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The transformation of science systems in the Middle East and North Africa

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Citation

El Ouahi, J. (2024, June 20). *The transformation of science systems in the Middle East and North Africa*. Retrieved from <https://hdl.handle.net/1887/3763793>

Version: Publisher's Version

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Note: To cite this publication please use the final published version (if applicable).

References

- Aagaard, K. (2015). How incentives trickle down: Local use of a national bibliometric indicator system. *Science and Public Policy*, 42(5), 725-737. <https://doi.org/10.1093/scipol/scu087>
- Aagaard, K., Mongeon, P., Ramos-Vielba, I., & Thomas, D. A. (2021). Getting to the bottom of research funding: Acknowledging the complexity of funding dynamics. *PLoS One*, 16(5), e0251488. <https://doi.org/10.1371/journal.pone.0251488>
- Aalbers, M. B. (2004). Creative destruction through the Anglo-American hegemony: a non-Anglo-American view on publications, referees and language. *Area*, 36(3), 319-322. <https://doi.org/10.1111/j.0004-0894.2004.00229.x>
- Abdulkadir, R., & Müller, H. (2020). The Politics of Women Empowerment: Female Leaders in the UAE. *Hawwa*, 18(1), 8-30.
- Abramo, G., D'Angelo, C. A., & Caprasecca, A. (2009). Gender differences in research productivity: A bibliometric analysis of the Italian academic system. *Scientometrics*, 79(3), 517-539. <https://doi.org/10.1007/s11192-007-2046-8>
- Abramo, G., D'Angelo, C. A., & Solazzi, M. (2011). The relationship between scientists' research performance and the degree of internationalization of their research. *Scientometrics*, 86(3), 629-643. <https://doi.org/10.1007/s11192-010-0284-7>
- Ackers, L. (2005). Moving people and knowledge: Scientific mobility in the European Union. *International Migration*, 43(5), 99-131. <https://doi.org/10.1111/j.1468-2435.2005.00343.x>
- Ackers, L. (2008). Internationalisation, Mobility and Metrics: A New Form of Indirect Discrimination? *Minerva*, 46(4), 411-435. <https://doi.org/10.1007/s11024-008-9110-2>
- Adams, & Griliches. (1998). Research Productivity in a System of Universities. *Annales d'Économie et de Statistique*(49/50), 127. <https://doi.org/10.2307/20076113>
- Adams, J., El-Ouahi, J., Pendlebury, D., & Szomszor, M. (2021). *The changing research landscape of the Middle East, North Africa and Turkey* (Institute for Scientific Information (ISI), Issue.
- Aguado-López, E., Becerril-García, A., Arriola, M. L., & Martínez-Domínguez, N. D. (2014). Iberoamérica en la ciencia de corriente principal (Thomson Reuters/Scopus): una región fragmentada. *Interciencia*, 39(8), 570-579.
- Agyemang, G., & Broadbent, J. (2015). Management control systems and research management in universities. *Accounting, Auditing & Accountability Journal*, 28(7), 1018-1046. <https://doi.org/10.1108/aaaj-11-2013-1531>
- Ahmad, R. E., Mansoor, M., & Sajid, M. (2023). Iran-Saudi and China Trilateral Agreement: Reshaping the Global World Order. *South Asian Studies*, 38(1), 7.

- Ahmad, S., Ur Rehman, S., & Ashiq, M. (2021). A Bibliometric Review of Arab World Research from 1980-2020. *Science and Technology Libraries*, 40(2), 1-21. <https://doi.org/10.1080/0194262x.2020.1855615>
- Aksnes, D. W., & Sivertsen, G. (2019). A Criteria-based Assessment of the Coverage of Scopus and Web of Science. *Journal of Data and Information Science*, 4(1), 1-21. <https://doi.org/10.2478/jdis-2019-0001>
- Al-Jamimi, H. A., BinMakhashen, G. M., Bornmann, L., & Al Wajih, Y. A. (2023). Saudi Arabia research: academic insights and trend analysis. *Scientometrics*, 128(10), 5595-5627. <https://doi.org/10.1007/s11192-023-04797-0>
- Al-Khalili, J. (2011). *The house of wisdom: how Arabic science saved ancient knowledge and gave us the Renaissance*. Penguin.
- Al Marzouqi, A. H., Alameddine, M., Sharif, A., & Alsheikh-Ali, A. A. (2019). Research productivity in the United Arab Emirates: A 20-year bibliometric analysis. *Heliyon*, 5(12), e02819. <https://doi.org/10.1016/j.heliyon.2019.e02819>
- Albrecht, J., Werth, V. P., & Bigby, M. (2009). The role of case reports in evidence-based practice, with suggestions for improving their reporting. *Journal of the American Academy of Dermatology*, 60(3), 412-418. <https://doi.org/10.1016/j.jaad.2008.10.023>
- Allen, C., Metternicht, G., & Wiedmann, T. (2018). Initial progress in implementing the Sustainable Development Goals (SDGs): a review of evidence from countries. *Sustainability Science*, 13(5), 1453-1467. <https://doi.org/10.1007/s11625-018-0572-3>
- Alon, S., & Diprete, T. (2015). Gender Differences in the Formation of a Field of Study Choice Set. *Sociological Science*, 2, 50-81. <https://doi.org/10.15195/v2.a5>
- Alperin, J. P. (2014). Citation databases omit local journals. *Nature*, 511(7508), 155-155.
- Altbach, P. G., & Knight, J. (2007). The Internationalization of Higher Education: Motivations and Realities. *Journal of Studies in International Education*, 11(3-4), 290-305. <https://doi.org/10.1177/1028315307303542>
- Álvarez-Bornstein, B., Bordons, M., Costas, R., & Calero-Medina, C. (2018). Studying the research funding structure of countries through the analysis of funding acknowledgments. Proc. 23rd Int. Conf. on Science and Technology Indicators,
- Alvarez-Bornstein, B., & Montesi, M. (2021). Funding acknowledgements in scientific publications: A literature review. *Research Evaluation*, 29(4), 469-488. <https://doi.org/10.1093/reseval/rvaa038>
- Álvarez-Bornstein, B., Morillo, F., & Bordons, M. (2017). Funding acknowledgments in the Web of Science: completeness and accuracy of collected data. *Scientometrics*, 112(3), 1793-1812. <https://doi.org/10.1007/s11192-017-2453-4>
- Alvarez, G. R., & Caregnato, S. E. (2018). Agradecimentos por financiamento na produção científica brasileira representada na Web of Science. *Em Questão*, 24, 48-70. <https://doi.org/10.19132/1808-5245240.48-70>



- Alvarez, G. R., & Caregnato, S. E. (2020). Agradecimentos em artigos científicos: percepção e comportamento dos pesquisadores brasileiros. *Informação & Sociedade: Estudos*, 30(3), 1-14. <https://doi.org/10.22478/ufpb.1809-4783.2020v30n3.52055>
- Alvarez, G. R., & Caregnato, S. E. (2021). Colaboração de subautoría: Estudo cientométrico baseado nos artigos brasileiros com agradecimentos na Web of Science. *Encontros Bibli: revista eletrônica de biblioteconomia e ciência da informação*, 26. <https://doi.org/10.5007/1518-2924.2021.e74605>
- Anninos, L. N. (2014). Research performance evaluation: some critical thoughts on standard bibliometric indicators. *Studies in Higher Education*, 39(9), 1542-1561. <https://doi.org/10.1080/03075079.2013.801429>
- Appadurai, A. (1996). *Modernity at large : cultural dimensions of globalization*. Minneapolis, Minn: University of Minnesota Press.
- Archambault, É., Campbell, D., Gingras, Y., & Larivière, V. (2009). Comparing bibliometric statistics obtained from the Web of Science and Scopus. *Journal of the American Society for Information Science and Technology*, 60(7), 1320-1326.
- Aref, S., Zagheni, E., & West, J. (2019). The Demography of the Peripatetic Researcher: Evidence on Highly Mobile Scholars from the Web of Science. In *Lecture Notes in Computer Science* (Vol. 11864, pp. 50-65). Springer International Publishing. https://doi.org/10.1007/978-3-030-34971-4_4
- Armitage, C. S., Lorenz, M., & Mikki, S. (2020). Mapping scholarly publications related to the Sustainable Development Goals: Do independent bibliometric approaches get the same results? *Quantitative Science Studies*, 1(3), 1092-1108. https://doi.org/10.1162/qss_a_00071
- Arun, R., Suresh, V., Veni Madhavan, C., & Murthy, N. (2010). On finding the natural number of topics with latent dirichlet allocation: Some observations. Pacific-Asia conference on knowledge discovery and data mining,
- Assaad, R., Hendy, R., Lassassi, M., & Yassin, S. (2020). Explaining the MENA Paradox: Rising Educational Attainment, Yet Stagnant Female Labor Force Participation. *Demogr Res*, 43, 817-850. <https://doi.org/10.4054/demres.2020.43.28>
- Ataie-Ashtiani, B. (2018). World Map of Scientific Misconduct. *Science and Engineering Ethics*, 24(5), 1653-1656. <https://doi.org/10.1007/s11948-017-9939-6>
- Backes, T. (2018, 2018). Effective Unsupervised Author Disambiguation with Relative Frequencies.
- Baldwin, G. B. (1970). Brain drain or overflow? *Foreign Affairs*, 48(2), 358-372.
- Basson, I., Blanckenberg, J. P., & Prozesky, H. (2020). Do open access journal articles experience a citation advantage? Results and methodological reflections of an application of multiple measures to an analysis by WoS subject areas. *Scientometrics*, 26. <https://doi.org/10.1007/s1192-020-03734-9>
- Basu, A. (2006). Using ISI's 'Highly Cited Researchers' to obtain a country level indicator of citation excellence. *Scientometrics*, 68(3), 361-375. <https://doi.org/10.1007/s1192-006-0117-x>

- Bautista-Puig, N., Aleixo, A. M., Leal, S., Azeiteiro, U., & Costas, R. (2021). Unveiling the Research Landscape of Sustainable Development Goals and Their Inclusion in Higher Education Institutions and Research Centers: Major Trends in 2000–2017. *Frontiers in Sustainability*, 2. <https://doi.org/10.3389/frsus.2021.620743>
- Beaver, D. (2001). Reflections on scientific collaboration (and its study): past, present, and future. *Scientometrics*, 52(3), 365-377.
- Beigel, F. (2014). Publishing from the periphery: Structural heterogeneity and segmented circuits. The evaluation of scientific publications for tenure in Argentina's CONICET. *Current Sociology*, 62(5), 743-765.
- Beine, M., Docquier, F., & Rapoport, H. (2008). Brain drain and human capital formation in developing countries: Winners and losers. *Economic Journal*, 118(528), 631-652. <https://doi.org/10.1111/j.1468-0297.2008.02135.x>
- Berman, E. P. (2011). *Creating the market university: How academic science became an economic engine*. Princeton University Press.
- Bernard, M., Bernela, B., & Ferru, M. (2021). Does the geographical mobility of scientists shape their collaboration network? A panel approach of chemists' careers. *Papers in Regional Science*, 100(1). <https://doi.org/10.1111/pirs.12563>
- Bhattacharjee, Y. (2011). Saudi Universities Offer Cash in Exchange for Academic Prestige. *Science*, 334(6061), 1344-1345. <https://doi.org/doi:10.1126/science.334.6061.1344>
- Biagioli, M., & Galison, P. (2014). *Scientific authorship: Credit and intellectual property in science*. Routledge.
- Bianco, M., Gras, N., & Sutz, J. (2016). Academic Evaluation: Universal Instrument? Tool for Development? *Minerva*, 54(4), 399-421. <https://doi.org/10.1007/s11024-016-9306-9>
- Blei, D. M., Ng, A. Y., & Jordan, M. I. (2003). Latent dirichlet allocation. *Journal of machine learning research*, 3(Jan), 993-1022.
- Boekhout, H., Van der Weijden, I., & Waltman, L. (2021). Gender differences in scientific careers: A large-scale bibliometric analysis. *arXiv pre-print server*. <https://arxiv.org/abs/2106.12624>
- Bohórquez, D. A. C. (2017). *Universalism and Particularism: Explaining the Emergence and Growth of Regional Journal Indexing Systems* University of Sussex].
- Bornmann, L., & Haunschild, R. (2018). Measuring Individual Performance with Comprehensive Bibliometric Reports as an Alternative to h-Index Values. *Journal of Korean Medical Science*, 33(18). <https://doi.org/10.3346/jkms.2018.33.e138>
- Bosman, J., & Kramer, B. (2018). *Open access levels: a quantitative exploration using Web of Science and oaDOI data*. PeerJ. <https://dx.doi.org/10.7287/peerj.preprints.3520v1>
- Bouabid, H. (2014). Science and technology metrics for research policy evaluation: some insights from a Moroccan experience. *Scientometrics*, 101(1), 899-915. <https://doi.org/10.1007/s11192-014-1407-3>



