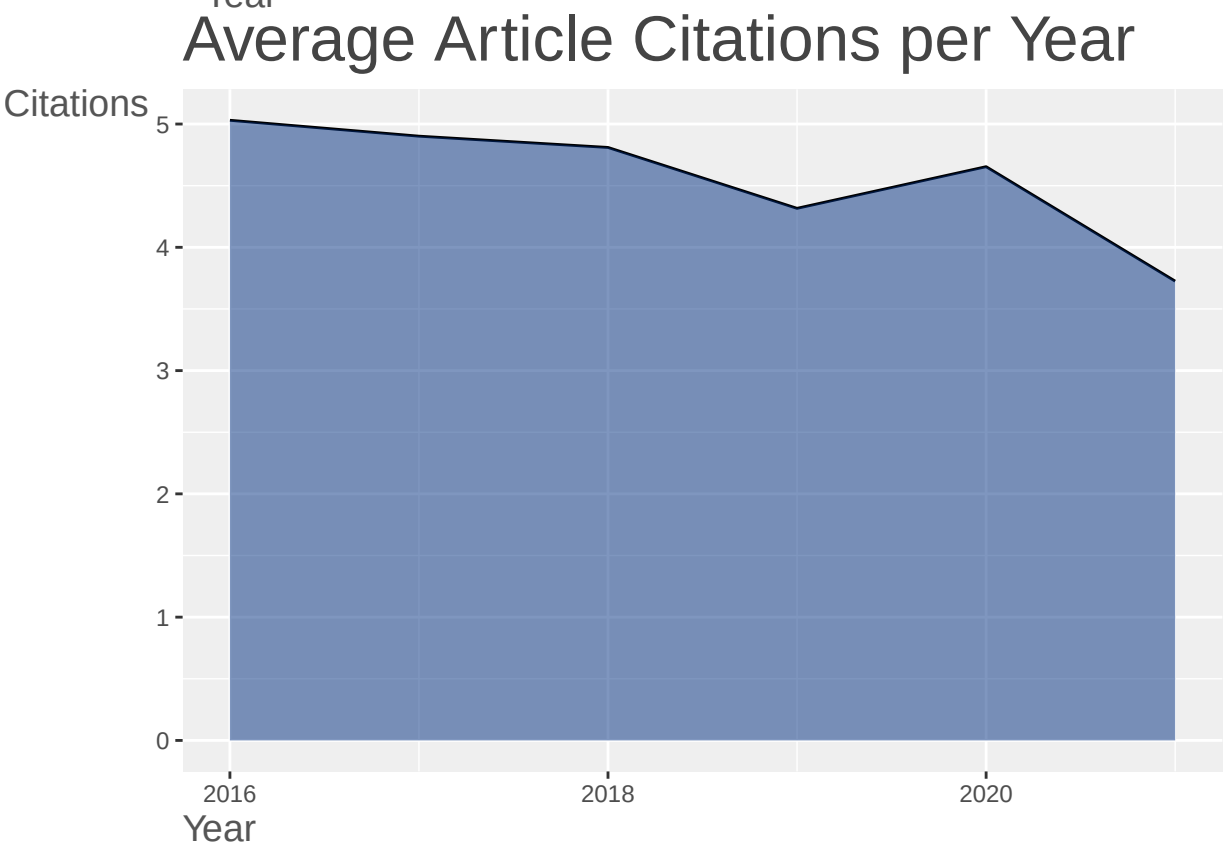
Main Indicators: Publications, Authors, Countries

