

References

- Aho, Esko, Mikko Alkio and Ilkka Lakaniemi (2013), The Finnish approach to innovation strategy and indicators, in Fred Gault (ed.), *Handbook of Innovation Indicators and Measurement*, Cheltenham, UK and Northampton, MA, USA: Edward Elgar, pp. 320–32.
- Appelt, Silvia, Fernando Galindo-Rueda and Ana Cinta González Cabral (2019), Measuring R&D tax incentives: The new OECD R&D Tax Incentive Database, *OECD Science, Technology and Industry Working Papers*, Paris: OECD Publishing.
- Arundel, Anthony and D. Huber (2013), From too little to too much innovation? Issues in measuring innovation in the public sector, *Structural Change and Economic Dynamics*, **27**, 146–59.
- Arundel, Anthony and Keith Smith (2013), History of the Community Innovation Survey, in Fred Gault (ed.), *Handbook of Innovation Indicators and Measurement*, Cheltenham, UK and Northampton, MA, USA: Edward Elgar, pp. 60–87.
- Arundel, Anthony, Luca Casali and Hugo Hollanders (2015), How European public sector agencies innovate: The use of bottom-up, policy-dependant and knowledge-scanning innovation methods, *Research Policy*, **44**, 1271–82.
- Arundel, Anthony, Carter Bloch and Barry Ferguson (2019), Advancing innovation in the public sector: Aligning innovation measurement with policy goals, *Research Policy*, **48**, 789–98.
- AU (2014), *Science, Technology and Innovation Strategy for Africa, STISA 2024*, Addis Ababa: African Union.
- AU-NEPAD (2010), *African Innovation Outlook 2010*, Pretoria: AU-NEPAD.
- AUDA-NEPAD (2019), *African Innovation Outlook 2019*, Pretoria: AUDA-NEPAD.
- Bloch, Carter (2010a), *Measuring Public Innovation in the Nordic Countries: Final Report*, Aarhus: The Danish Centre for Studies in Research and Research Policy.
- Bloch, Carter (2010b), *Towards a Conceptual Framework for Measuring Public Sector Innovation, Module 1 – Conceptual Framework*, Aarhus: The Danish Centre for Studies in Research and Research Policy.
- Bloch, Carter (2013), Measuring innovation in the public sector, in Fred Gault (ed.), *Handbook of Innovation Indicators and Measurement*, Cheltenham, UK and Northampton, MA, USA: Edward Elgar, pp. 403–19.
- Bloch, C. and M. Bugge (2013), Public sector innovation – from theory to measurement, *Structural Change and Economic Dynamics*, **27**, 133–45.
- BMW (2019), *Financing Start-ups and Growth: Overview of Funding Instruments*, Berlin: BMWi.

- Borrás, Susana and Charles Edquist (2019), *Holistic Innovation Policy: Theoretical Foundations, Policy Problems and Instrument Choices*, Oxford: Oxford University Press.
- Brynjolfsson, Erik, Avinash Collis, Erwin Diewert, Felix Eggers and Kevin Fox (2019), GDP-B: Accounting for the value of new and free goods in the digital economy, Discussion Paper, Vancouver School of Economics, Vancouver: University of British Columbia.
- Chaminade, Cristina, Bengt-Åke Lundvall and Shagufta Haneef (2018), *Elgar Advanced Introductions, Advanced Introduction to National Innovation Systems*, Cheltenham, UK and Northampton, MA, USA: Edward Elgar.
- Charmes, Jacques (2016), The informal economy: definitions, size, contribution and main characteristics, in Erika Kraemer-Mbula and Sacha Wunsch-Vincent (eds), *The Informal Economy in Developing Nations – Hidden Engine of Innovation*, Cambridge: Cambridge University Press, pp. 13–44.
- Charmes, Jacques (2019), *Dimensions of Resilience in Developing Countries: Informality, Solidarities and Care Work*, Cham, Switzerland: Springer Nature Switzerland AQ.