- Boulding, K. E. (1966). The economics of knowledge and the knowledge of economics. *American Economic Review*, 56(2), 1-13.
- Boyack, K. W., & Börner, K. (2003). Indicator-assisted evaluation and funding of research: Visualizing the influence of grants on the number and citation counts of research papers. *Journal of the American Society for Information Science and Technology*, 54(5), 447-461. <https://doi.org/10.1002/asi.10230>
- Brahmi, A., Ech-Cherif, A., & Benyettou, A. (2012). Arabic texts analysis for topic modeling evaluation. *Information Retrieval*, 15(1), 33-53. <https://doi.org/10.1007/s10791-011-9171-y>
- Brasil, A. (2021, Jul 12-15). Beyond the Web of Science: an overview of Brazilian papers indexed by regionally relevant databases. *Proceedings of the International Conference on Scientometrics and Informetrics* [18th international conference on scientometrics & informetrics (ISSI2021)]. 18th International Conference on Scientometrics and Informetrics (ISSI), KU Leuven, ELECTRONETWORK.
- Braun, D. (1998). The role of funding agencies in the cognitive development of science. *Research Policy*, 27(8), 807-821. [https://doi.org/10.1016/S0048-7333\(98\)00092-4](https://doi.org/10.1016/S0048-7333(98)00092-4)
- Breschi, S., & Lissoni, F. (2009). Mobility of skilled workers and co-invention networks: an anatomy of localized knowledge flows. *Journal of Economic Geography*, 9(4), 439-468. <https://doi.org/10.1093/jeg/lbp008>
- Brunsson, N., & Jacobsson, B. (2002). *A world of standards*. Oxford University Press. <https://doi.org/10.1093/acprof:oso/9780199256952.001.0001>
- Brunsson, N., Rasche, A., & Seidl, D. (2012). The dynamics of standardization: Three perspectives on standards in organization studies. *Organization Studies*, 33(5-6), 613-632. <https://doi.org/10.1177/0170840612450120>
- Buringh, E., & Van Zanden, J. L. (2009). Charting the “Rise of the West”: Manuscripts and Printed Books in Europe, a long-term Perspective from the Sixth through Eighteenth Centuries. *The Journal of Economic History*, 69(2), 409-445.
- Burrows, R. (2012). Living with the h-index? Metric assemblages in the contemporary academy. *The sociological review*, 60(2), 355-372. <https://doi.org/10.1111/j.1467-954X.2012.02077.x>
- Butler, L. (2003). Explaining Australia’s increased share of ISI publications—the effects of a funding formula based on publication counts. *Research Policy*, 32(1), 143-155. [https://doi.org/10.1016/S0048-7333\(02\)00007-0](https://doi.org/10.1016/S0048-7333(02)00007-0)
- Cabanac, G., Alexandre, C., Jégou, L., & Maisonobe, M. (2023). The Geography of Retracted Papers: Showcasing a Crossref–Dimensions–NETSCITY Pipeline for the Spatial Analysis of Bibliographic Data. 27th International Conference on Science, Technology and Innovation Indicators (STI 2023),
- Cameron, E. Z., White, A. M., & Gray, M. E. (2016). Solving the Productivity and Impact Puzzle: Do Men Outperform Women, or are Metrics Biased? *Bioscience*, 66(3), 245-252. <https://doi.org/10.1093/biosci/biv173>
- Campbell, D., Picard-Aitken, M., Cote, G., Caruso, J., Valentim, R., Edmonds, S., Williams, G. T., Macaluso, B., Robitaille, J. P., Bastien, N., Laframboise, M. C., Lebeau, L. M., Mirabel, P.,

- Lariviere, V., & Archambault, E. (2010). Bibliometrics as a Performance Measurement Tool for Research Evaluation: The Case of Research Funded by the National Cancer Institute of Canada. *American Journal of Evaluation*, 31(1), 66-83. <https://doi.org/10.1177/1098214009354774>
- Cañibano, C., Fox, M. F., & Otamendi, F. J. (2016). Gender and patterns of temporary mobility among researchers. *Science and Public Policy*, 43(3), 320-331. <https://doi.org/10.1093/scipol/scv042>
- Cañibano, C., & Woolley, R. (2015). Towards a Socio-Economics of the Brain Drain and Distributed Human Capital. *International Migration*, 53(1), 115-130. <https://doi.org/10.1111/imig.12020>
- Cao, C., Baas, J., Wagner, C. S., & Jonkers, K. (2020). Returning scientists and the emergence of China's science system. *Science and Public Policy*, 47(2), 172-183. <https://doi.org/10.1093/scipol/scz056>
- Caron, E., & van Eck, N. J. (2014). Large scale author name disambiguation using rule-based scoring and clustering. Proceedings of the 19th international conference on science and technology indicators,
- Carr, P. L., Ash, A. S., Friedman, R. H., Scaramucci, A., Barnett, R. C., Szalacha, L. E., Palepu, A., & Moskowitz, M. A. (1998). Relation of family responsibilities and gender to the productivity and career satisfaction of medical faculty. *Annals of internal medicine*, 129(7), 532-538.
- Cashell, P. (2012). University rankings: Theoretical basis, methodology and impacts on global higher education. In: Taylor & Francis.
- Cavacini, A. (2016). Recent trends in Middle Eastern scientific production. *Scientometrics*, 109(1), 423-432. <https://doi.org/10.1007/s11192-016-1932-3>
- Ceci, S. J., Ginther, D. K., Kahn, S., & Williams, W. M. (2014). Women in Academic Science. *Psychological Science in the Public Interest*, 15(3), 75-141. <https://doi.org/10.1177/1529100614541236>
- Ceci, S. J., Kahn, S., & Williams, W. M. (2023). Exploring Gender Bias in Six Key Domains of Academic Science: An Adversarial Collaboration. *Psychological Science in the Public Interest*, 152910062311631. <https://doi.org/10.1177/15291006231163179>
- Ceci, S. J., & Williams, W. M. (2007). *Why aren't more women in science?: Top researchers debate the evidence*. American Psychological Association. <https://doi.org/10.1037/11546-000>
- Ceci, S. J., & Williams, W. M. (2011). Understanding current causes of women's underrepresentation in science. *Proc Natl Acad Sci U S A*, 108(8), 3157-3162. <https://doi.org/10.1073/pnas.1014871108>
- Ceci, S. J., Williams, W. M., & Barnett, S. M. (2009). Women's Underrepresentation in Science: Sociocultural and Biological Considerations. *Psychological Bulletin*, 135(2), 218-261. <https://doi.org/10.1037/a0014412>
- Chang, J., & Blei, D. (2009). Relational topic models for document networks. Artificial intelligence and statistics,
- Chankseliani, M. (2023). Who funds the production of globally visible research in the Global South? *Scientometrics*, 128(1), 783-801. <https://doi.org/10.1007/s11192-022-04583-4>



- Chankseliani, M., Lovakov, A., & Pislyakov, V. (2021). A big picture: bibliometric study of academic publications from post-Soviet countries. *Scientometrics*, *126*(10), 8701-8730.
- Chataway, J., Dobson, C., Daniels, C., Byrne, R., Hanlin, R., & Tigabu, A. (2019). Science Granting Councils in Sub-Saharan Africa: Trends and tensions. *Science and Public Policy*. <https://doi.org/10.1093/scipol/scz007>
- Chavarro, D., Ràfols, I., & Tang, P. (2018). To what extent is inclusion in the Web of Science an indicator of journal 'quality'? *Research Evaluation*, *27*(2), 106-118.
- Chavarro, D., Tang, P., & Ràfols, I. (2017). Why researchers publish in non-mainstream journals: Training, knowledge bridging, and gap filling. *Research Policy*, *46*(9), 1666-1680. <https://doi.org/10.1016/j.respol.2017.08.002>
- Chen, K. H. (2004). The construction of the Taiwan Humanities Citation Index. *Online Information Review*, *28*(6), 410-419. <https://doi.org/10.1108/14684520410570535>
- Cheol Shin, J., Jeung Lee, S., & Kim, Y. (2013). Research collaboration across higher education systems: maturity, language use, and regional differences. *Studies in Higher Education*, *38*(3), 425-440.
- Cheryan, S., Ziegler, S. A., Montoya, A. K., & Jiang, L. (2017). Why are some STEM fields more gender balanced than others? *Psychological Bulletin*, *143*(1), 1-35. <https://doi.org/10.1037/bul0000052>
- Chinchilla-Rodríguez, Z., Miao, L., Murray, D., Robinson-García, N., Costas, R., & Sugimoto, C. R. (2018). A Global Comparison of Scientific Mobility and Collaboration According to National Scientific Capacities. *Frontiers in Research Metrics and Analytics*, *3*. <https://doi.org/10.3389/frma.2018.00017>
- Choi, H., Kim, B., Jung, Y., & Choi, S. (2013). Korean scholarly information analysis based on Korea Science Citation Database (KSCD). *Collnet Journal of Scientometrics and Information Management*, *7*(1), 1-33.
- Cintra, P. R., Furnival, A. C., & Milanez, D. H. (2018). The impact of open access citation and social media on leading top Information Science journals. *Investigacion Bibliotecologica*, *32*(77), 117-132. <https://doi.org/10.22201/iibi.24488321xe.2018.77.57874>
- Ciuriak, D. (2023). The BRICS as an Alternative Anchor for Global Economic Governance: A Comment. *Available at SSRN*.
- Clarivate. (2012). *OECD Category Schema*. <https://incites.help.clarivate.com/Content/Research-Areas/oeecd-category-schema.htm>
- Clarivate. (2019). *Introducing the Arabic Citation Index*. <https://clarivate.com/webofsciencgroup/campaigns/arabic-citation-index/>
- Clarivate. (2022). *Web of Science Core Collection: Availability of funding data*. https://support.clarivate.com/ScientificandAcademicResearch/s/article/Web-of-Science-Core-Collection-Availability-of-funding-data?language=en_US
- Clarivate. (2023a). *Funding Agencies*. <https://incites.help.clarivate.com/Content/funding-agencies.htm>

- Clarivate. (2023b). Supporting integrity of the scholarly record: Our commitment to curation and selectivity in the Web of Science. . <https://clarivate.com/blog/supporting-integrity-of-the-scholarly-record-our-commitment-to-curation-and-selectivity-in-the-web-of-science/>
- Clarivate. (May 2018). *Clarivate Analytics Partners with the Egyptian Knowledge Bank to Power the First Arabic Citation Index*. <https://www.prnewswire.com/news-releases/clarivate-analytics-partners-with-the-egyptian-knowledge-bank-to-power-the-first-arabic-citation-index-300655525.html>
- Coles, P. (1989). Protest as Pasteur speaks English. *Nature*, 338(6215), 448-448.
- Congress, U. (1991). Office of Technology Assessment (1991). Federally Funded Research: Decisions for a Decade. *Law, science, and medicine*, 371-375.
- Costas, R., & van Leeuwen, T. N. (2012). Approaching the “reward triangle”: General analysis of the presence of funding acknowledgments and “peer interactive communication” in scientific publications. *Journal of the American Society for Information Science and Technology*, 63(8), 1647-1661. <https://doi.org/10.1002/asi.22692>
- Costas, R., & Yegros-Yegros, A. (2013, Jul 15-20). Possibilities of funding acknowledgement analysis for the bibliometric study of research funding organizations: Case study of the Austrian Science Fund (FWF). *Proceedings of the International Conference on Scientometrics and Informetrics 14th International-Society-of-Scientometrics-and-Informetrics Conference (ISSI), Vienna, AUSTRIA*.
- Cota, R. G., Gonçalves, M. A., & Laender, A. H. (2007). A Heuristic-based Hierarchical Clustering Method for Author Name Disambiguation in Digital Libraries. SBBD,
- Council, I. P. G. Y. A. I. S. (2023). *The Future of Research Evaluation: A Synthesis of Current Debates and Developments*. <https://globalyoungacademy.net/wp-content/uploads/2023/05/The-Future-of-Research-Evaluation.pdf>
- Cronin, B. (1995). *The scholar's courtesy: The role of acknowledgement in the primary communication process*. Taylor Graham.
- Cronin, B., McKenzie, G., Rubio, L., & Weaver-Wozniak, S. (1993). Accounting for influence: Acknowledgments in contemporary sociology. *Journal of the American Society for information Science*, 44(7), 406-412.
- Cronin, B., & Overfelt, K. (1994). The Scholar's Courtesy: A Survey of Acknowledgement Behaviour. *Journal of Documentation*, 50(3), 165-196. <https://doi.org/10.1108/eb026929>
- Cronin, B., & Shaw, D. (1999). Citation, funding acknowledgement and author nationality relationships in four information science journals. *Journal of Documentation*, 55(4), 402-408.
- Cronin, B., Shaw, D., & La Barre, K. (2003). A cast of thousands: Coauthorship and subauthorship collaboration in the 20th century as manifested in the scholarly journal literature of psychology and philosophy. *Journal of the American Society for Information Science and Technology*, 54(9), 855-871.
- Cronin, B., & Weaver, S. (1995). The praxis of acknowledgement: from bibliometrics to influmetrics. *Revista Espanola De Documentacion Cientifica*, 18(2), 172.



- Currie-Alder, B. (2015). Research funding in Arab countries: Insights emerging from a forum of research funders held in Cairo in December 2014. <http://hdl.handle.net/10625/54550>
- Currie-Alder, B. (2019). Scaling Up Research Governance: From Exceptionalism to Fragmentation. In (pp. 229-249). Springer International Publishing. https://doi.org/10.1007/978-3-319-92561-5_9
- Currie-Alder, B., Arvanitis, R., & Hanafi, S. (2018). Research in Arabic-speaking countries: Funding competitions, international collaboration, and career incentives. *Science and Public Policy*, 45(1), 74-82. <https://doi.org/10.1093/scipol/scx048>
- D'Angelo, C. A., & Van Eck, N. J. (2020). Collecting large-scale publication data at the level of individual researchers: a practical proposal for author name disambiguation. *Scientometrics*, 123(2), 883-907. <https://doi.org/10.1007/s11192-020-03410-y>
- Damar, M., Özdağoğlu, G., & Özveri, O. (2020). Bilimsel Üretkenlik Bağlamında Dünya Sıralama Sistemleri ve Türkiye'deki Üniversitelerin Mevcut Durumu. *Üniversite Araştırmaları Dergisi*, 3(3), 107-123. <https://doi.org/10.32329/uad.792205>
- Dang, Q. A. (2015). The Bologna process goes east? From “Third Countries” to prioritizing inter-regional cooperation between the ASEAN and EU. *The European higher education area: Between critical reflections and future policies*, 763-783.
- Dataiku. (2023). Fuzzy matching. <https://knowledge.dataiku.com/latest/data-preparation/prepare-recipe/index.html#fuzzy-matching>
- de Cheveigne, S. (2009). The Career Paths of Women (and Men) in French Research. *Social Studies of Science*, 39(1), 113-136. <https://doi.org/10.1177/0306312708097656>
- de Rijcke, S., Wouters, P. F., Rushforth, A. D., Franssen, T. P., & Hammarfelt, B. (2016). Evaluation practices and effects of indicator use—a literature review. *Research Evaluation*, 25(2), 161-169. <https://doi.org/10.1093/reseval/rvv038>
- De Swaan, A. (2013). *Words of the world: The global language system*. John Wiley & Sons.
- Delbourgo, J. (2019). The knowing world: a new global history of science. *History of Science*, 57(3), 373-399. <https://doi.org/10.1177/0073275319831582>
- Derrick, G. E., & Pavone, V. (2013). Democratising research evaluation: Achieving greater public engagement with bibliometrics-informed peer review. *Science and Public Policy*, 40(5), 563-575. <https://doi.org/10.1093/scipol/sct007>
- Di Maria, C., & Strykowski, P. (2009). Migration, human capital accumulation and economic development. *90*(2), 306-313. <https://doi.org/10.1016/j.jdeveco.2008.06.008>
- Díaz-Faes, A. A., & Bordons, M. (2014). Acknowledgments in scientific publications: Presence in Spanish science and text patterns across disciplines. *Journal of the Association for Information Science and Technology*, 65(9), 1834-1849. <https://doi.org/10.1002/asi.23081>
- Docquier, F., & Marfouk, A. (2005). International Migration by Educational Attainment 1990–2000 (Release 1). In.