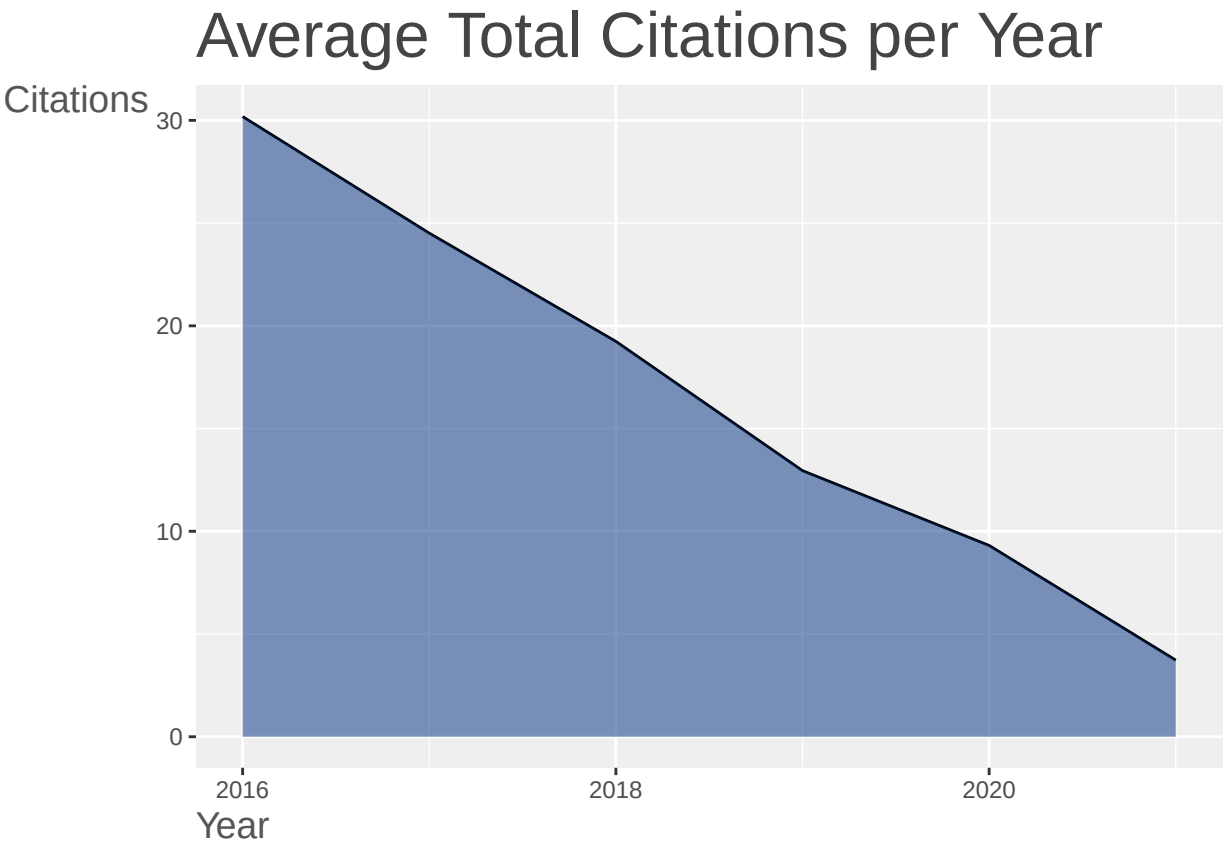


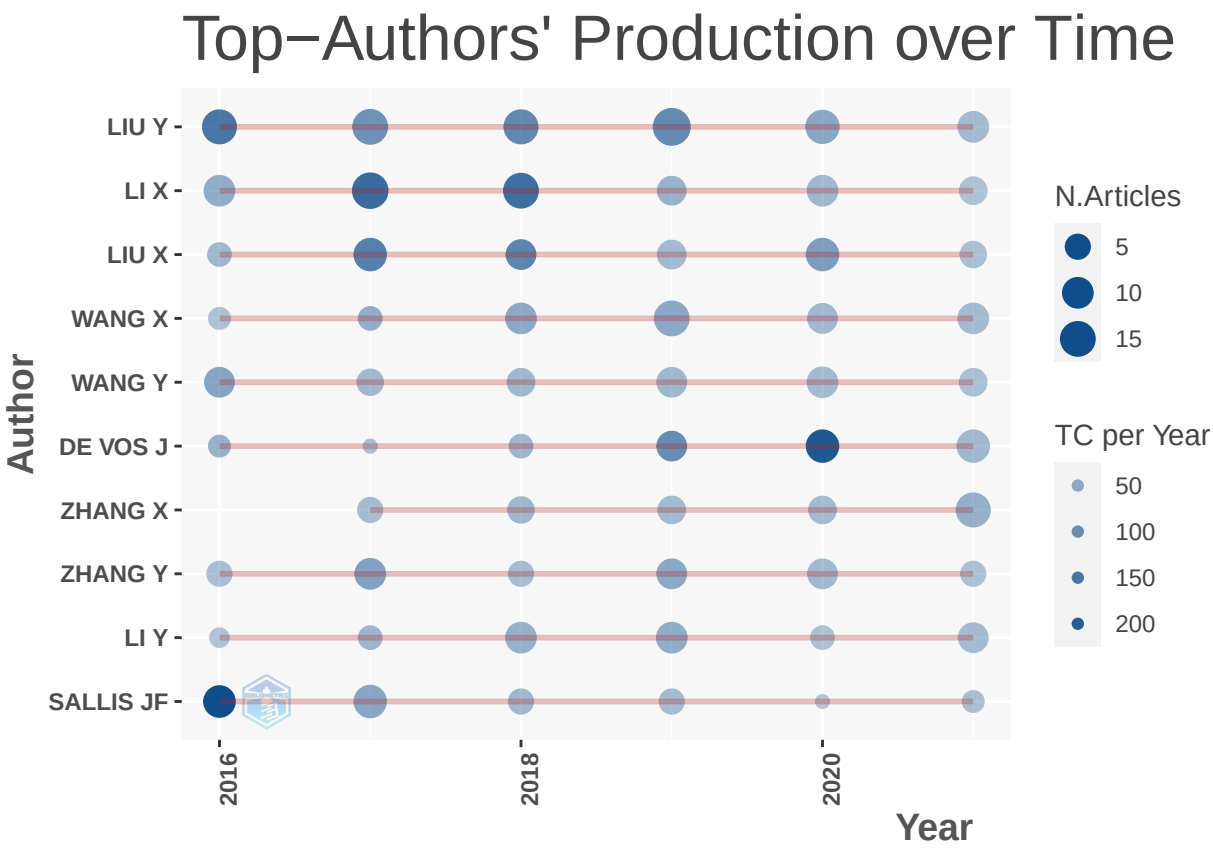


SCP: Single Country Publications, MCP: Multiple Country Publications

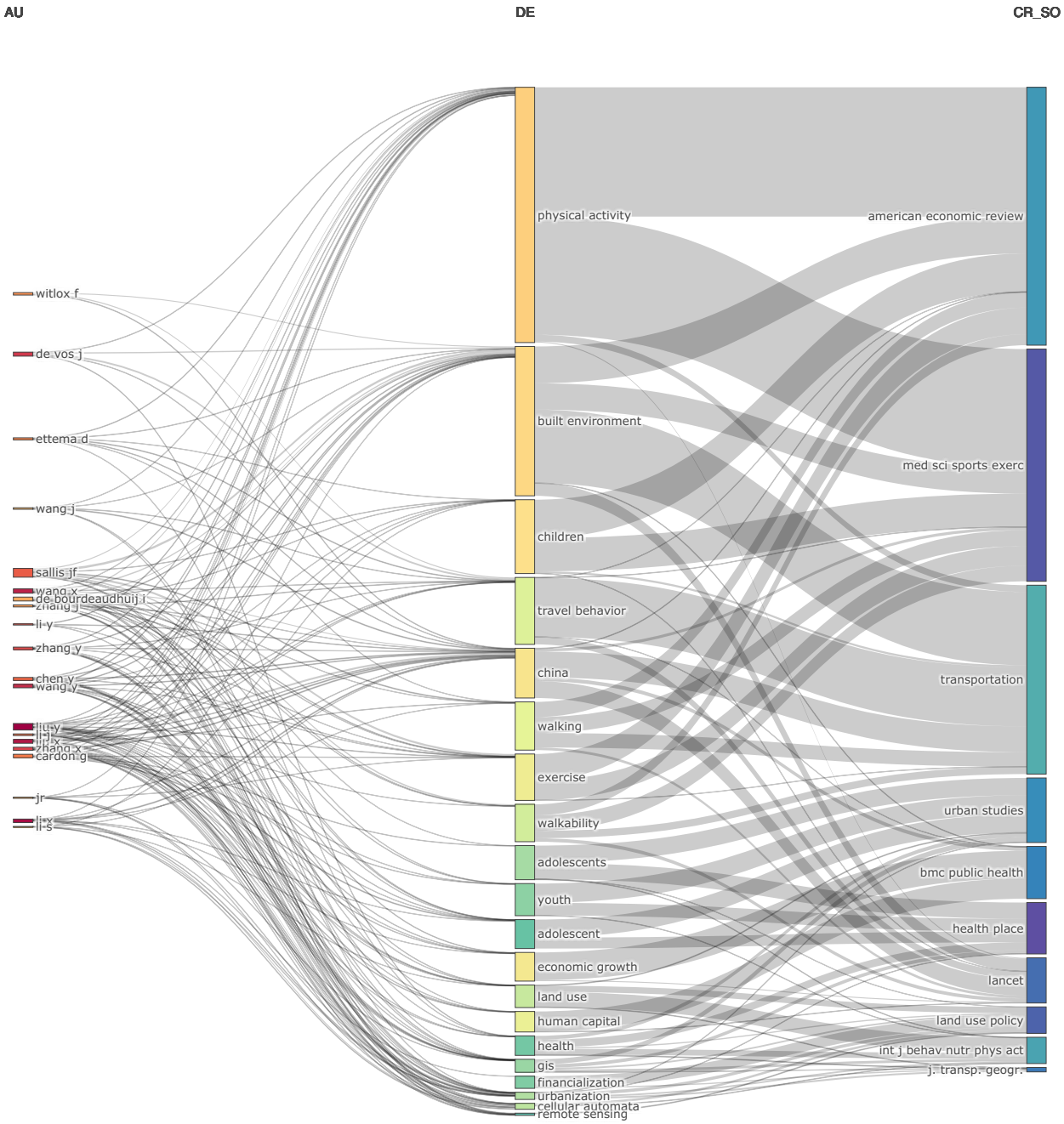

Annual Scientific Production
Articles
1500
1000
500
0
2016
2018
2020
Year


Average Article Citations per Year
Citations
5
4
3
2
1
0
2016
2018
2020
Year