- Charmes, Jacques, Fred Gault and Sacha Wunsch-Vincent (2016), Formulating an agenda for the measurement of innovation in the informal economy, in Erika Kraemer-Mbula and Sacha Wunsch-Vincent (eds), *The Informal Economy in Developing Nations – Hidden Engine of Innovation*, Cambridge: Cambridge University Press, pp. 332–62.
- Charmes, Jacques, Fred Gault and Sacha Wunsch-Vincent (2018), Measuring innovation in the informal economy – formulating an agenda for Africa, *Journal of Intellectual Capital*, **19**(3), 536–49. <https://doi.org/10.1108/JIC-11-2016-0126>
- Colecchia, A. (2007), Looking ahead: What implications for STI indicator development, in OECD (ed.), *Science, Technology and Innovation Indicators in a Changing World: Responding to Policy Needs*, Paris: OECD Publishing, pp. 285–98.
- Cornell University, INSEAD and WIPO (2019), *The Global Innovation Index 2019: Creating Healthy Lives – the Future of Innovation*, Ithaca, NY, Fontainebleau and Geneva.
- Coyle, Diane (2016), *GDP, a Brief but Affectionate History*, Princeton, NJ: Princeton University Press.
- Cozzens, S. and D. Thakur (eds) (2014), *Innovation and Inequality: Emerging Technologies in an Unequal World*, Cheltenham, UK and Northampton, MA, USA: Edward Elgar.
- Davis, K.E., A. Fischer, B. Kingsbury and S. Merry (eds) (2012), *Governance by Indicators: Global Power through Quantification and Rankings*, Oxford: Oxford University Press.
- de Jong, Jeroen P.J., Eric von Hippel, Fred Gault, Jari Kuusisto and Christina Raasch (2015), Market failure in the diffusion of consumer-developed innovations: Patterns in Finland, *Research Policy*, **44**(10), 1856–65. <http://www.sciencedirect.com/science/article/pii/S0048733315001122> (accessed 17 March 2020).

- Diewert, Erwin, Kevin Fox and Paul Schreyer (2018), Experimental economics and the new goods problem, Discussion Paper, Vancouver School of Economics, Vancouver: University of British Columbia.
- Drummond, Don and Alistair Bentley (2010), The Productivity Puzzle: Why is the Canadian record so poor and what can be done about it? Toronto: TD Bank Financial Group. <https://www.td.com/document/PDF/economics/special/td-economics-special-ab0610-productivity.pdf> (accessed 17 March 2020).
- Dutrénit, Gabriela and Judith Sutz (2014), *National Innovation Systems, Social Inclusion and Development, the Latin American Experience*, Cheltenham, UK and Northampton, MA, USA: Edward Elgar.
- EC (2014), *European Public Sector Innovation Scoreboard 2013*, Brussels: Publications Office of the EU.
- EC, IMF, OECD, UN and the World Bank (1994), *System of National Accounts, 1994 (1994 SNA)*, New York: United Nations.
- EC, IMF, OECD, UN and the World Bank (2009), *System of National Accounts, 2008 (2008 SNA)*, New York: United Nations.
- Eidler, Jakob and Jan Fagerberg (2017), Innovation policy: What, why, and how? *Oxford Review of Economic Policy*, **33**(1), 2–23.
- Eidler, Jacob, Paul Cunningham, Abdullah Gök and Philip Shapira (2016), *Handbook of Innovation Policy Impact*, Cheltenham, UK and Northampton, MA, USA: Edward Elgar.
- Edquist, C. (ed.) (1997), *Systems of Innovation: Technologies, Institutions and Organisations*, London: Pinter.
- Edquist, C. (2005), Systems of innovation: Perspectives and challenges, in Jan Fagerberg, David Mowery and Richard Nelson (eds), *The Oxford Handbook of Innovation*, Oxford: Oxford University Press, pp. 181–208.
- Edquist, C. and L. Hommen (eds) (2008), *Small Country Innovation Systems, Globalisation, Change and Policy in Asia and Europe*, Cheltenham, UK and Northampton, MA, USA: Edward Elgar.