- Dokko, G., & Rosenkopf, L. (2010). Social Capital for Hire? Mobility of Technical Professionals and Firm Influence in Wireless Standards Committees. *Organization Science*, 21(3), 677-695. <https://doi.org/10.1287/orsc.1090.0470>
- Dokko, G., Wilk, S. L., & Rothbard, N. P. (2009). Unpacking prior experience: How career history affects job performance. *Organization Science*, 20(1), 51-68. <https://doi.org/10.1287/orsc.1080.0357>
- Donthu, N., Kumar, S., Mukherjee, D., Pandey, N., & Lim, W. M. (2021). How to conduct a bibliometric analysis: An overview and guidelines. *Journal of Business Research*, 133, 285-296. <https://doi.org/https://doi.org/10.1016/j.jbusres.2021.04.070>
- Dorsey, E. R., Vitticore, P., De Roulet, J., Thompson, J. P., Carrasco, M., Johnston, S. C., Holloway, R. G., & Moses III, H. (2006). Financial anatomy of neuroscience research. *Annals of Neurology: Official Journal of the American Neurological Association and the Child Neurology Society*, 60(6), 652-659. <https://doi.org/10.1002/ana.21047>
- Durand, T., & Dameron, S. (2011). Where have all the business schools gone? *British Journal of Management*, 22(3), 559-563. <https://doi.org/10.1111/j.1467-8551.2011.00775.x>
- Egyptian Government. (2016). *Egypt's Vision 2030*. <https://mped.gov.eg/EgyptVision?lang=en>
- El-Ouahi, J. (2021, Jul 12-15). Early insights into the Arabic Citation Index. *Proceedings of the International Conference on Scientometrics and Informetrics 18th International Conference on Scientometrics and Informetrics (ISSI)*, KU Leuven.
- El-Ouahi, J. (2023a). The Arabic Citation Index - Toward a better understanding of Arab scientific literature. *Quantitative Science Studies*, 4 (3), 728–755. https://doi.org/10.1162/qss_a_00261
- El-Ouahi, J. (2023b). *Research Funding in the Middle East and North Africa: Analyses of Acknowledgments in Scientific Publications indexed in the Web of Science (2008-2021) [Dataset]*. <https://doi.org/https://doi.org/10.5281/zenodo.8337086>
- El-Ouahi, J. (2024a). Research Funding in the Middle East and North Africa: Analyses of Acknowledgments in Scientific Publications indexed in the Web of Science (2008-2021). *Scientometrics*. <https://doi.org/10.1007/s11192-024-04983-8>
- El-Ouahi, J. (2024b). Scientometric Rules as a Guide to Transform Science Systems in the Middle East & North Africa. *Scientometrics*, 129, 869-888. <https://doi.org/10.1007/s11192-023-04916-x>
- El-Ouahi, J., & Larivière, V. (2023). On the lack of women researchers in the Middle East and North Africa. *Scientometrics*, 128(8), 4321-4348. <https://doi.org/10.1007/s11192-023-04768-5>
- El-Ouahi, J., Robinson-García, N., & Costas, R. (2021a). *Analysing Scientific Mobility and Collaboration in the Middle East and North Africa [Dataset]*. <https://doi.org/https://doi.org/10.5281/zenodo.5155979>
- El-Ouahi, J., Robinson-García, N., & Costas, R. (2021b). Analyzing scientific mobility and collaboration in the Middle East and North Africa. *Quantitative Science Studies*, 2 (3), 1023–1047. https://doi.org/10.1162/qss_a_00149



- Ellegaard, O., & Wallin, J. A. (2015). The bibliometric analysis of scholarly production: How great is the impact? *Scientometrics*, 105(3), 1809-1831.
- Elo, S., & Kyngäs, H. (2008). The qualitative content analysis process. *Journal of Advanced Nursing*, 62(1), 107-115. <https://doi.org/10.1111/j.1365-2648.2007.04569.x>
- Etzkowitz, H., & Leydesdorff, L. (2000). The dynamics of innovation: from National Systems and “Mode 2” to a Triple Helix of university–industry–government relations. *Research Policy*, 29(2), 109-123.
- European Commission. (March 2019). *Mediterranean Partners*. European Commission. https://ec.europa.eu/research/iscp/index.cfm?pg=med_part
- Fargues, P. (2006). International migration in the Arab region: Trends and policies. United Nations Expert Group Meeting on International Migration and Development in the Arab Region, Beirut.
- Fargues, P., & Shah, N. M. (2018). *Migration to the Gulf: Policies in sending and receiving countries*.
- Fischman, G. E., Alperin, J. P., & Willinsky, J. (2010). Visibility and quality in Spanish-language Latin American scholarly publishing. *Information technologies & international development*, 6(4), pp. 1-21.
- Fox, M. F. (2005). Gender, family characteristics, and publication productivity among scientists. *Social Studies of Science*, 35(1), 131-150. <https://doi.org/10.1177/0306312705046630>
- Fox, M. F. (2006). Gender, hierarchy, and science. In *Handbook of the Sociology of Gender* (pp. 441-457). Springer.
- Fox, M. F., Whittington, K., & Linkova, M. (2017). Gender,(in) equity, and the scientific workforce. *Handbook of science and technology studies*, 701-731.
- Franceschet, M., & Costantini, A. (2010). The effect of scholar collaboration on impact and quality of academic papers. *Journal of Informetrics*, 4(4), 540-553. <https://doi.org/10.1016/j.joi.2010.06.003>
- Franssen, T., & Wouters, P. (2019). Science and its significant other: Representing the humanities in bibliometric scholarship. *Journal of the Association for Information Science and Technology*, 70(10), 1124-1137. <https://doi.org/10.1002/asi.24206>
- Franzoni, C., Scellato, G., & Stephan, P. (2011). Changing incentives to publish. *Science*, 333(6043), 702-703. <https://doi.org/10.1126/science.1197286>
- Frenken, K., Hardeman, S., & Hoekman, J. (2009). Spatial scientometrics: Towards a cumulative research program. *Journal of Informetrics*, 3(3), 222-232. <https://doi.org/10.1016/j.joi.2009.03.005>
- Gaillard, J., & Bouabid, H. (2017). *La recherche scientifique au Maroc et son internationalisation*. Éditions universitaires européennes.
- Gao, J.-P., Su, C., Wang, H.-Y., Zhai, L.-H., & Pan, Y.-T. (2019). Research fund evaluation based on academic publication output analysis: the case of Chinese research fund evaluation. *Scientometrics*, 119(2), 959-972. <https://doi.org/10.1007/s11192-019-03073-4>

- Garcia-Ramon, M.-D. (2003). Globalization and international geography: the questions of languages and scholarly traditions. 27(1), 1-5. <https://doi.org/10.1191/0309132503ph409xx>
- Garfield, E. (1989). The English Language: The Lingua Franca Of International Science. *Scientist*, 3(10), 12-12.
- Garfield, E. (1995). Quantitative analysis of the scientific literature and its implications for science policymaking in Latin America and the Caribbean. *Bulletin of the Pan American Health Organization (PAHO)*; 29 (1), mar. 1995.
- Garfield, E. (1996). The significant scientific literature appears in a small core of journals. *Scientist*, 10(17), 13.
- Garfield, E. (1997). A statistically valid definition of bias is needed to determine whether the Science Citation Index(R) discriminates against third world journals. *Current Science*, 73(8), 639-641.
- Garfield, E. (2009). From the science of science to Scientometrics visualizing the history of science with HistCite software. *Journal of Informetrics*, 3(3), 173-179. <https://doi.org/10.1016/j.joi.2009.03.009>
- Garfield, E. (2012). A Century of Citation Indexing. *Collnet Journal of Scientometrics and Information Management*, 6(1), 1-6. <https://doi.org/10.1080/09737766.2012.10700919>
- Gazni, A., Sugimoto, C. R., & Didegah, F. (2012). Mapping World Scientific Collaboration: Authors, Institutions, and Countries. *Journal of the American Society for Information Science and Technology*, 63(2), 323-335. <https://doi.org/10.1002/asi.21688>
- Geman, D., & Geman, S. (2016). Science in the age of selfies. *Proceedings of the National academy of Sciences*, 113(34), 9384-9387. <https://doi.org/10.1073/pnas.1609793113>
- Geuna, A., & Martin, B. R. (2003). University Research Evaluation and Funding: An International Comparison. *Minerva*, 41(4), 277-304. <https://doi.org/10.1023/b:mine.0000005155.70870.bd>
- Gibbs, W. (1995). LOST SCIENCE IN THE 3RD-WORLD. *Scientific American*, 273(2), 92-99. <https://doi.org/10.1038/scientificamerican0895-92>
- Giles, C. L., & Councill, I. G. (2004). Who gets acknowledged: Measuring scientific contributions through automatic acknowledgment indexing. *Proceedings of the National academy of Sciences*, 101(51), 17599-17604. <https://doi.org/10.1073/pnas.0407743101>
- Glanzel, W. (2001). National characteristics in international scientific co-authorship relations. *Scientometrics*, 51(1), 69-115. <https://doi.org/10.1023/a:1010512628145>
- Glänzel, W., & Schubert, A. (2004). Analysing scientific networks through co-authorship. In *Handbook of quantitative science and technology research* (pp. 257-276). Springer.
- Glänzel, W., Thijs, B., & Debackere, K. (2016). Productivity, performance, efficiency, impact-What do we measure anyway?. Some comments on the paper" A farewell to the MNCS and like size-independent indicators" by Abramo and D'Angelo. *Journal of Informetrics*. <https://doi.org/10.1016/j.joi.2016.04.008>



- Gläser, J., Laudel, G., Hinze, S., & Butler, L. (2002). Impact of Evaluation-Based Funding on the Production of Scientific Knowledge: What to Worry About, and How to Find Out. Expertise for the German Ministry for Education and Research.
- Global Research Council. (2021). *Responsible Research Assessment*. https://globalresearchcouncil.org/fileadmin/documents/GRC_Publications/GRC_RRA_Conference_Summary_Report.pdf
- Glytsos, N. P. (2010). Theoretical considerations and empirical evidence on brain drain grounding the review of Albania's and Bulgaria's experience. *International Migration*, 48(3), 107-130. <https://doi.org/10.1111/j.1468-2435.2008.00505.x>
- Gök, A., Rigby, J., & Shapira, P. (2016). The impact of research funding on scientific outputs: Evidence from six smaller European countries. *Journal of the Association for Information Science and Technology*, 67(3), 715-730. <https://doi.org/10.1002/asi.23406>
- Gomez, C. J., Herman, A. C., & Parigi, P. (2020). Moving more, but closer: Mapping the growing regionalization of global scientific mobility using ORCID. *Journal of Informetrics*, 14(3), 101044. <https://doi.org/10.1016/j.joi.2020.101044>
- González-Alcaide, G., Park, J., Huamaní, C., & Ramos, J. M. (2017). Dominance and leadership in research activities: Collaboration between countries of differing human development is reflected through authorship order and designation as corresponding authors in scientific publications. *PLoS One*, 12(8), e0182513. <https://doi.org/10.1371/journal.pone.0182513>
- Gordin, M. D. (2015). *Scientific babel: How science was done before and after global English*. University of Chicago Press.
- Gouvea, R., & Gutierrez, M. (2023). "BRICS Plus": A New Global Economic Paradigm in the Making? *Modern Economy*, 14(5), 539-550. <https://doi.org/10.4236/me.2023.145029>
- Graham, S., & Milligan, I. (2012). Review of MALLETT, produced by Andrew Kachites McCallum. *J Digi Human*, 2, 73-76.
- Grassano, N., Rotolo, D., Hutton, J., Lang, F., & Hopkins, M. M. (2017). Funding Data from Publication Acknowledgments: Coverage, Uses, and Limitations. *Journal of the Association for Information Science and Technology*, 68(4), 999-1017. <https://doi.org/10.1002/asi.23737>
- Griffiths, T. L., & Steyvers, M. (2004). Finding scientific topics. *Proceedings of the National Academy of Sciences*, 101(suppl_1), 5228-5235.
- Guédon, J.-C. (2011). El acceso abierto y la división entre ciencia "principal" y "periférica". *Crítica y emancipación*, 3(6), 135-180.
- Gul, S., Nisa, N. T., Shah, T. A., Gupta, S., Jan, A., & Ahmad, S. (2015). Middle East: research productivity and performance across nations. *Scientometrics*, 105(2), 1157-1166. <https://doi.org/10.1007/s11192-015-1722-3>
- Gureyev, V. N., Mazov, N. A., Kosyakov, D. V., & Guskov, A. E. (2020). Review and analysis of publications on scientific mobility: assessment of influence, motivation, and trends. *Scientometrics*, 124(2), 1599-1630. <https://doi.org/10.1007/s11192-020-03515-4>