Average Total Citations per Year
Citations
30
20
10
0
2016
2018
2020
Year


Top−Authors' Production over Time
LIU Y
LI X
LIU X
WANG X
WANG Y
DE VOS J
ZHANG X
ZHANG Y
LI Y
SALLIS JF
Author
2016
2018
2020
Year
N.Articles
5
10
15
TC per Year
50
100
150
200

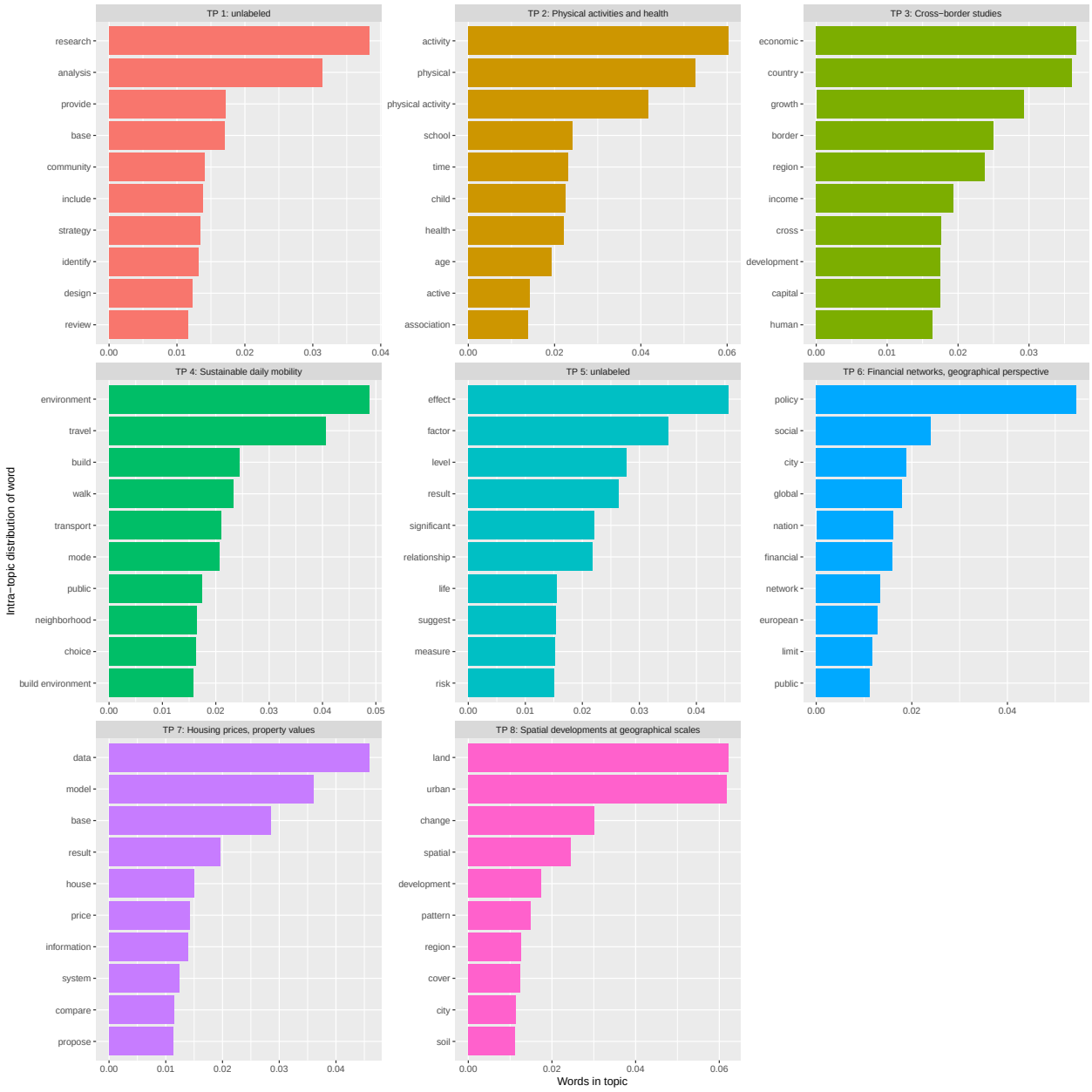
Connection between the research field's Top Authors-Keywords-Journals