- Edquist C. and J.M. Zabala-Iturriagoitia (2018), Viewpoint: The latest EU innovation index is out. It's flawed, *Science Business*, 22 June, London: Science Business. <https://sciencebusiness.net/viewpoint/viewpoint-latest-eu-innovation-index-out-its-flawed> (accessed 17 March 2020).
- EFI-Commission of Experts for Research and Innovation (2017), *Report on Research, Innovation and Technological Performance in Germany 2017*, Berlin: EFI.
- EFI-Commission of Experts for Research and Innovation (2019), *Report on Research, Innovation and Technological Performance in Germany 2019*, Berlin: EFI.
- Ergas, H. (1986), Does technology policy matter? *CEPS Papers* No. 29, Brussels: Centre for European Studies.
- Executive Office of the President (2017), *North American Industry Classification System (NAICS)*, Washington, DC: Executive Office of the President.
- EU (2013), *Lessons from a Decade of Innovation Policy*, Brussels: European Union.
- EU (2014), *Boosting Open Innovation and Knowledge Transfer in the European Union*, Brussels: Publication Office of the European Union.

- European Commission (2019), *European Innovation Scoreboard 2019*, Brussels: Publication Office of the European Union.
- Eurostat (2008), *NACE.Rev.2, Statistical Classification of Economic Activities in the European Community*, Luxembourg: Office for Official Publications of the European Communities.
- Eurostat (2018), *Europe 2020 Indicators – Poverty and Social Exclusion, Statistics Explained*, Brussels: Publication Office of the European Union. https://ec.europa.eu/eurostat/statistics-explained/index.php/Europe_2020_indicators_-_poverty_and_social_exclusion (accessed 17 March 2020).
- Fagerberg, Jan, David Mowery and Richard Nelson (2005), *The Oxford Handbook of Innovation*, Oxford: Oxford University Press.
- Foray, Dominique and Fred Gault (eds) (2003), *Measuring Knowledge Management in the Business Sector: First Steps*, Paris: OECD Publishing.
- Francis-Devine, Brigid, Lorna Booth and Feargal McGuinness (2019), Poverty in the UK: Statistics, Briefing Paper No. 7096, London: House of Commons Library.
- Freeman, Chris (1987), *Technology Policy and Economics Performance: Lessons from Japan*, London: Pinter.
- Freeman, Chris and Luc Soete (2007), Developing Science, Technology and Innovation Indicators: The twenty-first century challenges, in OECD (ed.), *Science, Technology and Innovation Indicators in a Changing World, Responding to Policy Needs*, Paris: OECD Publishing, pp. 271–80.
- Gault, F. (2010), *Innovation Strategies for a Global Economy, Development, Implementation, Measurement and Management*, Cheltenham, UK and Northampton, MA, USA: Edward Elgar and Ottawa: IDRC.
- Gault, Fred (2011), Developing a science of innovation policy internationally, in Kaye Husbands-Fealing, Julia Lane, John Marburger and Stephanie Shipp (eds), *Science of Science Policy: A Handbook*, Stanford, CA: Stanford University Press, pp. 156–82.
- Gault, Fred (2012), User innovation and the market, *Science and Public Policy*, **39**, 118–28.
- Gault, Fred (ed.) (2013), *Handbook of Innovation Indicators and Measurement*, Cheltenham, UK and Northampton, MA, USA: Edward Elgar.
- Gault, F. (2014), Where are innovation indicators, and their applications, going? UNU-MERIT Working Paper 2014-055, Maastricht: UNU-MERIT, 19 pp.
- Gault, Fred (2015), Measuring innovation in all sectors of the economy, UNU-MERIT Working Paper 2015-038, 23 pp.
- Gault, Fred (2016), User innovation and official statistics, in Dietmar Harhoff and Karim R. Lakhani (eds), *Revolutionizing Innovation: Users, Communities and Open Innovation*, Cambridge, MA: The MIT Press, pp. 89–105.