- Habash, N. Y. (2010). Introduction to Arabic natural language processing. *Synthesis lectures on human language technologies*, 3(1), 1-187.
- Halevi, G. (2019). Bibliometric Studies on Gender Disparities in Science. In (pp. 563-580). Springer International Publishing. https://doi.org/10.1007/978-3-030-02511-3_21
- Hammarfelt, B., & Rushforth, A. D. (2017). Indicators as judgment devices: An empirical study of citizen bibliometrics in research evaluation. *Research Evaluation*, 26(3), 169-180. <https://doi.org/10.1093/reseval/rvx018>
- Han, X. (2020). Evolution of research topics in LIS between 1996 and 2019: an analysis based on latent Dirichlet allocation topic model. *Scientometrics*, 125(3), 2561-2595. <https://doi.org/10.1007/s11192-020-03721-0>
- Hanafi, S., & Arvanitis, R. (2014). The marginalization of the Arab language in social science: Structural constraints and dependency by choice. *Current Sociology*, 62(5), 723-742. <https://doi.org/10.1177/0011392114531504>
- Hanafi, S., & Arvanitis, R. (2015). *Knowledge production in the Arab World: the impossible promise*. Routledge.
- Hanson, S. (2010). Gender and mobility: new approaches for informing sustainability. *Gender, Place & Culture*, 17(1), 5-23. <https://doi.org/10.1080/09663690903498225>
- Harter, S. P., & Hooten, P. A. (1992). Information science and scientists: JASIS, 1972–1990. *Journal of the American Society for information Science*, 43(9), 583-593.
- Hasse, W., & Fischer, R. J. (2003). German physicians against anglicization in medicine. A questionnaire study. *Deutsche Medizinische Wochenschrift*, 128(24), 1338-1341. <https://doi.org/10.1055/s-2003-39974>
- Haustein, S., & Larivière, V. (2014). The use of bibliometrics for assessing research: Possibilities, limitations and adverse effects. In *Incentives and performance: Governance of research organizations* (pp. 121-139). Springer.
- Hayek, F. A. (1945). The Use of Knowledge in Society. *American Economic Review*, 35(4), 519-530.
- Hazelkorn, E. (2014). Reflections on a Decade of Global Rankings: what we've learned and outstanding issues. *European Journal of Education*, 49(1), 12-28. <https://doi.org/10.1111/ejed.12059>
- Hazelkorn, E. (2015). *Rankings and the reshaping of higher education: The battle for world-class excellence*. Springer. <https://doi.org/10.1057/9781137446671>
- Hazelkorn, E. (2018). Reshaping the world order of higher education: the role and impact of rankings on national and global systems. *Policy Reviews in Higher Education*, 2(1), 4-31. <https://doi.org/10.1080/23322969.2018.1424562>
- Heilbron, J. (2002). La bibliométrie, genèse et usages. *Actes de la recherche en sciences sociales*, 141(2), 78-79.



- Henriksen, D. (2019). Alphabetic or Contributor Author Order. What Is the Norm in Danish Economics and Political Science and Why? *Journal of the Association for Information Science and Technology*, 70(6), 607-618. <https://doi.org/10.1002/asi.24151>
- Heyard, R., & Hottenrott, H. (2021). The value of research funding for knowledge creation and dissemination: A study of SNSF Research Grants. *Humanities and Social Sciences Communications*, 8(1). <https://doi.org/10.1057/s41599-021-00891-x>
- Hicks, D. (1999). The difficulty of achieving full coverage of international social science literature and the bibliometric consequences. *Scientometrics*, 44(2), 193-215. <https://doi.org/10.1007/bf02457380>
- Hicks, D. (2004). The four literatures of social science.(Eds.) Moed et. al. Handbook of Quantitative Science and Technology Research: The use of publication and patent statistics in studies of S&T systems. In: Dordrecht/Boston/London: Kluwer Academic Publishers.
- Hicks, D. (2012). Performance-based university research funding systems. *Research Policy*, 41(2), 251-261. <https://doi.org/j.respol.2011.09.007>
- Hicks, D., & Melkers, J. (2013). *Bibliometrics as a tool for research evaluation*. Edward Elgar Publishing Ltd. <https://doi.org/10.4337/9780857932402>
- Hicks, D., Wouters, P., Waltman, L., De Rijcke, S., & Rafols, I. (2015). Bibliometrics: The Leiden Manifesto for research metrics. *Nature*, 520(7548), 429-431. <https://doi.org/10.1038/520429a>
- Hirsch, J. E. (2005). An index to quantify an individual's scientific research output. *Proceedings of the National academy of Sciences*, 102(46), 16569-16572. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1283832/pdf/pnas-0507655102.pdf>
- Hofmann, T. (1999). Probabilistic latent semantic indexing. Proceedings of the 22nd annual international ACM SIGIR conference on Research and development in information retrieval,
- Holman, L., Stuart-Fox, D., & Hauser, C. E. (2018). The gender gap in science: How long until women are equally represented? *PLoS Biol*, 16(4), e2004956. <https://doi.org/10.1371/journal.pbio.2004956>
- Huang, C., Su, J., Xie, X., Ye, X., Li, Z., Porter, A., & Li, J. (2015). A bibliometric study of China's science and technology policies: 1949–2010. *Scientometrics*, 102(2), 1521-1539. <https://doi.org/10.1007/s11192-014-1406-4>
- Huang, J., Gates, A. J., Sinatra, R., & Barabási, A.-L. (2020). Historical comparison of gender inequality in scientific careers across countries and disciplines. *Proceedings of the National academy of Sciences*, 117(9), 4609-4616. <https://doi.org/10.1073/pnas.1914221117>
- Huang, J. C. (2011). Attitudes of Taiwanese scholars toward English and Chinese as languages of publication. *Asia Pacific Journal of Education*, 31(2), 115-128. <https://doi.org/10.1080/02188791.2011.566983>
- Huang, M.-H., & Huang, M.-J. (2018). An analysis of global research funding from subject field and funding agencies perspectives in the G9 countries. *Scientometrics*, 115(2), 833-847. <https://doi.org/10.1007/s11192-018-2677-y>

- Huang, Y., Zhu, D., Lv, Q., Porter, A. L., Robinson, D. K. R., & Wang, X. (2017). Early insights on the Emerging Sources Citation Index (ESCI): an overlay map-based bibliometric study. *Scientometrics*, 111(3), 2041-2057. <https://doi.org/10.1007/s11192-017-2349-3>
- Huff, T. E. (2017). *The rise of early modern science: Islam, China, and the West*. Cambridge University Press.
- Human Rights Watch. (2021). Qatar: Male Guardianship Severely Curtails Women's Rights. <https://www.hrw.org/news/2021/03/29/qatar-male-guardianship-severely-curtails-womens-rights>
- Hutchings, K., Dawn Metcalfe, B., & Cooper, B. K. (2010). Exploring Arab Middle Eastern women's perceptions of barriers to, and facilitators of, international management opportunities. *The International Journal of Human Resource Management*, 21(1), 61-83. <https://doi.org/10.1080/09585190903466863>
- Ibrahim, B. (2018). Arab Spring's effect on scientific productivity and research performance in Arab countries. *Scientometrics*, 117(3), 1555-1586. <https://doi.org/10.1007/s11192-018-2935-z>
- Ibrahim, N., Chaibi, A. H., & Ben Ghézala, H. (2022). Comparative study of science evaluation practices. *Vine Journal of Information and Knowledge Management Systems*, 23. <https://doi.org/10.1108/vjikms-12-2021-0293>
- International Labour Office. (2009). *International labour migration and employment in the Arab region: Origins, consequences and the way forward*.
- International Science Council. (2021). *Opening the Record of Science*. <https://council.science/wp-content/uploads/2020/06/2020-02-19-Opening-the-record-of-science.pdf>
- Internet World Stats. (2020). *Internet World users by language - Top 10 Languages*. <https://www.statista.com/statistics/262946/share-of-the-most-common-languages-on-the-internet/>
- Jaffe, A. B., Trajtenberg, M., & Henderson, R. (1993). Geographic Localization of Knowledge Spillovers as Evidenced by Patent Citations. *The quarterly journal of economics*, 108(3), 577-598. <https://doi.org/10.2307/2118401>
- Janavi, E., Moradi, S., & Pakzad, M. (2020). Assessment of Iran's scientific publications based on National Master Plan for Science and Education. *Scientometrics Research Journal*, 6(1), 213-236. <https://doi.org/10.22070/RSCI.2019.4529.1300>
- Jappe, A. (2020). Professional standards in bibliometric research evaluation? A meta-evaluation of European assessment practice 2005–2019. *PLoS One*, 15(4), e0231735. <https://doi.org/10.1371/journal.pone.0231735>
- Jaramillo, A., Ruby, A., Henard, F., & Zaafrane, H. (2011). Internationalization of Higher Education in MENA: Policy issues associated with skills formation and mobility.
- Jayachandran, S. (2015). The Roots of Gender Inequality in Developing Countries. *Annual Review of Economics*, 7(1), 63-88. <https://doi.org/10.1146/annurev-economics-080614-115404>
- Jepsen, D. M., Sun, J. J.-M., Budhwar, P. S., Klehe, U.-C., Krausert, A., Raghuram, S., & Valcour, M. (2014). International academic careers: personal reflections. *The International Journal of Human Resource Management*, 25(10), 1309-1326. <https://doi.org/10.1080/09585192.2013.870307>



- Jiang, Y., Jia, A., Feng, Y., & Zhao, D. (2012). Recommending academic papers via users' reading purposes. Proceedings of the sixth ACM conference on Recommender systems,
- Jiménez-Contreras, E., de Moya Anegón, F., & López-Cózar, E. D. (2003). The evolution of research activity in Spain: The impact of the National Commission for the Evaluation of Research Activity (CNEAI). *Research Policy*, 32(1), 123-142. [https://doi.org/10.1016/S0048-7333\(02\)00008-2](https://doi.org/10.1016/S0048-7333(02)00008-2)
- Jiménez-Contreras, E., & Ferreiro-Alález, L. (1996). Publishing abroad: Fair trade or short sell for non-English-speaking authors? A Spanish study. *Scientometrics*, 36(1), 81-95. <https://doi.org/10.1007/bf02126647>
- Jin, B., & Wang, B. (1999). Chinese science citation database: Its construction and application. *Scientometrics*, 45(2), 325-332. <https://doi.org/10.1007/bf02458440>
- Johnson, H. G. (1965). The Economics of the Brain Drain - The Canadian Case. *Minerva*, 3(3), 299-311. <https://doi.org/10.1007/bf01099956>
- Karabchuk, T., Shomotova, A., & Chmel, K. (2021). Paradox of research productivity of higher education institutions in Arab Gulf countries: The case of the UAE. *Higher Education Quarterly*. <https://doi.org/10.1111/hequ.12347>
- Karam, C. M., & Afioni, F. (2014). Localizing women's experiences in academia: multilevel factors at play in the Arab Middle East and North Africa. *The International Journal of Human Resource Management*, 25(4), 500-538. <https://doi.org/10.1080/09585192.2013.792857>
- Karpik, L. (2010). *The economics of singularities*. Princeton University Press, Princeton. <https://doi.org/10.2307/j.ctv1zm2v2n>
- Kato, M., & Ando, A. (2017). National ties of international scientific collaboration and researcher mobility found in Nature and Science. *Scientometrics*, 110(2), 673-694. <https://doi.org/10.1007/s11192-016-2183-z>
- Katz, J. (1994). Geographical proximity and scientific collaboration. *Scientometrics*, 31(1), 31-43.
- Kidd, C. V. (1965). The Economics of the Brain-Drain. *Minerva*, 4(1), 105-107. <https://doi.org/10.1007/bf01585988>
- Kingdom of Saudi Arabia Ministry of Economy and Planning. (2000). *Seventh development plan (2000–2004)*. Retrieved from <https://www.mof.gov.sa/en/about/OldStrategy/Seventh%20Development%20Plan%20-%20Appendix-%D9%85%D8%AF%D9%85%D8%AC.pdf>
- Kleijn, M. d. (2020). The researcher journey through a gender lens: An examination of research participation, career progression and perceptions across the globe. (*No Title*).
- Koburtay, T., Syed, J., & Haloub, R. (2020). Implications of Religion, Culture, and Legislation for Gender Equality at Work: Qualitative Insights from Jordan. *Journal of Business Ethics*, 164(3), 421-436. <https://doi.org/10.1007/s10551-018-4036-6>
- Kokabisaghi, F., Miller, A. C., Bashar, F. R., Salesi, M., Zarchi, A. A. K., Keramatfar, A., Pourhoseingholi, M. A., Amini, H., & Vahedian-Azimi, A. (2019). Impact of United States political

- sanctions on international collaborations and research in Iran. *BMJ Global Health*, 4(5), e001692. <https://doi.org/10.1136/bmjgh-2019-001692>
- Kokol, P., & Vošner, H. B. (2018). Discrepancies among Scopus, Web of Science, and PubMed coverage of funding information in medical journal articles. *Journal of the Medical Library Association: JMLA*, 106(1), 81. <https://doi.org/10.5195/jmla.2018.181>
- Koljatic, M., & Silva, M. (2001). The international publication productivity of Latin American countries in the economics and business administration fields. *Scientometrics*, 51(2), 381-394.
- Krishna, V., & Khadria, B. (1997). Phasing scientific migration in the context of brain gain and brain drain in India. *Science, Technology and Society*, 2(2), 347-385.
- Krücken, G., & Meier, F. (2006). Turning the university into an organizational actor. *Globalization and organization: World society and organizational change*, 241-257.
- Kucuk, N. (2013). Gender inequality in the MENA: Myths versus facts. *Topics in Middle Eastern and African Economies*, 15(2), 71-104.
- Kulczycki, E. (2017). Assessing publications through a bibliometric indicator: The case of comprehensive evaluation of scientific units in Poland. *Research Evaluation*, 26(1), 41-52. <https://doi.org/10.1093/reseval/rvw023>
- Kulczycki, E., Engels, T. C. E., Pölonen, J., Bruun, K., Dušková, M., Guns, R., Nowotniak, R., Petr, M., Sivertsen, G., Istenič Starčič, A., & Zuccala, A. (2018). Publication patterns in the social sciences and humanities: evidence from eight European countries. *Scientometrics*, 116(1), 463-486. <https://doi.org/10.1007/s11192-018-2711-0>
- Kulis, S., & Sicotte, D. (2002). Women Scientists in Academia: Geographically Constrained to Big Cities, College Clusters, or the Coasts. *Research in Higher Education*, 43(1), 1-30. <https://doi.org/10.1023/a:1013097716317>
- Lahtinen, E., Koskinen-Ollonqvist, P., Rouvinen-Wilenius, P., Tuominen, P., & Mittelmark, M. B. (2005). The development of quality criteria for research: a Finnish approach. *Health Promotion International*, 20(3), 306-315. <https://doi.org/10.1093/heapro/dai008>
- Lamont, M. (2012). Toward a Comparative Sociology of Valuation and Evaluation. *Annual Review of Sociology*, 38(1), 201-221. <https://doi.org/10.1146/annurev-soc-070308-120022>
- Landauer, T. K., Foltz, P. W., & Laham, D. (1998). An introduction to latent semantic analysis. *Discourse processes*, 25(2-3), 259-284.
- Langfeldt, L., Nedeva, M., Sörlin, S., & Thomas, D. A. (2020). Co-existing notions of research quality: A framework to study context-specific understandings of good research. *Minerva*, 58(1), 115-137. <https://doi.org/10.1007/s11024-019-09385-2>
- Langfeldt, L., Reymert, I., & Svartefoss, S. M. (2023). Distrust in grant peer review—reasons and remedies. *Science and Public Policy*. <https://doi.org/10.1093/scipol/scad051>
- Lapidow, A., & Scudder, P. (2019). Shared first authorship. *Journal of the Medical Library Association*, 107(4). <https://doi.org/10.5195/jmla.2019.700>