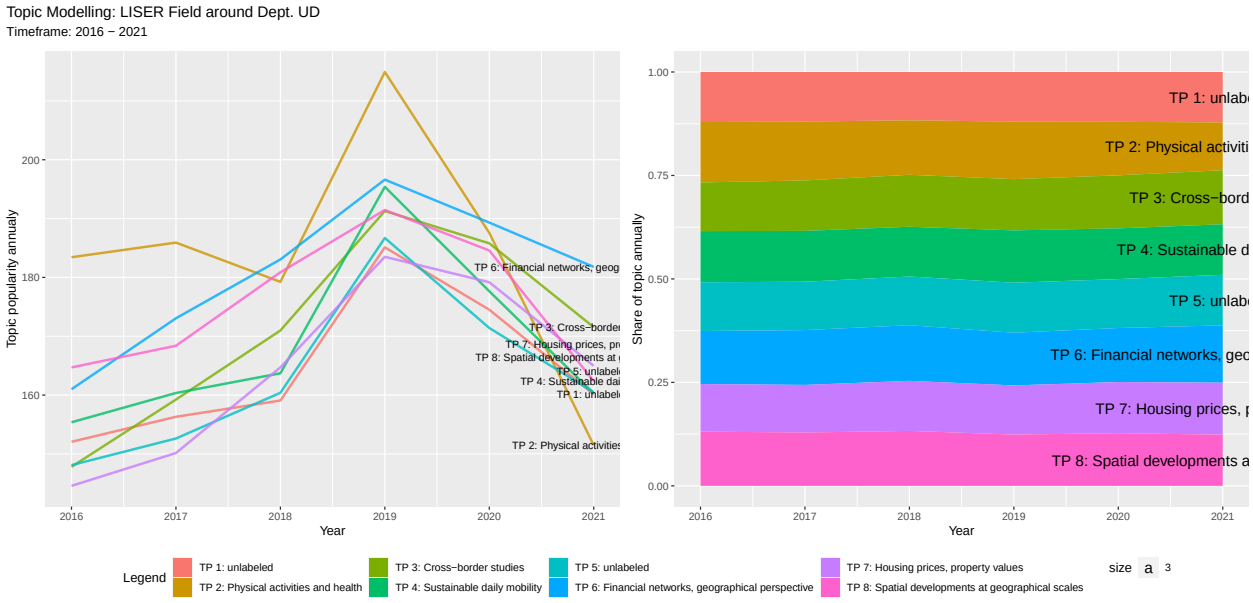
Topic modelling

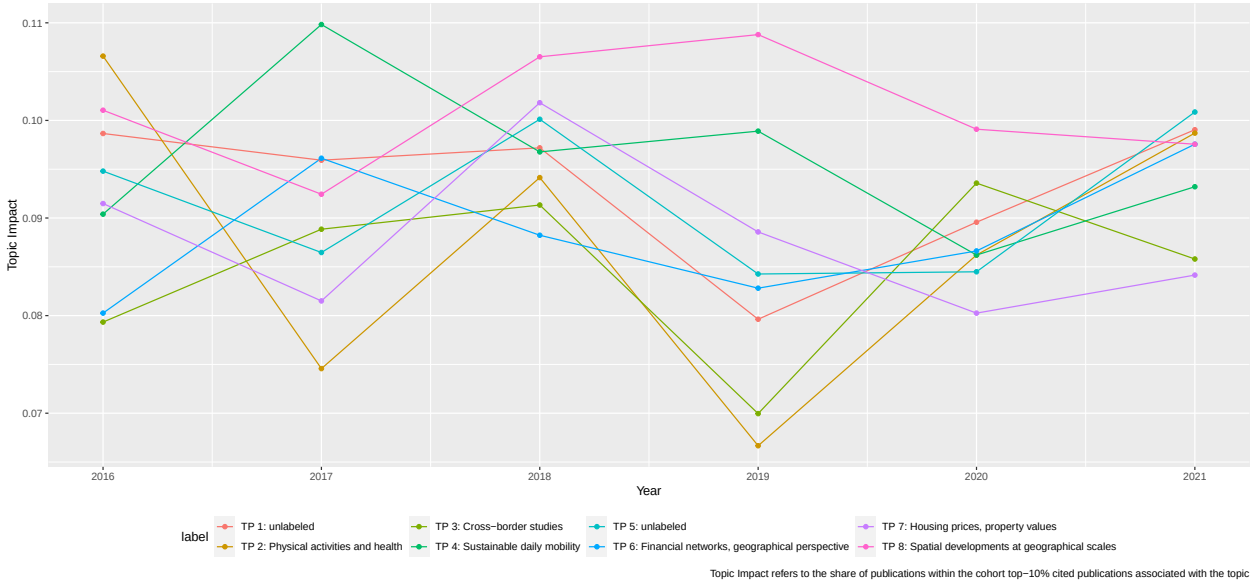
Note: Here, we report the results of a LDA topic-modelling (basically, clustering on words) on all title+abstract texts. Identified topics can be interpreted as broad themes in the research field. See `Technical description`for additional explanations.

Topics by topwords



Note: While this static vies is helpful, I recommend using the interactive LDAVis version to be found under https://daniel-hain.github.io/biblio_lux_2022/output/topic_modelling/LDAviz_liser_ud.rds/index.html #topic=1&lambda=0.60&term=. For functionality and usage, see ´Technical ´.

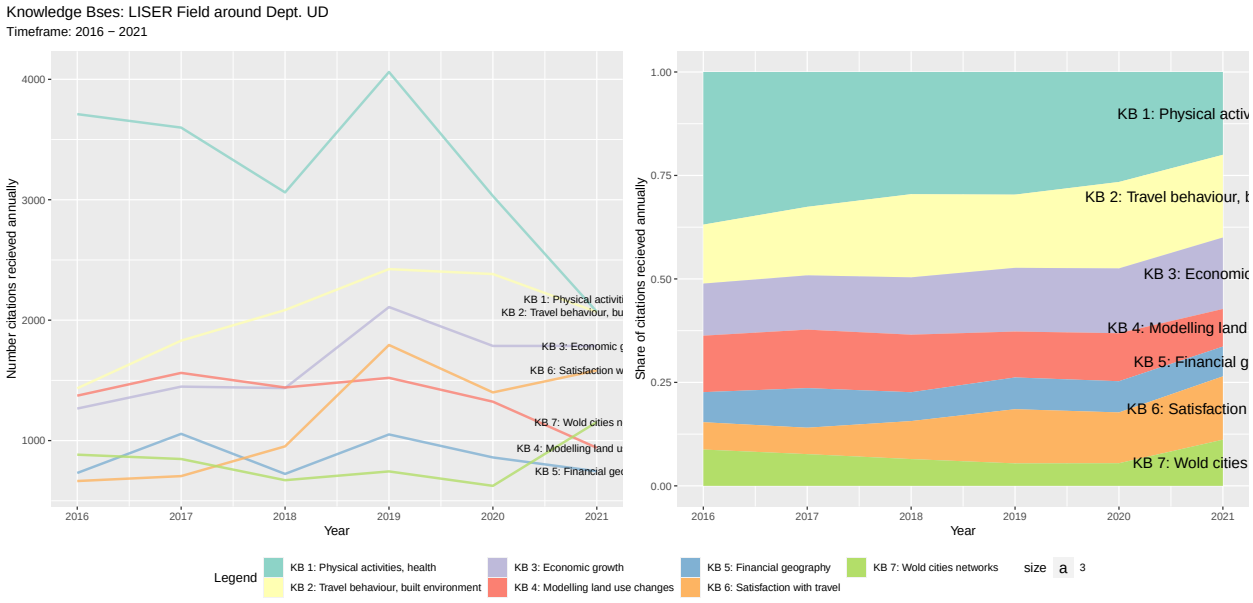




Knowledge Bases: Co-Citation network analysis

Note: This analysis refers the co-citation analysis, where the cited references and not the original publications are the unit of analysis. Identified knowledge bases can be interpreted as the knowledge foundation the field draws from. See `Technical description`for additional explanations.