- Gault, F. (2018a), Defining and measuring innovation in all sectors of the economy, *Research Policy*, **47**, 617–22.
- Gault, F. (2018b), Measuring the economic and social impact of innovation for sustainable development, in Nuria Sanz and Carlos Tejada (eds), *Innovación para el Desarrollo Sostenible*, México: Gobierno del Estado de Guanajuato en colaboración con la Oficina de la UNESCO en México, pp. 173–80. <http://>

- unesdoc.unesco.org/images/0026/002656/265693m.pdf (accessed 17 March 2020).
- Gault, F. (2019), User innovation in the digital economy, *Foresight and STI Governance*, **13**(3), 6–13.
- Gault, F. and M. Hakvåg (2018), *Cooperation between the International Organization for Standardisation (ISO) and the Organisation for Economic Co-operation and Development (OECD) of the Definition of Innovation for International Management and Statistical Measurement*, Paris: OECD. <https://community.oecd.org/docs/DOC-165568> (accessed 17 March 2020).
- George, Gerard, Ted Baker, Paul Tracy and Havovi Joshi (2019), Inclusion and innovation: A call to action, in Gerard George, Ted Baker, Paul Tracy and Havovi Joshi (eds), *Handbook of Inclusive Innovation, the Role of Organisations, Markets and Communities in Social Innovation*, Cheltenham, UK and Northampton, MA, USA: Edward Elgar, pp. 2–22.
- Ghafur, S., G. Fontana, G. Martin, A. Grass, J. Goodman and A. Darzi (2019), *Improving Cyber Security in the NHS*, Institute of Global Health Innovation, London: Imperial College.
- GTIPA (2019), *National Innovation Policies: What Countries Do Best and How They Can Improve*, Washington DC: Global Trade & Innovation Policy Alliance.
- Guellec, Dominique and Caroline Paunov (2018), Innovation policies in the digital economy, *OECD Science, Technology and Innovation Policy Papers*, No. 59, November, Paris: OECD Publishing.
- Harhoff, Dietmar and Karime Lakhani (eds) (2016), *Revolutionizing Innovation: Users, Communities and Open Innovation*, Cambridge, MA: The MIT Press.
- Haskel, Jonathan and Stian Westlake (2018), *Capitalism without Capital*, Princeton, NJ: Princeton University Press.
- Hawkins, Richard, Knut Blind and Robert Page (2017), *Handbook of Innovation Standards*, Cheltenham, UK and Northampton, MA, USA: Edward Elgar.
- Hill, Christopher T. (2013), US innovation strategy and policy: An indicators perspective, in Fred Gault (ed.), *Handbook of Innovation Indicators and Measurement*, Cheltenham, UK and Northampton, MA, USA: Edward Elgar, pp. 333–46.
- Hollanders, Hugo and Norbert Janz (2013), Scoreboard and indicator reports, in Fred Gault (ed.), *Handbook of Innovation Indicators and Measurement*, Cheltenham, UK and Northampton, MA, USA: Edward Elgar, pp. 279–97.
- Horst, J. and F. Santiago (2018), *What Can Policy Makers Learn from Germany's Industrie 4.0 Development Strategy?* Vienna: UNIDO.
- House of Commons Library Briefing Paper (2019), NHS Key Statistics: England, February, Briefing Paper 7281, London: House of Commons Library.
- Howaldt, J., A. Butzin, D. Domanski and C. Kaletka (2014), *Theoretical Approaches to Social Innovation – a Critical Literature Review*. A deliverable of the project: ‘Social Innovation: Driving Force of Social Change’ (SI-DRIVE), Dortmund: Sozialforschungsstelle.
- IMF (2018), *Measuring the Digital Economy*, Washington, DC: IMF.
- Kemp, R., A. Arundel, C. Rammer, M. Miedzinski, C. Tapia, N. Barbieri, S. Türkeli, A.M. Bassi, M. Mazzanti, D. Chapman, F. Diaz López, W.

- McDowall (2019), *Maastricht Manual on Measuring Eco-Innovation for a Green Economy*, Maastricht: University of Maastricht.