- Larivière, V., Desrochers, N., Macaluso, B., Mongeon, P., Paul-Hus, A., & Sugimoto, C. R. (2016). Contributorship and division of labor in knowledge production. *Social Studies of Science*, 46(3), 417-435. <https://doi.org/10.1177/0306312716650046>
- Larivière, V., Ni, C., Gingras, Y., Cronin, B., & Sugimoto, C. R. (2013). Bibliometrics: Global gender disparities in science. *Nature News*, 504(7479), 211. <https://doi.org/10.1038/504211a>
- Larivière, V., Pontille, D., & Sugimoto, C. R. (2021). Investigating the division of scientific labor using the Contributor Roles Taxonomy (CRediT). *Quantitative Science Studies*, 2(1), 111-128. https://doi.org/0.1162/qss_a_00097
- Larivière, V., Vignola-Gagne, E., Villeneuve, C., Gelinias, P., & Gingras, Y. (2011). Sex differences in research funding, productivity and impact: an analysis of Quebec university professors. *Scientometrics*, 87(3), 483-498. <https://doi.org/10.1007/s11192-011-0369-y>
- Latour, B., & Woolgar, S. (1986). *Laboratory life: The construction of scientific facts*. Princeton university press.
- Laudel, G. (2003). Studying the brain drain: Can bibliometric methods help? *Scientometrics*, 57(2), 215-237. <https://doi.org/10.1023/a:1024137718393>
- Laudel, G. (2005). Migration Currents Among the Scientific Elite. *Minerva*, 43(4), 377-395. <https://doi.org/10.1007/s11024-005-2474-7>
- League of Arab States. (2009). *Regional Report on Arab Labour Migration: Brain Drain or Brain Gain?*
- Lee, Y.-S., Lo, R., Chen, C.-Y., Lin, P.-C., & Wang, J.-C. (2015). News topics categorization using latent Dirichlet allocation and sparse representation classifier. 2015 IEEE International Conference on Consumer Electronics-Taiwan,
- Levin, S. G., & Stephan, P. E. (1999). Are the foreign born a source of strength for US science? In: American Association for the Advancement of Science.
- Lewis, D. W. (2012). The Inevitability of Open Access. *College & Research Libraries*, 73(5), 493-506. <https://doi.org/10.5860/crl-299>
- Lewison, G., & Dawson, G. (1998). The effect of funding on the outputs of biomedical research. *Scientometrics*, 41(1-2), 17-27.
- Lewison, G., Grant, J., & Jansen, P. (2001). International gastroenterology research: subject areas, impact, and funding. *Gut*, 49(2), 295-302. <https://doi.org/10.1136/gut.49.2.295>
- Ley, T. J., & Hamilton, B. H. (2008). The gender gap in NIH grant applications. *Science*, 322(5907), 1472-1474. <https://science.sciencemag.org/content/322/5907/1472.long>
- Leydesdorff, L., & Jin, B. H. (2005). Mapping the Chinese Science Citation Database in terms of aggregated journal-journal citation relations. *Journal of the American Society for Information Science and Technology*, 56(14), 1469-1479. <https://doi.org/10.1002/asi.20209>
- Li, S. Q. (2020). The end of publish or perish? China's new policy on research evaluation.

- Lincoln, A. E., Pincus, S., Koster, J. B., & Leboy, P. S. (2012). The Matilda Effect in science: Awards and prizes in the US, 1990s and 2000s. *Social Studies of Science*, 42(2), 307-320. https://journals.sagepub.com/doi/10.1177/0306312711435830?url_ver=Z39.88-2003&rft_id=ori:rid:crossref.org&rft_dat=cr_pub%3dpubmed
- Liu, M., Shi, D., & Li, J. (2017). Double-edged sword of interdisciplinary knowledge flow from hard sciences to humanities and social sciences: Evidence from China. *PLoS One*, 12(9), e0184977. <https://doi.org/10.1371/journal.pone.0184977>
- Liu, W. (2020). Accuracy of funding information in Scopus: a comparative case study. *Scientometrics*, 124(1), 803-811. <https://doi.org/10.1007/s11192-020-03458-w>
- Lowell, B. L. (2003). The need for policies that meet the needs of all. *Science and Development Network*.
- Lucio-Arias, D., Velez-Cuartas, G., & Leydesdorff, L. (2015). SciELO citation index and web of science: Distinctions in the visibility of regional science. Proceedings of the 15th conference of the international society for scientometrics and informetrics (ISSI), Istanbul, Turkey,
- Lynch, M. (2022). *The End of the Middle East: How an Old Map Distorts a New Reality*. <https://www.foreignaffairs.com/articles/africa/2022-02-22/end-middle-east>
- Macaluso, B., Larivière, V., Sugimoto, T., & Sugimoto, C. R. (2016). Is science built on the shoulders of women? A study of gender differences in contributorship. *Academic Medicine*, 91(8), 1136-1142. <https://doi.org/10.1097/ACM.0000000000001261>
- Malakhov, V. A., & Erkina, D. S. (2020). Russian Mathematicians in the International Circulation of Scientific Personnel: Bibliometric Analysis. *Sociologia Nauki I Tehnologij-Sociology of Science & Technology*, 11(1), 63-74. <https://doi.org/10.24411/2079-0910-2020-11005>
- Marginson, S. (2020). The world research system. *Changing higher education for a changing world*, 35-51.
- Marginson, S. (2022). 'All things are in flux': China in global science. *Higher Education*, 83(4), 881-910. <https://doi.org/10.1007/s10734-021-00712-9>
- Marginson, S., & Considine, M. (2000). *The enterprise university: Power, governance and reinvention in Australia*. Cambridge University Press.
- Margolis, J. (1967). Citation Indexing and Evaluation of Scientific Papers: The spread of influence in populations of scientific papers may become a subject for quantitative analysis. *Science*, 155(3767), 1213-1219. <https://doi.org/10.1126/science.155.3767.1213>
- Martín-Martín, A., Thelwall, M., Orduna-Malea, E., & Delgado López-Cózar, E. (2021). Google Scholar, Microsoft Academic, Scopus, Dimensions, Web of Science, and OpenCitations' COCI: a multidisciplinary comparison of coverage via citations. *Scientometrics*, 126(1), 871-906. <https://doi.org/10.1007/s11192-020-03690-4>
- Mawdsley, J. K., & Somaya, D. (2016). Employee Mobility and Organizational Outcomes: An Integrative Conceptual Framework and Research Agenda. 42(1), 85-113. <https://doi.org/10.1177/0149206315616459>



- McCallum, A., Wang, X. R., & Corrada-Emmanuel, A. (2007). Topic and role discovery in social networks with experiments on enron and academic email. *Journal of Artificial Intelligence Research*, 30, 249-272. <https://doi.org/10.1613/jair.2229>
- McKiernan, E. C., Schimanski, L. A., Muñoz Nieves, C., Matthias, L., Niles, M. T., & Alperin, J. P. (2019). Use of the Journal Impact Factor in academic review, promotion, and tenure evaluations. *eLife*, 8. <https://doi.org/10.7554/elife.47338>
- Mehrad, J., & Ghane, M. R. (2020). Handbook Bibliometrics. In B. Rafael (Ed.), *6.3 The Islamic World Science Citation Center (ISC): The Construction and Application* (pp. 431-454). De Gruyter Saur. <https://doi.org/doi:10.1515/9783110646610-040>
- Meneghini, R., Mugnaini, R., & Packer, A. L. (2006). International versus national oriented Brazilian scientific journals. A scientometric analysis based on SciELO and JCR-ISI databases. *Scientometrics*, 69(3), 529-538.
- Metcalfe, B. D. (2008). Women, Management and Globalization in the Middle East. *Journal of Business Ethics*, 83(1), 85-100. <https://doi.org/10.1007/s10551-007-9654-3>
- Meyer, J. B. (2001). Network Approach versus Brain Drain: Lessons from the Diaspora. *International Migration*, 39(5), 91-110. <https://doi.org/10.1111/1468-2435.00173>
- Miguélez, E., & Moreno, R. (2013). Research Networks and Inventors' Mobility as Drivers of Innovation: Evidence from Europe. *Regional Studies*, 47(10), 1668-1685. <https://doi.org/10.1080/00343404.2011.618803>
- Mihaljević, H., & Santamaría, L. (2021). Disambiguation of author entities in ADS using supervised learning and graph theory methods. *Scientometrics*, 126(5), 3893-3917. <https://doi.org/10.1007/s11192-021-03951-w>
- Mihaljević, H., Tullney, M., Santamaría, L., & Steinfeldt, C. (2019). Reflections on Gender Analyses of Bibliographic Corpora. *Frontiers in Big Data*, 2(29). <https://doi.org/10.3389/fdata.2019.00029>
- Miranda-González, A., Aref, S., Theile, T., & Zagheni, E. (2020). Scholarly migration within Mexico: analyzing internal migration among researchers using Scopus longitudinal bibliometric data. *EPJ Data Science*, 9(1), 34. <https://doi.org/10.1140/epjds/s13688-020-00252-9>
- Mishra, S., Fegley, B. D., Diesner, J., & Torvik, V. I. (2018). Self-citation is the hallmark of productive authors, of any gender. *PLoS One*, 13(9), e0195773. <https://doi.org/10.1371/journal.pone.0195773>
- Moed, H., De Bruin, R., Nederhof, A., Van Raan, A., Tijssen, R., Schermer, L., & Removille, J. (1992). State of the art bibliometric macro-indicators(an overview of demand and supply). *EUR(Luxembourg)*.
- Moed, H. F. (2006). *Citation analysis in research evaluation* (Vol. 9). Springer Science & Business Media.
- Moed, H. F., Aisati, M. h., & Plume, A. (2012). Studying scientific migration in Scopus. *Scientometrics*, 94(3), 929-942. <https://doi.org/10.1007/s11192-012-0783-9>

- Moed, H. F., Burger, W. J. M., Frankfort, J. G., & Van Raan, A. F. J. (1985). The use of bibliometric data for the measurement of university research performance. *Research Policy*, 14(3), 131-149. [https://doi.org/10.1016/0048-7333\(85\)90012-5](https://doi.org/10.1016/0048-7333(85)90012-5)
- Moed, H. F., De Moya-Anegón, F., Guerrero-Bote, V., Lopez-Illeras, C., & Hladchenko, M. (2021). Bibliometric assessment of national scientific journals. *Scientometrics*, 126(4), 3641-3666. <https://doi.org/10.1007/s11192-021-03883-5>
- Moed, H. F., Glänzel, W., & Schmoch, U. (2004). *Handbook of quantitative science and technology research*. Springer.
- Moed, H. F., & Halevi, G. (2014). A bibliometric approach to tracking international scientific migration. *101*(3), 1987-2001. <https://doi.org/10.1007/s11192-014-1307-6>
- Moghadam, V. M. (2005). Women's economic participation in the Middle East: What difference has the neoliberal policy turn made? *Journal of Middle East Women's Studies*, 1(1), 110-146. <https://www.brookings.edu/articles/equality-and-the-economy-why-the-arab-world-should-employ-more-women/>
- Möller, T. (2019, Sep 02-05). The Impact of Research Funding Agencies on the Research Performance of five European Countries-A Funding Acknowledgements Analysis. *Proceedings of the International Conference on Scientometrics and Informetrics 17th International Conference of the International-Society-for-Scientometrics-and-Informetrics (ISSI) on Scientometrics and Informetrics*, Sapienza Univ Rome, Rome, ITALY.
- Momani, B. (2016). Equality and the economy: why the Arab world should employ more women.
- Mongeon, P., & Paul-Hus, A. (2016). The journal coverage of Web of Science and Scopus: a comparative analysis. *Scientometrics*, 106(1), 213-228. <https://doi.org/10.1007/s11192-015-1765-5>
- Moody, J. (2004). The structure of a social science collaboration network: Disciplinary cohesion from 1963 to 1999. *American sociological review*, 69(2), 213-238. <https://doi.org/10.1177/000312240406900204>
- Morano Foadi, S. (2006). Key issues and Causes of the Italian Brain Drain. *Innovation: The European Journal of Social Science Research*, 19(2), 209-223. <https://doi.org/10.1080/13511610600804315>
- Morillo, F. (2020). Is open access publication useful for all research fields? Presence of funding, collaboration and impact. *Scientometrics*, 125(1), 689-716. <https://doi.org/10.1007/s11192-020-03652-w>
- Morris, H., Harvey, C., Kelly, A., & Rowlinson, M. (2011). Food for Thought? A Rejoinder on Peer-review and RAE2008 Evidence. *Accounting Education*, 20(6), 561-573. <https://doi.org/10.1080/09639284.2011.634215>
- Moskaleva, O., Pisyakov, V., Sterligov, I., Akoev, M., & Shabanova, S. (2018). Russian Index of Science Citation: Overview and review. *Scientometrics*, 116(1), 449-462. <https://doi.org/10.1007/s11192-018-2758-y>
- Mounier, P. (2018). 'Publication favela' or bibliodiversity? Open access publishing viewed from a European perspective. *Learned Publishing*, 31, 299-305.