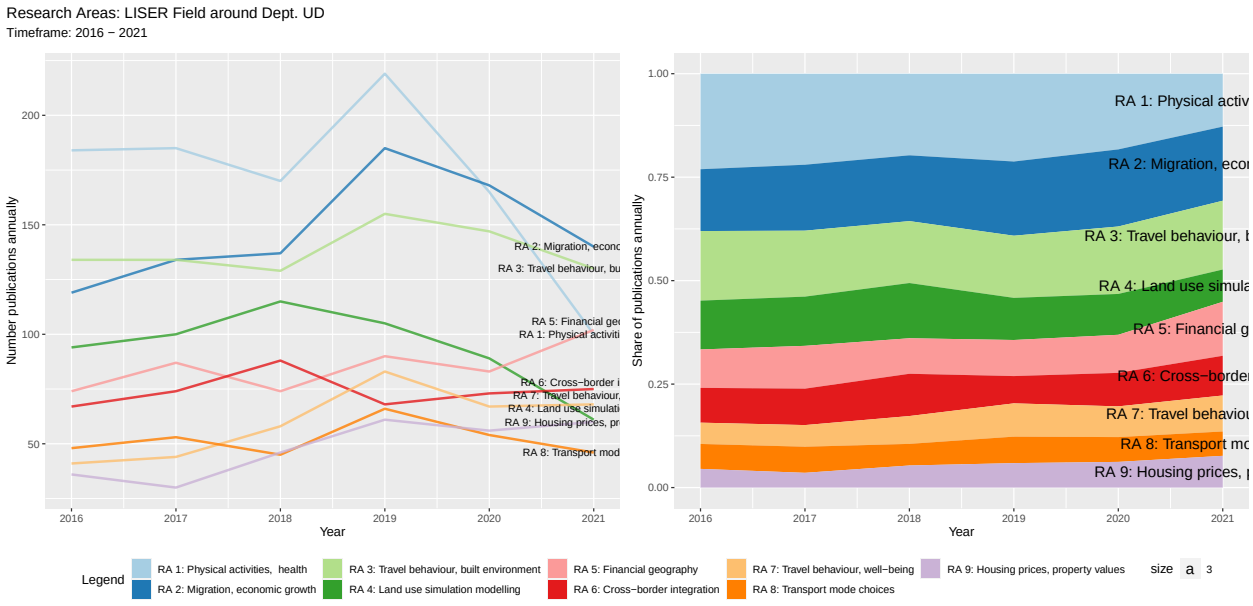
name
Knowledge Base 1: KB 1: Physical activities, health (n = 1943, density =1.98)
JANSSEN I. LEBLANC A.G. SYSTEMATIC REVIEW OF THE HEALTH BENEFITS OF PHYSICAL ACTIVITY A
SAELENS B.E. HANDY S.L. BUILT ENVIRONMENT CORRELATES OF WALKING: A REVIEW (2008)
HALLAL P.C. ANDERSEN L.B. BULL F.C. GUTHOLD R. HASKELL W. EKELUND U. GLOBAL PHYSICAL ACT
SALLIS J.F. CERVERO R.B. ASCHER W. HENDERSON K.A. KRAFT M.K. KERR J. AN ECOLOGICAL APPROA
SAELENS B.E. SALLIS J.F. FRANK L.D. ENVIRONMENTAL CORRELATES OF WALKING AND CYCLING: FIN
MCCORMACK G.R. SHIELL A. IN SEARCH OF CAUSALITY: A SYSTEMATIC REVIEW OF THE RELATIONSH
SALLIS J.F. PROCHASKA J.J. TAYLOR W.C. A REVIEW OF CORRELATES OF PHYSICAL ACTIVITY OF CH
SAELENS B.E. SALLIS J.F. BLACK J.B. CHEN D. NEIGHBORHOOD-BASED DIFFERENCES IN PHYSICAL AC
EVENSON K.R. CATELLIER D.J. GILL K. ONDRAK K.S. MCMURRAY R.G. CALIBRATION OF TWO OBJECTI
DING D. SALLIS J.F. KERR J. LEE S. ROSENBERG D.E. NEIGHBORHOOD ENVIRONMENT AND PHYSICAL A
Knowledge Base 2: KB 2: Travel behaviour, built environment (n = 1173, density =6.15)
CERVERO R. KOCKELMAN K. TRAVEL DEMAND AND THE 3DS: DENSITY DIVERSITY AND DESIGN (1997)
EWING R. CERVERO R. TRAVEL AND THE BUILT ENVIRONMENT: A META-ANALYSIS (2010)
MOKHTARIAN P.L. CAO X. EXAMINING THE IMPACTS OF RESIDENTIAL SELF-SELECTION ON TRAVEL B
HANDY S. CAO X. MOKHTARIAN P. CORRELATION OR CAUSALITY BETWEEN THE BUILT ENVIRONMEN
EWING R. CERVERO R. TRAVEL AND THE BUILT ENVIRONMENT (2010)
EWING R. CERVERO R. TRAVEL AND THE BUILT ENVIRONMENT: A SYNTHESIS (2001)
CAO X. MOKHTARIAN P.L. HANDY S.L. EXAMINING THE IMPACTS OF RESIDENTIAL SELF-SELECTION O
BHAT C.R. GUO J.Y. A COMPREHENSIVE ANALYSIS OF BUILT ENVIRONMENT CHARACTERISTICS ON HO
BAGLEY M.N. MOKHTARIAN P.L. THE IMPACT OF RESIDENTIAL NEIGHBORHOOD TYPE ON TRAVEL BE
VAN ACKER V. WITLOX F. CAR OWNERSHIP AS A MEDIATING VARIABLE IN CAR TRAVEL BEHAVIOUR I
Knowledge Base 3: KB 3: Economic growth (n = 1059, density =4.45)
SOLOW R.M. A CONTRIBUTION TO THE THEORY OF ECONOMIC GROWTH (1956)
LUCAS R.E. ON THE MECHANICS OF ECONOMIC DEVELOPMENT (1988)
ROMER P.M. ENDOGENOUS TECHNOLOGICAL CHANGE (1990)
MANKIW N.G. ROMER D. WEIL D.N. A CONTRIBUTION TO THE EMPIRICS OF ECONOMIC GROWTH (1992
HALL R.E. JONES C.I. WHY DO SOME COUNTRIES PRODUCE SO MUCH MORE OUTPUT PER WORKER TH
BARRO R.J. ECONOMIC GROWTH IN A CROSS SECTION OF COUNTRIES (1991)
ROMER P.M. INCREASING RETURNS AND LONG-RUN GROWTH (1986)
GALOR O. ZEIRA J. INCOME DISTRIBUTION AND MACROECONOMICS (1993)
BLUNDELL R. BOND S. INITIAL CONDITIONS AND MOMENT RESTRICTIONS IN DYNAMIC PANEL DATA M
GALOR O. (2011)
Knowledge Base 4: KB 4: Modelling land use changes (n = 937, density =5.06)
WU F. CALIBRATION OF STOCHASTIC CELLULAR AUTOMATA: THE APPLICATION TO RURAL-URBAN LA
PIJANOWSKI B.C. BROWN D.G. SHELLITO B.A. MANIK G.A. USING NEURAL NETWORKS AND GIS TO FO
CLARKE K.C. HOPPEN S. GAYDOS L. A SELF-MODIFYING CELLULAR AUTOMATON MODEL OF HISTORIC
CLARKE K.C. GAYDOS L.J. LOOSE-COUPLING A CELLULAR AUTOMATON MODEL AND GIS: LONG-TERM
SILVA E.A. CLARKE K.C. CALIBRATION OF THE SLEUTH URBAN GROWTH MODEL FOR LISBON AND PO
WHITE R. ENGELEN G. CELLULAR AUTOMATA AND FRACTAL URBAN FORM: A CELLULAR MODELLING
TAYYEBI A. PIJANOWSKI B.C. MODELING MULTIPLE LAND USE CHANGES USING ANN CART AND MARS
YANG Q. LI X. SHI X. CELLULAR AUTOMATA FOR SIMULATING LAND USE CHANGES BASED ON SUPPOR
WU F. WEBSTER C.J. SIMULATION OF LAND DEVELOPMENT THROUGH THE INTEGRATION OF CELLUL
PONTIUS R.G. MILLONES M. DEATH TO KAPPA: BIRTH OF QUANTITY DISAGREEMENT AND ALLOCATIO
Knowledge Base 5: KB 5: Financial geography (n = 746, density =4.4)
LANGLEY P. (2008)
MARTIN R. (2002)
FRENCH S. LEYSHON A. WAINWRIGHT T. FINANCIALIZING SPACE SPACING FINANCIALIZATION (2011)
VAN DER ZWAN N. MAKING SENSE OF FINANCIALIZATION (2014)
HARVEY D. (2005)
CHRISTOPHERS B. THE LIMITS TO FINANCIALIZATION (2015)
AALBERS M.B. THE FINANCIALIZATION OF HOME AND THE MORTGAGE MARKET CRISIS (2008)
FINLAYSON A. FINANCIALISATION FINANCIAL LITERACY AND ASSET-BASED WELFARE (2009)
HARVEY D. (1982)
PIKE A. POLLARD J. ECONOMIC GEOGRAPHIES OF FINANCIALIZATION (2010)
Knowledge Base 6: KB 6: Satisfaction with travel (n = 679, density =15.77)
OLSSON L.E. GÄRLING T. ETTEMA D. FRIMAN M. FUJII S. HAPPINESS AND SATISFACTION WITH WORK