- Kindlon, Audrey E. and John E. Jankowski (2017), *Rates of Innovation among U.S. Businesses Stay Steady: Data from the 2014 Business R&D and Innovation Survey*, National Center for Science and Engineering Statistics, InfoBrief, NSF 17-321, Arlington, VA: NSF.
- Kraemer-Mbula, Erika and Watu Wamae (2010), *Innovation and the Development Agenda*, Paris: OECD Publishing.
- Kraemer-Mbula, Erika and Sacha Wunsch-Vincent (eds) (2016), *The Informal Economy in Developing Nations – Hidden Engine of Innovation*, Cambridge: Cambridge University Press.
- Kuusisto, Jari, Jeroen P.J. de Jong, Fred Gault, Christina Raasch and Eric von Hippel (2013), Consumer innovation in Finland: Incidence, diffusion and policy implications, *Proceedings of the University of Vaasa Reports 189*, Vaasa, Finland: University of Vaasa.
- Lipsey, R.G., K.I. Carlaw and C.T. Bekar (2005), *Economic Transformations, General Purpose Technologies and Long Term Economic Growth*, Oxford: Oxford University Press.
- Lundvall, B.-Å. (ed.) (1992), *National Innovation Systems: Towards a Theory of Innovation and Interactive Learning*, London: Pinter.
- Lundvall, B.-Å., K.J. Joseph, Cristina Chaminade and Jan Vang (eds) (2009), *Handbook of Innovation Systems and Developing Countries, Building Domestic Capabilities in a Global Setting*, Cheltenham, UK and Northampton, MA, USA: Edward Elgar.
- Marburger, John (2005), 'Wanted: Better benchmarks', *Science*, **308**(5725), May, 1087.
- Marburger, John (2007), The Science of Science and Innovation Policy, in OECD (ed.), *Science, Technology and Innovation Indicators in a Changing World, Responding to Policy Needs*, Paris: OECD Publishing, pp. 27–32.
- Marburger, John and Robert R. Crease (eds) (2015), *Science Policy Up Close*, Cambridge, MA: Harvard University Press.
- Marée, Michel and Sybille Mertens (2012), The limits of economic value in measuring the performance of social innovation, in Alex Nicholls and Alex Murdock (eds), *Social Innovation: Blurring Boundaries to Reconfigure Markets*, Basingstoke, UK: Palgrave Macmillan, pp. 114–36.
- Mashelkar, R.A. (2012), *On Building an Inclusive Innovation Ecosystem*, Paris: OECD Publishing. http://www.oecd.org/sti/inno/k_mashelkar.pdf (accessed 17 March 2020).
- Mashelkar, R.A. (2014), Accelerated inclusive growth through inclusive innovation, presentation at the OECD-Growth Dialogue Symposium on Innovation and Inclusive Growth, Paris, 20 March. http://www.oecd.org/sti/inno/Session_3_Mashelkar_Keynote.pdf (accessed 17 March 2020).
- Mazzucato, Mariana (2013), *The Entrepreneurial State, Debunking Public vs. Private sector Myths*, London: Anthem Press.
- Meadows, Donella, H. and Diana Wright (eds) (2008), *Thinking in Systems: A Primer*, Sterling, VT: Chelsea Green Publishing.

- Ministry of Education, Science and Technology, Kenya (2016), *The Kenya Innovation Indicators Survey 2015*, Nairobi: Ministry of Education, Science and Technology.
- Mitchell, Melanie (2009), *Complexity, a Guided Tour*, New York: Oxford University Press.
- Molotja, N., S. Parker and P. Mudavanhu (2019), Patterns of investing in business R&D in South Africa, *Foresight and STI Governance*, **13**(3), 51–60.
- Moulaert, Frank and Diana MacCallum (2019), *Advanced Introduction to Social Innovation*, Elgar Advanced Introductions series, Cheltenham, UK and Northampton, MA, USA: Edward Elgar.