- Mountford, A. (1997). Can a brain drain be good for growth in the source economy? *Journal of Development Economics*, 53(2), 287-303. [https://doi.org/10.1016/s0304-3878\(97\)00021-7](https://doi.org/10.1016/s0304-3878(97)00021-7)
- Mugabushaka, A.-M., van Eck, N. J., & Waltman, L. (2022). Funding COVID-19 research: Insights from an exploratory analysis using open data infrastructures. *Quantitative Science Studies*, 3(3), 560-582. https://doi.org/10.1162/qss_a_00212
- Mukundan, R., & Narayanan, N. (2019). Research performance of Khalifa University of Science and Technology, Abu Dhabi. *Performance Measurement and Metrics*, 21(1), 52-64. <https://doi.org/10.1108/pmm-06-2019-0022>
- Musselin, C. (2005). *Le marché des universitaires: France, Allemagne, États-Unis*. Presses de Sciences Po.
- Musselin, C. (2009). *The market for academics*. Routledge.
- Musselin, C. (2013). *The long march of French universities*. Routledge.
- Nakamura, M., Pendlebury, D., Schnell, J., & Szomszor, M. (2019). Navigating the structure of research on sustainable development goals. *Policy*, 11, 12.
- Nallapati, R., & Cohen, W. (2008). Link-PLSA-LDA: A new unsupervised model for topics and influence of blogs. Proceedings of the International AAAI Conference on Web and Social Media,
- Nane, G. F., Larivière, V., & Costas, R. (2017). Predicting the age of researchers using bibliometric data. *Journal of Informetrics*, 11(3), 713-729. <https://doi.org/10.1016/j.joi.2017.05.002>
- Narasimhan, S. (2021). Participation of women in science in the developed and developing worlds: inverted U of feminization of the scientific workforce, gender equity and retention. *Pure and Applied Chemistry*. <https://doi.org/10.1515/pac-2021-0101>
- Narin, F. (1976). *Evaluative bibliometrics: The use of publication and citation analysis in the evaluation of scientific activity*. Computer Horizons Cherry Hill, NJ.
- Narin, F., & Hamilton, K. S. (1996). Bibliometric performance measures. *Scientometrics*, 36(3), 293-310. <https://doi.org/10.1007/bf02129596>
- Negishi, M., Sun, Y., & Shigi, K. (2004). Citation Database for Japanese Papers: A new bibliometric tool for Japanese academic society. *Scientometrics*, 60(3), 333-351. <https://doi.org/10.1023/b:scie.0000034378.38698.b2>
- Nerad, M. (2010). Globalization and the internationalization of graduate education: A macro and micro view. *Canadian Journal of Higher Education*, 40(1), 1-12.
- Netz, N., Hampel, S., & Aman, V. (2020). What effects does international mobility have on scientists' careers? A systematic review. *Research Evaluation*, 29(3), 327-351. <https://doi.org/10.1093/reseval/rvaa007>
- Newman, D. J., & Block, S. (2006). Probabilistic topic decomposition of an eighteenth-century American newspaper. *Journal of the American Society for Information Science and Technology*, 57(6), 753-767. <https://doi.org/10.1002/asi.20342>

- Ni, R., & Waltman, L. (2023). *To Preprint or Not to Preprint: A Global Researcher Survey*. Center for Open Science. <https://dx.doi.org/10.31235/osf.io/k7reb>
- Ochsner, M., Kulczycki, E., & Gedutis, A. (2018). The diversity of european research evaluation systems. STI 2018 Conference Proceedings,
- OECD. (1996). *The Knowledge-Based Economy*. World Bank. <https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups>
- OECD. (2008). *The Global Competition for Talent: Mobility of the Highly Skilled*. World Bank. www.oecd.org/sti/inno/theglobalcompetitionfortalentmobilityofthehighlyskilled
- OECD. (2013). *Gender inequality and entrepreneurship in the Middle East and North Africa - A statistical portrait*. <https://www.oecd-ilibrary.org/content/publication/9789264213944-en>
- OECD. (2014). *Women in Business 2014*. <https://doi.org/https://doi.org/10.1787/9789264213944-en>
- OECD. (2015). *Connecting with Emigrants - A Global Profile of Diasporas 2015*. <https://www.oecd-ilibrary.org/content/publication/9789264239845-en>
- Offenhauer, P., & Buchalter, A. R. (2005). Women in Islamic societies: A selected review of social scientific literature.
- Oldac, Y. I., & Lili, Y. (2021). Two edges of Asia in a multipolar world: The interconnections between Chinese and Turkish higher education systems. *Higher Education Governance and Policy*, 2(2), 68-81.
- Oppenheimer, J. R. (1948). The eternal apprentice. *Time magazine*, 52, 70-81.
- Ortiz, R. (2009). *La supremacía del inglés en las ciencias sociales*. Siglo XXI Editores Argentina.
- Osterloh, M. (2010). Governance by numbers. Does it really work in research? *Analyse & Kritik*, 32(2), 267-283. <https://doi.org/10.1515/auk-2010-0205>
- Özden, Ç. (2006). Brain drain in Middle East and North Africa—The patterns under the surface. *United Nations Population, EGM/2006/10, New York, NY*.
- Paasi, M. (1998). Efficiency of innovation systems in the transition countries. *Economic Systems*, 22, 217-234.
- Packer, A. L., Biojone, M. R., Antonio, I., Takenaka, R. M., García, A. P., Silva, A. C. d., Murasaki, R. T., Mylek, C., Reis, O. C., & Delbucio, H. C. R. F. (1998). SciELO: uma metodologia para publicação eletrônica. *Ciência da informação*, 27, nd-nd.
- Pajic, D. (2015). The Serbian Citation Index: Contest and Collapse. In A. A. Salah, Y. Tonta, A. A. A. Salah, C. Sugimoto, & U. Al (Eds.), *Proceedings of Issi 2015 Istanbul: 15th International Society of Scientometrics and Informetrics Conference* (pp. 604-605). Int Soc Scientometrics & Informetrics-Issi. https://www.issi-society.org/proceedings/issi_2015/0604.pdf
- Palomerias, N., & Melero, E. (2010). Markets for Inventors: Learning-by-Hiring as a Driver of Mobility. *Management Science*, 56(5), 881-895. <https://doi.org/10.1287/mnsc.1090.1135>



- Paradeise, C. (2016). *In search of academic quality*. Springer. <https://doi.org/10.1057/9781137298294>
- Paradeise, C., & Thoenig, J.-C. (2013). Academic Institutions in Search of Quality: Local Orders and Global Standards. *Organization Studies*, 34(2), 189-218. <https://doi.org/10.1177/0170840612473550>
- Parveen, M. (2021). Women empowerment: new paradigm shift of Saudi women into labor workforce. *Society and Business Review*, ahead-of-print(ahead-of-print). <https://doi.org/10.1108/SBR-10-2020-0123>
- Patterson, L., Varadarajan, D. S., & Saji Salim, B. (2020). Women in STEM/SET: gender gap research review of the United Arab Emirates (UAE) – a meta-analysis. *Gender in Management: An International Journal*, ahead-of-print(ahead-of-print). <https://doi.org/10.1108/GM-11-2019-0201>
- Paul-Hus, A., Bouvier, R. L., Ni, C. Q., Sugimoto, C. R., Pisljakov, V., & Lariviere, V. (2015). Forty years of gender disparities in Russian science: a historical bibliometric analysis. *Scientometrics*, 102(2), 1541-1553. <https://doi.org/10.1007/s11192-014-1386-4>
- Paul-Hus, A., Desrochers, N., & Costas, R. (2016). Characterization, description, and considerations for the use of funding acknowledgement data in Web of Science. *Scientometrics*, 108(1), 167-182. <https://doi.org/10.1007/s11192-016-1953-y>
- Payne, A. A., & Siow, A. (1999). *Does federal research funding increase university research output?* Citeseer.
- Pedersen, J. (2014). *The arabic book* (Vol. 688). Princeton University Press.
- Peterson, M. W. (2007). The study of colleges and universities as organizations. *Sociology of higher education: Contributions and their contexts*, 147-186.
- Pisljakov, V. (2007). Why should we create national citation indexes. *Science and Technical Libraries*, 2, 65-71. <https://library.hse.ru/mirror/pubs/share/200171529>
- Pittler, M. H., & Ernst, E. (2005). The Decline of Non-English Language Journals. 80(2), 287. <https://doi.org/10.4065/80.2.287-a>
- Piwowar, H., Priem, J., Lariviere, V., Alperin, J. P., Matthias, L., Norlander, B., Farley, A., West, J., & Haustein, S. (2018). The state of OA: a large-scale analysis of the prevalence and impact of Open Access articles. *Peerj*, 6, Article e4375. <https://doi.org/10.7717/peerj.4375>
- Porter, T. M. (1996). Trust in numbers. In *Trust in Numbers*. Princeton University Press. <https://doi.org/10.1515/9781400821617>
- Qatar Government. (2021). Government Communications Office statement in response to Human Rights Watch. <https://www.gco.gov.qa/en/2021/03/29/gco-statement-in-response-to-human-rights-watch>
- Qiu, J. (2010). Publish or perish in China: The pressure to rack up publications in high-impact journals could encourage misconduct, some say. *Nature*, 463(7278), 142-144. <https://doi.org/10.1038/463142a>

- Quan, W., Chen, B., & Shu, F. (2017). Publish or impoverish: An investigation of the monetary reward system of science in China (1999-2016). *Aslib Journal of Information Management*. <https://doi.org/10.1108/ajim-01-2017-0014>
- Rabat Declaration. (2013). <https://pin.enssup.gov.ma/index.php/cooperation/cooperation-regionale/2-non-categorise/30-dialogue-5-5>
- Rafols, I., Noyons, E., Confraria, H., & Ciarli, T. (2021). Visualising plural mappings of science for Sustainable Development Goals (SDGs). <https://doi.org/10.31235/osf.io/yfqbd>
- Rangnekar, D. (2005). Acknowledged: Analysing the bibliometric presence of the Multiple Sclerosis Society. *Aslib Proceedings*, 57(3), 247-260. <https://doi.org/10.1108/00012530510599208>
- Rasmussen, K. C., Maier, E., Strauss, B. E., Durbin, M., Riesbeck, L., Wallach, A., Zamloot, V., & Erena, A. (2019). The nonbinary fraction: Looking towards the future of gender equity in astronomy. *arXiv preprint arXiv:1907.04893*.
- Research Professional. (2020). *Global Funding Trends*. <http://online.fliphtml5.com/qetge/qcwn/#p=3>
- Riera, M., & Aibar, E. (2013). Does open access publishing increase the impact of scientific articles? An empirical study in the field of intensive care medicine. *Medicina Intensiva*, 37(4), 232-240. <https://doi.org/10.1016/j.medin.2012.04.002>
- Rigby, J. (2011). Systematic grant and funding body acknowledgement data for publications: new dimensions and new controversies for research policy and evaluation. *Research Evaluation*, 20(5), 365-375. <https://doi.org/10.3152/095820211x13164389670392>
- Rizvi, L. J., & Hussain, Z. (2021). Empowering woman through legal reforms-evidence from Saudi Arabian context. *International Journal of Law and Management*. <https://doi.org/10.1108/IJLMA-03-2021-0068>
- Roa-Atkinson, A., & Velho, L. (2005). Interactions in knowledge production. *Aslib Proceedings*, 57(3), 200-216. <https://doi.org/10.1108/00012530510599172>
- Robertson, R. (2012). Globalisation or glocalisation? *The Journal of International Communication*, 18(2), 191-208. <https://doi.org/10.1080/13216597.2012.709925>
- Robinson-García, N., Cañibano, C., Woolley, R., & Costas, R. (2016). Scientific mobility of early career researchers in Spain and The Netherlands through their publications. 21st International Conference on Science and Technology Indicators-STI 2016. Book of Proceedings,
- Robinson-García, N., Costas, R., Sugimoto, C. R., Larivière, V., & Nane, G. F. (2020). Task specialization across research careers. *eLife*, 9. <https://doi.org/10.7554/elife.60586>
- Robinson-García, N., Sugimoto, C. R., Murray, D., Yegros-Yegros, A., Larivière, V., & Costas, R. (2019). The many faces of mobility: Using bibliometric data to measure the movement of scientists. *Journal of Informetrics*, 13(1), 50-63. <https://doi.org/10.1016/j.joi.2018.11.002>
- Rochmyaningsih, D. (2019). How to shine in Indonesian science? Game the system. <https://doi.org/10.1126/science.aaw6064>