Absolute knowledge base appearance (left), Relative knowledge base appearance (right)

Research Areas: Bibliographic coupling analysis

Note: This analysis refers the bibliographic coupling analysis, where original publications are the unit of analysis. Identified research areas can be interpreted as the field's current research frontier. See `Technical description`for additional explanations.

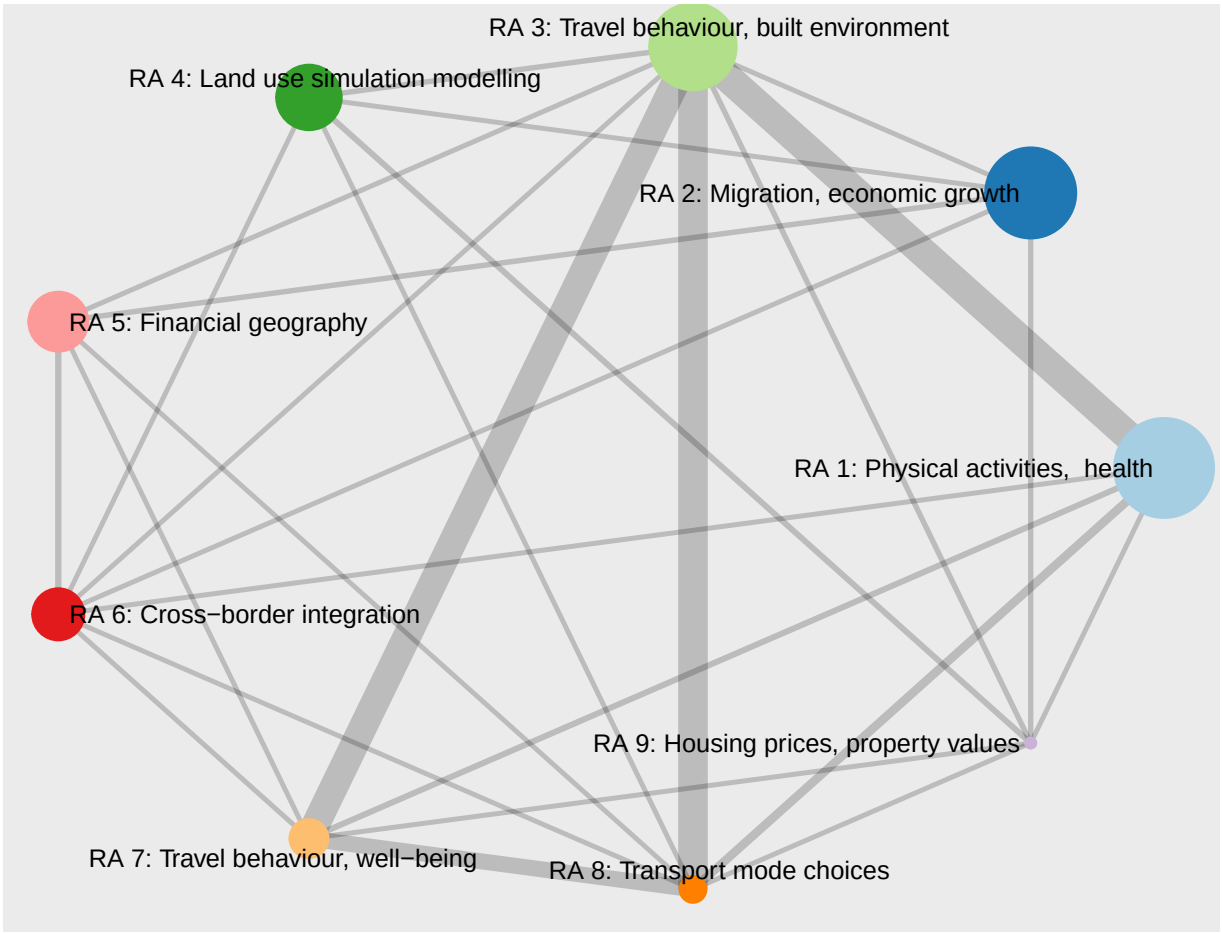


Absolute research area appearance (left), Relative research area appearance (right)