- Moulaert, Frank, Diana MacCallum, Abid Mehmood and Abdelillah Hamdouch (eds) (2013), *The International Handbook on Social Innovation: Collective Action, Social Learning and Transdisciplinary Research*, Cheltenham, UK and Northampton, MA, USA: Edward Elgar.
- Mulgan, Geoff (2007), 'What social innovation is', in Geoff Mulgan, Simon Tucker, Rushanara Ali and Ben Sanders (eds), *Social Innovation, What It Is, Why It Matters, and How It Can be Accelerated*, Oxford: Skoll Centre for Social Entrepreneurship, Oxford Said Business School, pp. 8–12.
- Mulgan, Geoff (2019), *Social Innovation: How Societies Find the Power to Change*, Bristol: Policy Press.
- Mulgan, Geoff, Kippy Joseph and Will Norman (2013), Indicators for social innovation, in Fred Gault (ed.), *Handbook of Innovation Indicators and Measurement*, Cheltenham, UK and Northampton, MA, USA: Edward Elgar, pp. 420–37.
- Murray, Robin, Julie Caulier-Grice and Geoff Mulgan (2010), *The Open Book of Social Innovation*, London: The Young Foundation and Nesta.
- National Academies of Sciences, Engineering and Medicine (2017), *Advancing Concepts and Models for Measuring Innovation: Proceedings of a Workshop*, Washington, DC: The National Academies Press.
- National Research Council (2014), *Capturing Change in Science, Technology and Innovation: Improving Indicators to Inform Policy*, Washington, DC: The National Academies Press.
- National Science Board (2018), *Science and Engineering Indicators*, Arlington, VA: NSF.
- Nelson, Richard R. (ed.) (1993), *National Systems of Innovation*, New York: Oxford University Press.
- Nicholls, A. and A. Murdock (eds) (2012), *Social Innovation: Blurring Boundaries to Reconfigure Markets*, London: Macmillan.
- North, D. (1990), *Institutions, Institutional Change and Economic Performance*, Cambridge: Cambridge University Press.
- NPCA (2014), *African Innovation Outlook II*, Pretoria: NEPAD Planning and Coordinating Agency.
- NSF (2019), Dear Colleague Letter: 2019 Social, Behavioural and Economic (SBE) Repositioning, NSF 19-2019, Arlington, VA: NSF.
- OECD (1992), *OECD Proposed Guidelines for Collecting and Interpreting Technological Innovation Data – Oslo Manual*, OCDE/GD (92) 26, Paris: OECD Publishing.

- OECD (2002), *Frascati Manual: Proposed Standard Practice for Surveys on Research and Development*, Paris: OECD Publishing.
- OECD (2007), *Science, Technology and Innovation Indicators in a Changing World: Responding to Policy Needs*, Paris: OECD Publishing.
- OECD (2008), *Growing Unequal? – Income Distribution and Poverty in OECD Countries*, Paris: OECD Publishing.
- OECD (2009), *Clusters, Innovation and Entrepreneurship*. Paris: OECD Publishing.
- OECD (2010a), *The OECD Innovation Strategy: Getting a Head Start on Tomorrow*, Paris: OECD Publishing.
- OECD (2010b), *Measuring Innovation: A New Perspective*, Paris: OECD Publishing.
- OECD (2011), *Business Innovation Policies: Selected Country Comparisons*, Paris: OECD Publishing.
- OECD (2014), *OECD Science, Technology and Industry Outlook 2014*, Paris: OECD Publishing.
- OECD (2015a), *The Innovation Imperative: Contributing to Productivity, Growth and Well-being*, Paris: OECD Publishing.
- OECD (2015b), *The Innovation Imperative in the Public Sector: Setting an Agenda for Action*, Paris: OECD Publishing.
- OECD (2015c), *Frascati Manual 2015, Guidelines for Collecting and Reporting Data on Research and Experimental Development*, Paris: OECD Publishing.
- OECD (2015d), *Innovation Policies for Inclusive Growth*, Paris: OECD Publishing.