- Roco, M. C. (2011). The long view of nanotechnology development: the National Nanotechnology Initiative at 10 years. *Journal of Nanoparticle Research*, 13(2), 427-445. <https://doi.org/10.1007/s11051-010-0192-z>
- Rodrigues, M. L., Nimrichter, L., & Cordero, R. J. B. (2016). The benefits of scientific mobility and international collaboration. *FEMS Microbiology Letters*, 363(21), fnw247. <https://doi.org/10.1093/femsle/fnw247>
- Ross, M. L. (2008). Oil, Islam, and Women. *American Political Science Review*, 102(1), 107-123. <https://doi.org/10.1017/s0003055408080040>
- Royal Society. (2012). *Science as an open enterprise*. <https://royalsociety.org/~media/policy/projects/sape/2012-06-20-saoc.pdf>
- Said, E. W. (2014). Orientalism reconsidered. In *Postcolonial criticism* (pp. 126-144). Routledge.
- Saliba, G. (2007). *Islamic science and the making of the European renaissance*. Mit Press.
- Saliba, G. (2008). China and Islamic civilization: Exchange of techniques and scientific ideas. *The Silk Road*, 6(1), 9-16.
- Saliba, G. (2009). Islamic reception of Greek astronomy. *Proceedings of the International Astronomical Union*, 5(S260), 149-165.
- Salter, A. J., & Martin, B. R. (2001). The economic benefits of publicly funded basic research: a critical review. *Research Policy*, 30(3), 509-532. [https://doi.org/10.1016/S0048-7333\(00\)00091-3](https://doi.org/10.1016/S0048-7333(00)00091-3)
- Samers, M. (2000). Exclusions, Inclusions, and Occlusions in 'Anglo-American Geography': Reflections on Minca's "Venetian Geographical Praxis". *IS*(6), 663-666. <https://doi.org/10.1068/d1806cd>
- Sandström, U. (2009). Research quality and diversity of funding: A model for relating research money to output of research. *Scientometrics*, 79(2), 341-349. <https://doi.org/10.1007/s11192-009-0422-2>
- Santamaría, L., & Mihaljević, H. (2018). Comparison and benchmark of name-to-gender inference services. *PeerJ Computer Science*, 4, e156. <https://doi.org/10.7717/peerj-cs.156>
- Sarewitz, D. (1997). Social change and science policy. *Issues in Science and Technology*, 13(4), 29-32.
- Sarwar, R., & Hassan, S.-U. (2015). A bibliometric assessment of scientific productivity and international collaboration of the Islamic World in science and technology (S&T) areas. *Scientometrics*, 105(2), 1059-1077. <https://doi.org/10.1007/s11192-015-1718-z>
- Sauder, M., & Espeland, W. N. (2009). The discipline of rankings: Tight coupling and organizational change. *American sociological review*, 74(1), 63-82. <https://doi.org/10.1177/000312240907400104>
- Saudi Arabia's Vision 2030. (2020). *National Transformation Program 2020*. Retrieved from <https://www.vision2030.gov.sa/en/vision-2030/overview/>
- Scellato, G., Franzoni, C., & Stephan, P. (2015). Migrant scientists and international networks. *Research Policy*, 44(1), 108-120. <https://doi.org/10.1016/j.respol.2014.07.014>

- Schmoch, U., Fardoun, H. M., & Mashat, A. S. (2016). Establishing a World-Class University in Saudi Arabia: intended and unintended effects. *Scientometrics*, 109(2), 1191-1207. <https://doi.org/10.1007/s11192-016-2089-9>
- Schulz, C., Mazloumian, A., Petersen, A. M., Penner, O., & Helbing, D. (2014). Exploiting citation networks for large-scale author name disambiguation. *EPJ Data Science*, 3(1). <https://doi.org/10.1140/epjds/s13688-014-0011-3>
- Science Europe. (2022). *The Agreement on Reforming Research Assessment is now final*. <https://scienceeurope.org/news/rra-agreement-final/>
- Scott, P. (2015). Dynamics of Academic Mobility: Hegemonic Internationalisation or Fluid Globalisation. *European Review*, 23(S1), S55-S69. <https://doi.org/10.1017/s1062798714000775>
- Seol, S. S., & Park, J. M. (2008). Knowledge sources of innovation studies in Korea: A citation analysis. *Scientometrics*, 75(1), 3-20. <https://doi.org/10.1007/s11192-007-1826-5>
- Shalaby, M. (2014). The Paradox of Female Economic Participation in the Middle East and North Africa. *Issue Brief*(03.07.14). <https://hdl.handle.net/1911/91839>
- Shen, H. (2013). Inequality quantified: Mind the gender gap. *Nature News*, 495(7439), 22. <https://doi.org/10.1038/495022a>
- Shin, J. C., Lee, S. J., & Kim, Y. (2012). Knowledge-based innovation and collaboration: a triple-helix approach in Saudi Arabia. *Scientometrics*, 90(1), 311-326. <https://doi.org/10.1007/s11192-011-0518-3>
- Short, J. R., Boniche, A., Kim, Y., & Li, P. L. (2001). Cultural globalization, global English, and geography journals. *Professional Geographer*, 53(1), 1-11. <https://doi.org/10.1111/0033-0124.00265>
- Shueb, S., & Gul, S. (2023). Measuring the research funding landscape: a case study of BRICS nations. *Global Knowledge Memory and Communication*, 24. <https://doi.org/10.1108/gkmc-08-2022-0192>
- Siddiqi, A., Stoppani, J., Anadon, L. D., & Narayanamurti, V. (2016). Scientific Wealth in Middle East and North Africa: Productivity, Indigeneity, and Specialty in 1981–2013. *PLoS One*, 11(11), e0164500. <https://doi.org/10.1371/journal.pone.0164500>
- Sīle, L., Pölönen, J., Sivertsen, G., Guns, R., Engels, T. C., Arefiev, P., Dušková, M., Faurbæk, L., Holl, A., & Kulczycki, E. (2018). Comprehensiveness of national bibliographic databases for social sciences and humanities: Findings from a European survey. *Research Evaluation*, 27(4), 310-322. <https://doi.org/10.1093/reseval/rvy016>
- Simon, D., & Knie, A. (2013). Can evaluation contribute to the organizational development of academic institutions? An international comparison. *Evaluation*, 19(4), 402-418. <https://doi.org/10.1177/1356389013505806>
- Singh, J. (2005). Collaborative Networks as Determinants of Knowledge Diffusion Patterns. *Management Science*, 51(5), 756-770. <https://doi.org/10.1287/mnsc.1040.0349>
- Singh, J., & Agrawal, A. (2011). Recruiting for Ideas: How Firms Exploit the Prior Inventions of New Hires. *Management Science*, 57(1), 129-150. <https://doi.org/10.1287/mnsc.1100.1253>



- Singh, V. K., Singh, P., Karmakar, M., Leta, J., & Mayr, P. (2021). The journal coverage of Web of Science, Scopus and Dimensions: A comparative analysis. *Scientometrics*, 126(6), 5113-5142. <https://doi.org/10.1007/s11192-021-03948-5>
- Sirtes, D. (2013). Funding acknowledgements for the German Research Foundation (DFG). The dirty data of the web of science database and how to clean it up. Proceedings of the 14th international society of scientometrics and informetrics conference,
- Sirtes, D., & Riechert, M. (2014). A fully automated method for the unification of funding organizations in the web of knowledge. *Proceedings of the 19th international conference on science and technology indicators*
- Sivertsen, G. (2018a). Balanced multilingualism in science.
- Sivertsen, G. (2018b). The Norwegian Model in Norway. *Journal of Data and Information Science*, 3(4), 3-19. <https://doi.org/10.2478/jdis-2018-0017>
- Slaughter, S., & Leslie, L. L. (1997). Academic capitalism: Politics, policies, and the entrepreneurial university.
- Slavova, K., Fosfuri, A., & De Castro, J. O. (2015). Learning by Hiring: The Effects of Scientists' Inbound Mobility on Research Performance in Academia. *Organization Science*. <https://doi.org/10.1287/orsc.2015.1026>
- Solati, F. (2017). *Women, work, and patriarchy in the Middle East and North Africa*. Springer.
- Song, H. (1997). From brain drain to reverse brain drain: Three decades of Korean experience. *Science, Technology and Society*, 2(2), 317-345.
- Sonnenwald, D. H. (2007). Scientific collaboration. *Annual Review of Information Science and Technology*, 41(1), 643-681. <https://doi.org/10.1002/aris.2007.1440410121>
- Sotudeh, H. (2011). Concentration effect of citation to Iranian papers: Iran's Matthew core journals. *Online Information Review*, 35(3), 471-491. <https://doi.org/10.1108/14684521111151478>
- Stack, S. (2004). Gender, children and research productivity. *Research in Higher Education*, 45(8), 891-920. <https://doi.org/10.1007/s11162-004-5953-z>
- Stephan, P. (2012). *How economics shapes science*. Harvard University Press.
- Stephan, P. E., & Levin, S. G. (2001). Exceptional contributions to US science by the foreign-born and foreign-educated. *Population Research and Policy Review*, 20(1/2), 59-79. <https://doi.org/10.1023/a:1010682017950>
- Sterligov, I. A., Savina, T. F., & Chichkova, A. O. (2020). A Study of Grant Support from Russian Scientific Foundations to Domestic Publications in Leading International Journals (based on Data from Scopus and Web of Science, the Russian Foundation for Basic Research, and the Russian Science Foundation). *Scientific and Technical Information Processing*, 47(1), 36-55. <https://doi.org/10.3103/s0147688220010074>

- Su, R., Rounds, J., & Armstrong, P. I. (2009). Men and Things, Women and People: A Meta-Analysis of Sex Differences in Interests. *Psychological Bulletin*, 135(6), 859-884. <https://doi.org/10.1037/a0017364>
- Su, X., Deng, S., & Shen, S. (2014). The design and application value of the Chinese Social Science Citation Index. *Scientometrics*, 98(3), 1567-1582. <https://doi.org/10.1007/s11192-012-0921-4>
- Subbotin, A., & Aref, S. (2021). Brain Drain and Brain Gain in Russia: Analyzing International Migration of Researchers by Discipline using Scopus Bibliometric Data 1996-2020. *Scientometrics*, 126, 7875-7900. <https://doi.org/10.1007/s11192-021-04091-x>
- Sugimoto, C., & Larivière, V. (May 2019). *Indicators for social good*. CWTS. <https://www.cwts.nl/blog?article=n-r2w2c4>
- Sugimoto, C. R., Robinson-García, N., & Costas, R. (2016). Towards a global scientific brain: Indicators of researcher mobility using co-affiliation data. *OECD STI*. <https://www.oecd.org/sti/061%20-%20SugimotoMobilityOECD.pdf>
- Sugimoto, C. R., Robinson-García, N., Murray, D. S., Yegros-Yegros, A., Costas, R., & Lariviere, V. (2017). Scientists have most impact when they're free to move. *Nature*, 550(7674), 29-31. <https://doi.org/10.1038/550029a>
- Suominen, A., & Toivanen, H. (2016). Map of science with topic modeling: Comparison of unsupervised learning and human-assigned subject classification. *Journal of the Association for Information Science and Technology*, 67(10), 2464-2476. <https://doi.org/10.1002/asi.23596>
- Tang, L., Hu, G., & Liu, W. (2017). Funding acknowledgment analysis: Queries and caveats. *Journal of the Association for Information Science and Technology*, 68(3), 790-794. <https://doi.org/10.1002/asi.23713>
- Tang, M., Bever, J. D., & Yu, F.-H. (2017). Open access increases citations of papers in ecology. *Ecosphere*, 8(7), Article e01887. <https://doi.org/10.1002/ecs2.1887>
- Tasci, G. (2021). Reflections on women in internationalization. *Cypriot Journal of Educational Sciences*, 16(2), 703-724. <https://doi.org/10.18844/cjes.v16i2.5648>
- Tekles, A., & Bornmann, L. (2020). Author name disambiguation of bibliometric data: A comparison of several unsupervised approaches. *Quantitative Science Studies*, 1(4), 1510-1528. https://doi.org/10.1162/qss_a_00081
- Terleckyj, N. E. (1985). Measuring economic effects of federal research and development expenditures, recent history with special emphasis on federal R&D performed in industry (Paper prepared for the Workshop on the Federal Role in Research and Development, National Academies of Science and Engineering, Washington DC). Papers Commissioned for a Workshop on the Federal Role in Research and Development,
- The Committee for Public Information in Finland, European Network for Research Evaluation in the Social Sciences and the Humanities (ENRESSH), Federation of Finnish Learned Societies, The Finnish Association for Scholarly Publishing, & Universities Norway. (2019). Helsinki Initiative on Multilingualism in Scholarly Communication. <https://doi.org/10.6084/m9.figshare.7951067.v1>



- Thelwall, M., Kousha, K., Wouters, P., Waltman, L., de Rijcke, S., Rushforth, A., & Franssen, T. (2015). *The metric tide: Literature review*. <https://doi.org/10.13140/RG.2.1.5066.3520>
- Thomas, D. A., Nedeva, M., Tirado, M. M., & Jacob, M. (2020). Changing research on research evaluation: A critical literature review to revisit the agenda. *Research Evaluation*, 29(3), 275-288. <https://doi.org/10.1093/reseval/rvaa008>
- Times Higher Education. (2017). *Latin American science funding crisis fuels brain drain*. <https://www.timeshighereducation.com/news/latin-american-science-funding-crisis-fuels-brain-drain>
- Tonta, Y. (201). Türkiye de Yayimlanan ve Web of Science ta Dizinlenen Dergilerle İlgili Bir Değerlendirme (Journals Published in Turkey and Indexed in the Web of Science: An Evaluation). *Türk Kutuphaneciliği - Turkish Librarianship*, 31(4), 449-482. <https://doi.org/10.24146/tkd.2017.21>
- Tonta, Y., & Akbulut, M. (2020). Does monetary support increase citation impact of scholarly papers? *Scientometrics*, 125(2), 1617-1641. <https://doi.org/10.1007/s11192-020-03688-y>
- Torvik, V. I., & Smalheiser, N. R. (2009). Author name disambiguation in MEDLINE. *ACM Transactions on Knowledge Discovery from Data (TKDD)*, 3(3), 1-29. <https://doi.org/10.1145/1552303.1552304>
- Trusz, S. (2020). Why do females choose to study humanities or social sciences, while males prefer technology or science? Some intrapersonal and interpersonal predictors. *Social Psychology of Education*, 23(3), 615-639. <https://doi.org/10.1007/s11218-020-09551-5>
- Turki, H., Ben Aouicha, M., & Hadj Taieb, M. A. (2019). Discussing Arab Spring's effect on scientific productivity and research performance in Arab countries. *Scientometrics*, 120(1), 337-339. <https://doi.org/10.1007/s11192-019-03127-7>
- UNDP. (2009). *Development Challenges for the Arab Region*. World Bank. <https://openknowledge.worldbank.org/handle/10986/4391>
- UNESCO. (2015a). First Regional Pan-Arab Consultation on Open Access to Scientific Information and Research. <https://en.unesco.org/news/first-regional-pan-arab-consultation-open-access-scientific-information-and-research>
- UNESCO. (2015b). *Transforming our world: the 2030 Agenda for Sustainable Development*. <https://sdgs.un.org/2030agenda>
- UNESCO. (2015c). *UNESCO science report: towards 2030*. <https://unesdoc.unesco.org/ark:/48223/pf0000235406>
- UNESCO. (2016). *Global Open Access Portal*. <http://www.unesco.org/new/en/communication-and-information/portals-and-platforms/goap/access-by-region/arab-states/>
- UNESCO. (2021a). *UNESCO Recommendation on Open Science*. <https://unesdoc.unesco.org/ark:/48223/pf0000379949>
- UNESCO. (2021b). *UNESCO Science Report: the race against time for smarter development* (9231004506)

978-92-3-100450-6). https://unesdoc.unesco.org/notice?id=p::usmarcdef_0000377433

UNESCO. (2022). Arab States adopt a new regional higher education convention. <https://www.unesco.org/en/articles/arab-states-adopt-new-regional-higher-education-convention>

UNESCO. (2023). Scientific research cooperation: Why collaborate in science? Benefits and examples. <https://www.unesco.org/en/scientific-research-cooperation-why-collaborate-science-benefits-and-examples>

United Nations. (2002-2018). *Coordination Meeting on International Migration*. <https://www.un.org/en/development/desa/population/migration/events/coordination/index.asp>

United Nations. (2015). *Transforming our world: the 2030 Agenda for Sustainable Development* https://www.un.org/en/development/desa/population/migration/generalassembly/docs/globalcompact/A_RES_70_1_E.pdf

Uzun, A. (2006). Science and technology policy in Turkey. National strategies for innovation and change during the 1983-2003 period and beyond. *Scientometrics*, 66(3), 551-559. <https://doi.org/10.1007/s11192-006-0040-1>

van Arensbergen, P., van der Weijden, I., & van den Besselaar, P. (2014). Different views on scholarly talent: What are the talents we are looking for in science? *Research Evaluation*, 23(4), 273-284.