AU	PY	TI
Research Area 1: RA 1: Physical activities, health (n = 1023, density =0.15)		
DING D;LAWSON KD;KOLBE...	2016	THE ECONOMIC BURDEN OF PHYSICAL INACTIVITY: A GLOBA
GUTHOLD R;STEVENS GA;R...	2020	GLOBAL TRENDS IN INSUFFICIENT PHYSICAL ACTIVITY AMON
LAIRD Y;FAWKNER S;KELL...	2016	THE ROLE OF SOCIAL SUPPORT ON PHYSICAL ACTIVITY BEHA
CHOI J;LEE M;LEE J-K;K...	2017	CORRELATES ASSOCIATED WITH PARTICIPATION IN PHYSICAL
GILES-CORTI B;VERNEZ-M...	2016	CITY PLANNING AND POPULATION HEALTH: A GLOBAL CHALL
TWOHIG-BENNETT C;JONES A	2018	THE HEALTH BENEFITS OF THE GREAT OUTDOORS: A SYSTEM
SALLIS JF;CERIN E;CONW...	2016	PHYSICAL ACTIVITY IN RELATION TO URBAN ENVIRONMENTS
CARLIN A;PERCHOUX C;PU...	2017	A LIFE COURSE EXAMINATION OF THE PHYSICAL ENVIRONME
LU C;STOLK RP;SAUER PJ...	2017	FACTORS OF PHYSICAL ACTIVITY AMONG CHINESE CHILDREN
CORDER K;SHARP SJ;ATKI...	2016	AGE-RELATED PATTERNS OF VIGOROUS-INTENSITY PHYSICAL
Research Area 2: RA 2: Migration, economic growth (n = 883, density =0.17)		
ACEMOGLU D;RESTREPO P	2018	THE RACE BETWEEN MAN AND MACHINE: IMPLICATIONS OF T
BHATTACHARYA M;AWAWORY...	2017	THE DYNAMIC IMPACT OF RENEWABLE ENERGY AND INSTITU
TEIXEIRA AAC;QUEIRÓS ASS	2016	ECONOMIC GROWTH, HUMAN CAPITAL AND STRUCTURAL CH
JONES CI	2016	THE FACTS OF ECONOMIC GROWTH
DIEBOLT C;HIPPE R	2019	THE LONG-RUN IMPACT OF HUMAN CAPITAL ON INNOVATION
BEINE M;BERTOLI S;FERN...	2016	A PRACTITIONERS' GUIDE TO GRAVITY MODELS OF INTERNA
DIAMOND R	2016	THE DETERMINANTS AND WELFARE IMPLICATIONS OF US WO
BEAUDRY P;GREEN DA;SAN...	2016	THE GREAT REVERSAL IN THE DEMAND FOR SKILL AND COGI
BOVE V;ELIA L	2017	MIGRATION, DIVERSITY, AND ECONOMIC GROWTH
BERG A;OSTRY JD;TSANGA...	2018	REDISTRIBUTION, INEQUALITY, AND GROWTH: NEW EVIDENC
Research Area 3: RA 3: Travel behaviour, built environment (n = 829, density =0.4)		
DING C;WANG D;LIU C;ZH...	2017	EXPLORING THE INFLUENCE OF BUILT ENVIRONMENT ON TR
YE R;TITHERIDGE H	2017	SATISFACTION WITH THE COMMUTE: THE ROLE OF TRAVEL M
ETTEMA D;NIEUWENHUIS R	2017	RESIDENTIAL SELF-SELECTION AND TRAVEL BEHAVIOUR: WH
MOURA F;CAMBRA P;GONÇA...	2017	MEASURING WALKABILITY FOR DISTINCT PEDESTRIAN GROU
SUN B;ERMAGUN A;DAN B	2017	BUILT ENVIRONMENTAL IMPACTS ON COMMUTING MODE CHO
EWING R;HAJRASOULIHA A...	2016	STREETSCAPE FEATURES RELATED TO PEDESTRIAN ACTIVIT
CAO X;YANG W	2017	EXAMINING THE EFFECTS OF THE BUILT ENVIRONMENT AND
SMITH M;HOSKING J;WOOD...	2017	SYSTEMATIC LITERATURE REVIEW OF BUILT ENVIRONMENT
DING C;WANG Y;TANG T;M...	2018	JOINT ANALYSIS OF THE SPATIAL IMPACTS OF BUILT ENVIRO
LIN T;WANG D;GUAN X	2017	THE BUILT ENVIRONMENT, TRAVEL ATTITUDE, AND TRAVEL
Research Area 4: RA 4: Land use simulation modelling (n = 564, density =0.22)		
LIU X;LIANG X;LI X;XU ...	2017	A FUTURE LAND USE SIMULATION MODEL (FLUS) FOR SIMULA
MUSTAFA A;HEPPENSTALL ...	2018	MODELLING BUILT-UP EXPANSION AND DENSIFICATION WITH
LIANG X;LIU X;LI X;CHE...	2018	DELINEATING MULTI-SCENARIO URBAN GROWTH BOUNDARIE
MISHRA VN;RAI PK	2016	A REMOTE SENSING AIDED MULTI-LAYER PERCEPTRON-MARK
LIAO J;TANG L;SHAO G;S...	2016	INCORPORATION OF EXTENDED NEIGHBORHOOD MECHANISM
SHAFIZADEH-MOGHADAM H;...	2017	COUPLING MACHINE LEARNING, TREE-BASED AND STATISTIC
ABURAS MM;HO YM;RAMLI ...	2016	THE SIMULATION AND PREDICTION OF SPATIO-TEMPORAL UR
GHOSH P;MUKHOPADHYAY A...	2017	APPLICATION OF CELLULAR AUTOMATA AND MARKOV-CHAIN
VAN VLIET J;BREGT AK;B...	2016	A REVIEW OF CURRENT CALIBRATION AND VALIDATION PRA
SHAFIZADEH-MOGHADAM H;...	2017	SENSITIVITY ANALYSIS AND ACCURACY ASSESSMENT OF THE
Research Area 5: RA 5: Financial geography (n = 510, density =0.17)		
AALBERS MB	2017	THE VARIEGATED FINANCIALIZATION OF HOUSING
FERNANDEZ R;AALBERS MB	2016	FINANCIALIZATION AND HOUSING: BETWEEN GLOBALIZATION
DERUDDER B;TAYLOR PJ	2018	CENTRAL FLOW THEORY: COMPARATIVE CONNECTIVITIES IN
FIELDS D	2017	UNWILLING SUBJECTS OF FINANCIALIZATION
FIELDS D	2017	URBAN STRUGGLES WITH FINANCIALIZATION
GABOR D;BROOKS S	2017	THE DIGITAL REVOLUTION IN FINANCIAL INCLUSION: INTERN
PAN F;BI W;LENZER J;ZH...	2017	MAPPING URBAN NETWORKS THROUGH INTER-FIRM SERVICE
DERUDDER B;TAYLOR P	2016	CHANGE IN THE WORLD CITY NETWORK, 2000–2012
FINE B;SAAD-FILHO A	2017	THIRTEEN THINGS YOU NEED TO KNOW ABOUT NEOLIBERAL
SIGLER TJ;MARTINUS K	2017	EXTENDING BEYOND 'WORLD CITIES' IN WORLD CITY NETWO
Research Area 6: RA 6: Cross-border integration (n = 445, density =0.12)		
FRIEDMAN S	2016	HABITUS CLIVÉ AND THE EMOTIONAL IMPRINT OF SOCIAL M

