

## *Curriculum vitae*

LEO FULVIO MINERVINI

### PERSONAL DETAILS

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First name: Leo Fulvio  
Family name: Minervini  
Nationality: Italian  
E-mail: leofulvio.minervini@unimc.it

### EDUCATION

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PhD – University of Warwick, Warwick Business School (UK), 2011.  
LL.M (Law and Economics), with *distinction* - University of Manchester (UK), 2003.  
European Master in Law and Economics, *cum laude* - Erasmus University of Rotterdam (Netherlands), 2003.  
Degree in Economics, *cum laude* - University of Urbino (Italy), 2000.

### PRESENT POSITION

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Senior researcher with tenure of Public Finance, *University of Macerata, Department of Economics and Law (Italy), since June 2008.*

### PAST ACADEMIC POSITIONS

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Research fellow, *University of Macerata, Department of Studies on Economic Development (Italy), November 2005 - May 2008.*

### TEMPORARY RESEARCH AFFILIATIONS

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Visiting researcher, VTT Technical Research Centre, Oulu, Finland, April 2014.  
Visiting researcher, Vilnius Gediminas Technical University, Vilnius, Lithuania, June 2012.

### RESEARCH INTERESTS

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Public finance and economics; Economic regulation of public utilities; Economics of wireless communications; Airport economics; Regulatory authorities; Public goods; Taxation; Higher education.

### Articles in international journals

- “Evolved Spectrum Usage Rights: A Catalyst for Liberal Spectrum Management Reform” (with William Webb and Arturas Medeisis), in *Telecommunications Policy*, 2024, 102715, doi: 10.1016/j.telpol.2024.
- “Municipal Waste Management: A Complex Network Approach with an Application to Italy” (with Roy Cerqueti and Matteo Cinelli), in *Waste Management*, 2021, vol. 126, 597–607, doi: 10.1016/j.wasman.2021.03.035.
- “University Dropouts in Italy: Are Supply Side Characteristics Part of the Problem?” (with Lara Gitto and Luisa Monaco), in *Economic Analysis and Policy*, 2016, vol. 49, 108-116, doi:10.1016/j.eap.2015.12.004.
- “Coopetitive Business Models in Future Mobile Broadband with Licensed Shared Access (LSA)” (with Petri Ahokangas, Marja Matinmikko, Irina Atkova, Seppo Yrjölä and Miia Mustonen), in *EAI Endorsed Transactions on Cognitive Communications*, 2016, 16(7): e2, doi: 10.4108/eai.5-9-2016.151645.
- “Spectrum Management Reform: Rethinking Practices”, in *Telecommunications Policy*, 2014, vol. 38(2), 136-146, doi:10.1016/j.telpol.2013.07.004.
- “Stalling Innovation of Cognitive Radio: The Case for Dedicated Frequency Band” (with Arturas Medeisis), in *Telecommunications Policy*, 2013, vol. 37(2-3), 108-115, doi:10.1016/j.telpol.2012.07.001.
- “Pluralistic Licensing” (with Oliver Holland, Luca De Nardis, Keith Nolan, Arturas Medeisis, Peter Anker, Fernando Velez, Marja Matinmikko and John Sydor), in *IEEE DySPAN 2012*, 33-41.
- “Emerging Technologies and Access to Spectrum Resources: The Case of Short-Range Systems”, in *Communications and Strategies*, 2007, vol. 67, 107-125. [Reprinted in *Spectrum Law and Governance*, J. Ramakistaiah (Ed.), 2008, ICFAI, Hyderabad, A.P, Amicus Books, pp. 1-18.]

### Articles in national journals

- “Lo spazio delle materie economiche nella formazione dei giuristi” [The Space of Economic Subjects in the Academic Training of Italian Graduates in Legal Studies] (with Paolo Polidori), in *Rivista di diritto finanziario e scienza delle finanze*, 2023, vol. LXXXII(1), *forthcoming*.
- “The Selection of Regulators, or, the Political Economy of Regulation in Italy” (with Diego Piacentino), in *L'industria*, 2021, vol. XLII(1), 1–25, doi: 10.1430/98709.
- “Sergio Steve e Duncan Black: gli studi e l'amicizia” [Sergio Steve and Duncan Black: Their Studies and Friendship], in *Apertacontrada*, 2021, open access, <https://www.apertacontrada.it/wp-content/uploads/2021/06/Minervini.pdf>.
- “The Performance of European Full Service Airlines after Liberalisation: An Econometric Analysis” (with Lara Gitto), in *Rivista di politica economica*, special issue on *The Liberalisation of the European Civil Aviation Industry: Economic and Policy Implications*, C.A. Piga and M.J. Gil-Moltó (Eds.), 2007, vol. 97(1), 105-122.