Van den Besselaar, P., & Sandström, U. (2017). Vicious circles of gender bias, lower positions, and lower performance: Gender differences in scholarly productivity and impact. *PLoS One*, 12(8), e0183301. <https://doi.org/10.1371/journal.pone.0183301>

van der Wende, M., Kirby, W. C., Liu, N. C., & Marginson, S. (2020). *China and Europe on the new silk road: Connecting universities across Eurasia*. Oxford University Press.

van Eck, N. J., & Waltman, L. (2009). VOSviewer: A Computer Program for Bibliometric Mapping. In B. Larsen & J. Leta (Eds.), *Proceedings of Issi 2009 - 12th International Conference of the International Society for Scientometrics and Informetrics, Vol 2* (Vol. 2, pp. 886-897). Int Soc Scientometrics & Informetrics-Issi.

van Eck, N. J., & Waltman, L. (2010). Software survey: VOSviewer, a computer program for bibliometric mapping. *Scientometrics*, 84(2), 523-538. <https://doi.org/10.1007/s11192-009-0146-3>

Van Leeuwen, T. N., Moed, H. F., Tijssen, R. J. W., Visser, M. S., & Van Raan, A. F. J. (2001). Language biases in the coverage of the Science Citation Index and its consequences for international comparisons of national research performance. *Scientometrics*, 51(1), 335-346. <https://doi.org/10.1023/a:1010549719484>

Van Raan, A. F. J. (1998). The influence of international collaboration on the impact of research results. *Scientometrics*, 42(3), 423-428. <https://doi.org/10.1007/bf02458380>

Vandewalle, L. (2015). *Pakistan and China: 'Iron brothers' forever?* http://www.europarl.europa.eu/RegData/etudes/IDAN/2015/549052/EXPO_IDA%282015%29549052_EN.pdf



- Vélez Cuartas, G. J., Lucio Arias, D., & Leydesdorff, L. (2016). Regional and global science: Publications from Latin America and the Caribbean in the SciELO Citation Index and the Web of Science.
- Velho, L., & Krige, J. (1984). Publication and citation practices of Brazilian agricultural scientists. *Social Studies of Science*, 14(1), 45-62.
- Vera-Baceta, M.-A., Thelwall, M., & Kousha, K. (2019). Web of Science and Scopus language coverage. *Scientometrics*, 121(3), 1803-1813. <https://doi.org/10.1007/s11192-019-03264-z>
- Vesper, I. (2013). Euro-Arab science collaboration in the spotlight. *Research Europe*.
- Visser, M., Van Eck, N. J., & Waltman, L. (2021). Large-scale comparison of bibliographic data sources: Scopus, Web of Science, Dimensions, Crossref, and Microsoft Academic. *Quantitative Science Studies*, 2(1), 20-41. https://doi.org/10.1162/qss_a_00112
- Vléduts, G. É., Nalimov, V. V. e., & Styazhkin, N. (1959). Scientific and technical information as one of the problems of cybernetics. *Soviet Physics Uspekhi*, 2(5), 637.
- Wagner, C. S., & Leydesdorff, L. (2005). Network structure, self-organization, and the growth of international collaboration in science. *Research Policy*, 34(10), 1608-1618. <https://doi.org/10.1016/j.respol.2005.08.002>
- Wagner, C. S., Whetsell, T. A., & Leydesdorff, L. (2017). Growth of international collaboration in science: revisiting six specialties. *Scientometrics*, 110(3), 1633-1652. <https://doi.org/10.1007/s11192-016-2230-9>
- Wahid, N., Warraich, N. F., & Tahira, M. (2021). Group level scientometric analysis of Pakistani authors. *Collnet Journal of Scientometrics and Information Management*, 15(2), 287-304. <https://doi.org/10.1080/09737766.2021.1960219>
- Waltman, L. (2012). An empirical analysis of the use of alphabetical authorship in scientific publishing. *Journal of Informetrics*, 6(4), 700-711. <https://doi.org/10.1016/j.joi.2012.07.008>
- Waltman, L. (2016). A review of the literature on citation impact indicators. *Journal of Informetrics*, 10(2), 365-391. <https://doi.org/10.1016/j.joi.2016.02.007>
- Waltman, L. (2021). Understanding gender differences in science requires a diversity of perspectives, including controversial ones. *Quantitative Science Studies*, 2(1), 224-224. https://doi.org/10.1162/qss_e_00115
- Waltman, L., & Van Eck, N. J. (2012). A new methodology for constructing a publication-level classification system of science. *Journal of the American Society for Information Science and Technology*, 63(12), 2378-2392. <https://doi.org/10.1002/asi.22748>
- Wang, J., Hooi, R., Li, A. X., & Chou, M.-H. (2019). Collaboration patterns of mobile academics: The impact of international mobility. *Science and Public Policy*, 46(3), 450-462. <https://doi.org/10.1093/scipol/scy073>
- Wang, J., & Shapira, P. (2011). Funding acknowledgement analysis: an enhanced tool to investigate research sponsorship impacts: the case of nanotechnology. *Scientometrics*, 87(3), 563-586. <https://doi.org/10.1007/s11192-011-0362-5>

- Wang, J., & Shapira, P. (2015). Is There a Relationship between Research Sponsorship and Publication Impact? An Analysis of Funding Acknowledgments in Nanotechnology Papers. *PLoS One*, *10*(2), e0117727. <https://doi.org/10.1371/journal.pone.0117727>
- Wang, M.-T., & Degol, J. L. (2017). Gender Gap in Science, Technology, Engineering, and Mathematics (STEM): Current Knowledge, Implications for Practice, Policy, and Future Directions. *Educational Psychology Review*, *29*(1), 119-140. <https://doi.org/10.1007/s10648-015-9355-x>
- Wang, X., Liu, D., Ding, K., & Wang, X. (2012). Science funding and research output: a study on 10 countries. *Scientometrics*, *91*(2), 591-599. <https://doi.org/10.1007/s11192-011-0576-6>
- Wang, Y. Q., Luo, H., & Shi, Y. Y. (2019). Complex network analysis for international talent mobility based on bibliometrics. *International Journal of Innovation Science*, *11*(3), 419-435. <https://doi.org/10.1108/ijis-04-2019-0044>
- Weber, A. S. (2014). Education, development and sustainability in Qatar: A case study of economic and knowledge transformation in the Arabian Gulf. In *Education for a Knowledge Society in Arabian Gulf Countries* (Vol. 24, pp. 59-82). Emerald Group Publishing Limited. <https://doi.org/10.1108/S1479-367920140000024007>
- Weingart, P. (2005). Impact of bibliometrics upon the science system: Inadvertent consequences? *Scientometrics*, *62*(1), 117-131. <https://doi.org/10.1007/s11192-005-0007-7>
- Weng, J., Lim, E.-P., Jiang, J., & He, Q. (2010). Twitterank: finding topic-sensitive influential twitterers. Proceedings of the third ACM international conference on Web search and data mining,
- Werner, R. (2015). The focus on bibliometrics makes papers less useful. *Nature News*, *517*(7534), 245. <https://doi.org/10.1038/517245a>
- West, J. D., Jacquet, J., King, M. M., Correll, S. J., & Bergstrom, C. T. (2013). The Role of Gender in Scholarly Authorship. *PLoS One*, *8*(7), e66212. <https://doi.org/10.1371/journal.pone.0066212>
- Whitley, R., & Gläser, J. (2007). The changing governance of the sciences. *Sociology of the sciences yearbook*, *26*. https://doi.org/10.1007/978-1-4020-6746-4_1
- Williams, W. M. (2018). Editorial: Underrepresentation of women in science: International and cross-disciplinary evidence and debate. *Frontiers in Psychology*, *8*. <https://doi.org/10.3389/fpsyg.2017.02352>
- Wilsdon, J. (2011). Knowledge, networks and nations: Global scientific collaboration in the 21st century. *London: The Royal Society*.
- Wilsdon, J., Allen, L., Belfiore, E., Campbell, P., Curry, S., Hill, S., Jones, R., Kain, R., Kerridge, S., Thelwall, M., Tinkler, J., Viney, I., Wouters, P., Hill, J., & Johnson, B. (2015). *The Metric Tide: Report of the Independent Review of the Role of Metrics in Research Assessment and Management*. <https://doi.org/10.13140/RG.2.1.4929.1363>
- World Bank. (2011). *Capabilities, Opportunities and Participation : Gender Equality and Development in the Middle East and North Africa Region*. World Bank. <http://hdl.handle.net/10986/10870>



- World Bank. (2012). *World Development Report 2012 : Gender Equality and Development*. World Bank. <https://openknowledge.worldbank.org/handle/10986/4391>
- World Bank. (2013). *Opening Doors : Gender Equality and Development in the Middle East and North Africa*. World Bank. <https://openknowledge.worldbank.org/handle/10986/12552>
- World Bank. (2019). *Middle East and North Africa*. World Bank. <https://www.worldbank.org/en/region/mena>
- World Bank. (2023). *World Bank Open Data*. World Bank. <https://data.worldbank.org/>
- World Bank. (June 2019). *World Development Indicators*. World Bank. <https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups>
- World Economic Forum. (2019). *Mind the 100 Year Gap*. <https://www.weforum.org/reports/gender-gap-2020-report-100-years-pay-equality>
- World Economic Forum. (2021a). *Global Gender Gap Report 2021*. <https://www.weforum.org/reports/global-gender-gap-report-2021>
- World Economic Forum. (2021b). Why is scientific collaboration key? 4 experts explain. <https://www.weforum.org/agenda/2021/06/4-views-on-why-scientific-collaboration-is-key-for-the-future/>
- Wouters, P., Thelwall, M., Kousha, K., Waltman, L., de Rijcke, S., Rushforth, A., Franssen, T., & Wouters, P. (2015). The metric tide. *literature review, Supplementary Report I to the Independent Review of the Role of Metrics in Research Assessment and Management, HEFCE, London*. <https://doi.org/10.13140/RG.2.1.5066.3520>
- Xie, Y., & Shauman, K. A. (2004). Women in science: Career processes and outcomes. *Social Forces*, 82(4), 1669-1671.
- Yadav, B., & Yadav, M. (2014). Resources, facilities and services of the Indian citation index (ICI). *Library Hi Tech News*, 31(4), 21-29. <https://doi.org/10.1108/LHTN-02-2014-0008>
- Yau, C.-K., Porter, A., Newman, N., & Suominen, A. (2014). Clustering scientific documents with topic modeling. *Scientometrics*, 100(3), 767-786. <https://doi.org/10.1007/s11192-014-1321-8>
- Ye, J. (2014). Development, significance and background information about the “Chinese Book Citation Index”(CBkCI) demonstration database. *Scientometrics*, 98(1), 557-564.
- Young, J. S., & Brandes, P. M. (2020). Green and gold open access citation and interdisciplinary advantage: A bibliometric study of two science journals. *Journal of Academic Librarianship*, 46(2), Article 102105. <https://doi.org/10.1016/j.acalib.2019.102105>
- Yurevich, M. A., Erkina, D. S., & Tsapenko, I. P. (2020). Measuring International Mobility Of Russian Scientists: A Bibliometric Approach. *Mirovaya Ekonomika I Mezhdunarodnye Otnosheniya*, 64(9), 53-62. <https://doi.org/10.20542/0131-2227-2020-64-9-53-62>

Zhao, W., Chen, J. J., Perkins, R., Liu, Z., Ge, W., Ding, Y., & Zou, W. (2015). A heuristic approach to determine an appropriate number of topics in topic modeling. *BMC Bioinformatics*, 16(S13), S8. <https://doi.org/10.1186/1471-2105-16-s13-s8>

Zhao, X., Aref, S., Zagheni, E., & Stecklov, G. (2021). International Migration in Academia and Citation Performance: An Analysis of German-Affiliated Researchers by Gender and Discipline Using Scopus Publications 1996-2020. *arXiv pre-print server*. <https://doi.org/2104.12380>

Zippel, K. (2011). How gender neutral are state policies on science and international mobility of academics? *Sociologica*(1), 0-0.

Zweig, D. (199). To return or not to return? Politics vs. economics in China's brain drain. *Studies in Comparative International Development*, 32(1), 92-125. <https://doi.org/10.1007/bf02696307>

ویگی، عزیز، لاه، نپورقاز، & بغدادی و هاب. (2020) تحلیل نئو لیبرالیستی عوام لیبرون دانشگاهی و شریب رتبه جهان در آن شرگاه های پیران پژوهش در نظام های آموزشی، 14(49), 91-109