- OECD (2016), *OECD Science, Technology and Innovation Outlook 2016*, Paris: OECD Publishing.
- OECD (2017a), *OECD Reviews of Innovation Policy, Kazakhstan*, Paris: OECD Publishing.
- OECD (2017b), *OECD Reviews of Innovation Policy, Norway*, Paris: OECD Publishing.
- OECD (2017c), *OECD Reviews of Innovation Policy, Finland*, Paris: OECD Publishing.
- OECD (2017d), *OECD Science, Technology and Industry Scoreboard 2017*, Paris: OECD Publishing.
- OECD (2017e), *OECD Digital Economy Outlook 2017*, Paris: OECD Publishing.
- OECD (2018a), *OECD Reviews of Innovation Policy, Austria*, Paris: OECD Publishing.
- OECD (2018b), *OECD Science, Technology and Innovation Outlook 2018*, Paris: OECD Publishing.
- OECD (2019a), *Measuring the Digital Transformation: A Roadmap for the Future*, Paris: OECD Publishing.
- OECD (2019b), Portugal 2019: Review of higher education, research and innovation, *OECD Reviews of Innovation Policy*, Paris: OECD Publishing.
- OECD (2019c), *Measuring Distance to the SDG Targets 2019, an Assessment of Where OECD Countries Stand*, Paris: OECD Publishing.
- OECD (2019d), *Digital Innovation, Seizing Policy Opportunities*, Paris: OECD Publishing.

- OECD/Eurostat (1997), *Proposed Guidelines for Collecting and Interpreting Technological Innovation Data, Oslo Manual*, Paris: OECD Publishing.
- OECD/Eurostat (2005), *Oslo Manual, Guidelines for Collecting and Interpreting Innovation Data*, Paris: OECD Publishing.
- OECD/Eurostat (2018), *Oslo Manual 2018: Guidelines for Collecting, Reporting and Using Data for Innovation*, 4th edition, The Measurement of Scientific, Technological and Innovation Activities, Paris: OECD Publishing and Luxembourg: Eurostat.
- Osborne, Stephen and Louise Brown (2013), *Handbook of Innovation in Public Services*, Cheltenham, UK and Northampton, MA, USA: Edward Elgar.
- Paunov, Caroline and Sandra Planes-Satorra (2019), How are digital technologies changing innovation? Evidence from agriculture, the automotive industry and retail, *OECD Science, Technology and Industry Policy Papers*, No. 74, Paris: OECD Publishing.
- Pietrobelli, C. and R. Rabellotti (2011), Global value chains meeting innovation systems: Are there learning opportunities for developing countries, *World Development*, **39**(7), 1261–9.
- Planes-Satorra, Sandra and Caroline Paunov (2017), Inclusive innovation policies. Lessons from international case studies, *OECD Science, Technology and Industry Policy Papers*, 2017/02, Paris: OECD Publishing.
- Rammer, C. and T. Schubert (2016), *Concentration on the Few? R&D and Innovation in German Firms 2001 to 2013*, Mannheim: ZEW, Centre for European Economic Research. <http://ftp.zew.de/pub/zew-docs/dp/dp16005.pdf> (accessed 17 March 2020).
- RICYT/OECD/CYTED (2001), *Standardization of Indicators of Technological Innovation in Latin American and Caribbean Countries: Bogotá Manual*, Buenos Aires: RICYT.
- Rüede, Dominik and Kathrin Lurtz (2012), Mapping the various meanings of social innovation: Towards a differentiated understanding of an emerging concept, EBS Business School Research Paper Series 12-03, Oestrich-Winkel: EBS.
- Schellings, R. and F. Gault (2002), *Size and persistence of R&D performance in Canadian Firms 1994 to 2002*, Catalogue 88F0006XIE, No. 008, Ottawa: Statistics Canada.
- Schumpeter, J. (1934), *The Theory of Economic Development*, Cambridge, MA: Harvard University Press.
- Schwab, Klaus (2017), *The Fourth Industrial Revolution*, UK: Portfolio Penguin.