Research Area Connectivity: LISER Field around Dept. UD

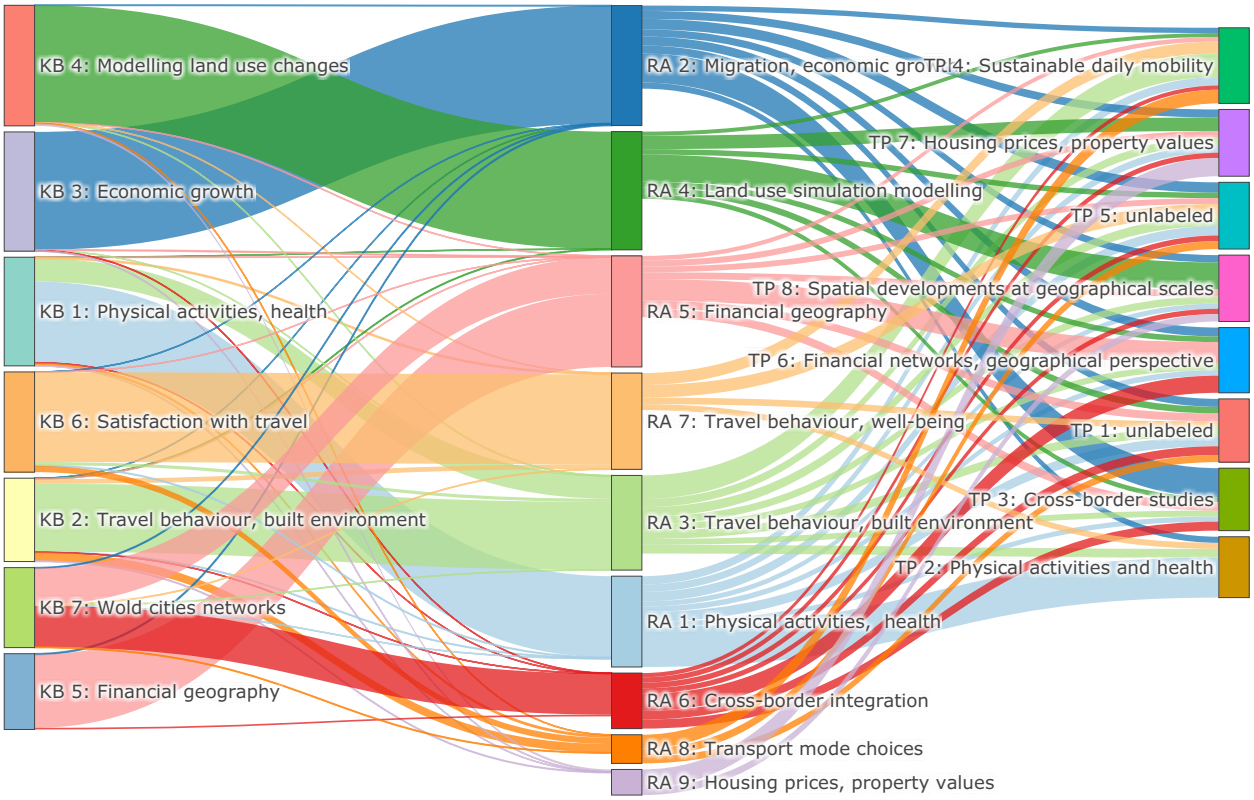
Timeframe: 2016 − 2021



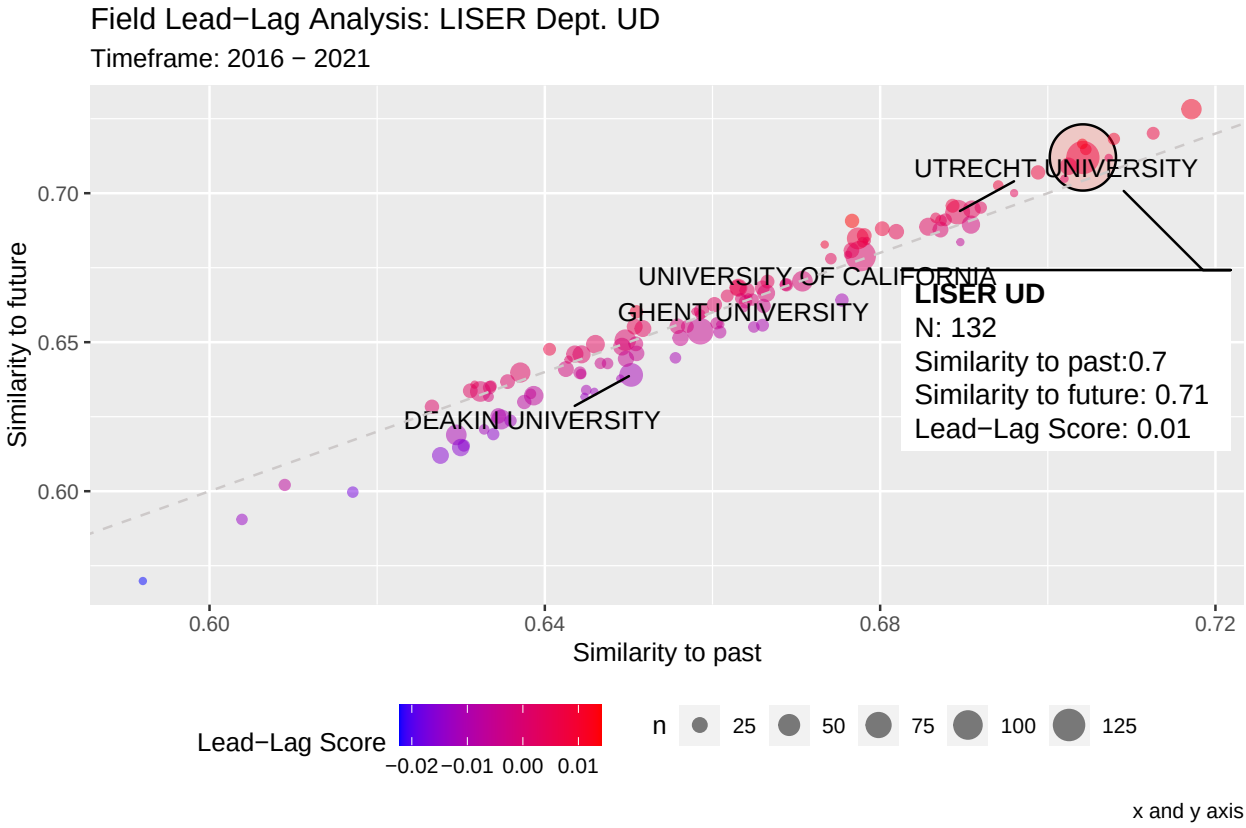
Nodes = Identified Research Areas; Edges: Bibliographic coupling strenght (Jaccard weighted)

Knowledge Bases, Research Areas & Topics Interaction

Knowledge Bases, Research Areas & Topics: LISER Field around Dept. UD



Trends (Experimantal)



Endnotes

All results are preliminary so far. . .