- Schwab, Klaus (2018), *Shaping the Future of the Fourth Industrial Revolution, a Guide to Building a Better World*, UK: Portfolio Penguin.
- Smith, K. (2005), Measuring innovation, in J. Fagerberg, D.C. Mowery and R.R. Nelson (eds), *The Oxford Handbook of Innovation*, Oxford: Oxford University Press, pp. 148–77.
- Smits, Ruud, Stefan Kuhlmann and Philip Shapira (eds) (2010), *The Theory and Practice of Innovation Policy*, Cheltenham, UK and Northampton, MA, USA: Edward Elgar.

- Soete, Luc, Bart Verspagen and Bas Ter Weel (2010), Systems of Innovation, in Bronwyn H. Hall and Nathan Rosenberg (eds), *Economics of Innovation*, Amsterdam: North-Holland, Vol. 2, pp. 1159–80.
- Teich, Albert H. (2018), In search of evidence-based science policy: From the endless frontier to SciSIP, *Annals of Science and Technology Policy*, 2(2), 75–199.
- UN Statistics Division (2008), *International Standard Industrial Classification of All Economic Activities, Revision 4*, New York: United Nations.
- UN Statistics Division (2018), *Global Work on Climate Change Statistics and Indicators and Adaptation-Related SDG Indicators*, Fifth Meeting of the Expert Group on Environment Statistics, New York: United Nations.
- UN Statistics Division (2019a), *Global Indicator Framework for the Sustainable Development Goals and Targets of the 2030 Agenda for Sustainable Development*, A/RES/71313, E/CH.3/2018/2, E/CN.3/2019/2, New York: United Nations. https://unstats.un.org/sdgs/indicators/Global%20Indicator%20Framework%20after%202019%20refinement_Eng.pdf (accessed 17 March 2020).
- UN Statistics Division (2019b), *Sustainable Development Goal (SDG) Indicators Correspondence with the Basic Set of Environment Statistics of the FDES 2013*, Environment Statistics, 12 July, New York: United Nations. https://unstats.un.org/unsd/envstats/fdes/SDGsInd_BasicSetMatrix.pdf (accessed 17 March 2020).
- United Nations (2015), *Transforming Our World: The 2030 Agenda for Sustainable Development*, A/RES/70/1, New York: United Nations. <https://sustainabledevelopment.un.org> (accessed 17 March 2020).
- United Nations (2017), *Framework for the Development of Environment Statistics*, New York: United Nations.
- Uyerra, E. and R. Ramlogan (2016), The impact of cluster policy on innovation, in J. Edler, P. Cunningham, A. Gök and P. Shapira (eds), *Handbook of Innovation Policy Impact*, Cheltenham, UK and Northampton, MA, USA: Edward Elgar, pp. 196–238.
- von Bogdandy, A. and M. Goldmann (2012), Taming and framing indicators: A legal reconstruction of the OECD's programme for international student assessment (PISA), in K.E. Davis, A. Fischer, B. Kinsbury and S. Merry (eds), *Governance by Indicators: Global Power through Quantification and Rankings*, Oxford: Oxford University Press, pp. 52–85.
- von Hippel, Eric (1988), *The Sources of Innovation*, New York: Oxford University Press.
- von Hippel, Eric (2005), *Democratizing Innovation*, Cambridge, MA: The MIT Press.
- von Hippel, Eric (2007), Democratizing innovation: The evolving phenomenon of user innovation, in OECD (ed.), *Science, Technology and Innovation in a Changing World, Responding to Policy Needs*, Paris: OECD, pp. 125–38.
- von Hippel, Eric (2016), *Novel Policies Required to Support Free Household Sector Innovation*, OECD Blue Sky Forum III. http://www.oecd.org/sti/blue-sky-2016-agenda.htm#ps4_d2 (accessed 17 March 2020).
- von Hippel, Eric (2017), *Free Innovation*, Cambridge, MA: The MIT Press.

World Commission on Environment and Development (1987), *Our Common Future*, Oxford: Oxford University Press.