### Books

- *Spectrum Management: Sharing a Wireless Input*, Saarbrücken, Lambert Academic Publishing, 2013 (ISBN 978-3-659-33432-0).

### Edited Books

- *Regole, mercati e sentimenti morali* [Rules, Markets, and Moral Sentiments], Macerata, Eum, 2021 (ISBN 978-88-6056-756-7 (print)).

### Book chapters

#### *In English:*

- “5G Networks: This Time It Is Different” (with Marja Matinmikko-Blue), in *La forza delle reti* [The Strength of Networks], G. Busilacchi and E. Cedrola (Eds.), 2020, Roma, Aracne, pp. 131-151.
- “The Returns to Education in Italy in Recent Years” (with Silvia Leoni), in *Crescita economica, tutela dei diritti e ruolo delle istituzioni* [Economic Growth, Rights Protection and the Role of Institutions], T. Febbrajo and M. Ricci (Eds.), 2018, Macerata, EUM, pp. 145-170.
- “Incentives Facing Local Governments in the Absence of Credible Enforcement” (with Annalisa Vinella), in *Multi-level Finance and the Euro Crisis*, E. Ahmad, M. Bordignon and G. Brosio (Eds.), Edward Elgar publishing, 2016, pp. 326-358.
- “University Dropout in Italy” (with Lara Gitto and Luisa Monaco), in *Youth and the Crisis: Unemployment, Education and Health in Europe*, G. Coppola and N. O’Higgins (Eds.), Routledge, 2015, pp. 75-88.
- “Spectrum Trading”, in *Spectrum Management: Using the Airwaves for Maximum Social and Economic Benefit*, M. Cave and W. Webb (Eds.), Cambridge University Press, 2015, pp. 113-127.
- “Cognitive Radio Policy Analysis: Framework and Implementation” (with Arturas Medeisis), in *Cognitive Radio Policy and Regulation: Techno-Economic Studies to Facilitate Dynamic Spectrum Access*, A. Medeisis and O. Holland (Eds.), Springer, 2014, pp. 251-255.
- “Helping Innovation of Cognitive Radio” (with Arturas Medeisis), in *Cognitive Radio Policy and Regulation: Techno-Economic Studies to Facilitate Dynamic Spectrum Access*, A. Medeisis and O. Holland (Eds.), Springer, 2014, pp. 292-298.
- “Impact assessment for Cognitive Radio” (with Peter Anker), in *Cognitive Radio Policy and Regulation: Techno-Economic Studies to Facilitate Dynamic Spectrum Access*, A. Medeisis and O. Holland (Eds.), Springer, 2014, pp. 298-304.
- “Monitoring EU Telecoms Policy: Spectrum Policy” (with Martin Cave), in *Monitoring EU Telecoms Policy*, M. Cave, J. Haucap, J. Padilla, A. Renda and B. Williamson (Eds.), Madrid, Mic-Nerec, 2009, pp. 19-26.
- “Spectrum Management and Regulation: Towards a Full-Fledged Market for Spectrum Bands?” (with Diego Piacentino), in *Servizi pubblici: nuove tendenze nella regolamentazione, nella produzione e nel finanziamento* [Public Services: New Trends in Regulation, Production and Financing], M. Marrelli, F. Padovano and I. Rizzo (Eds.), Milano, Angeli, 2007, pp. 131-156.

#### *In Italian:*

- “Il ruolo dei comuni nella transizione digitale” [The Role of Municipalities in Digital Transition] (with Annalisa Vinella), in *La risposta dei comuni alla crisi pandemica* [How Municipalities Reacted to the Pandemic Crisis], M. Degni (Ed.), 2021, Roma, Castelvechi, pp. 498–528.
- “Punitive damages. L’approccio di Law & Economics” [Punitive Damages: A Law & Economics Approach], in *Il punto sui così detti “danni punitivi”* [The State of the Art on Punitive Damages], U. Perfetti (Ed.), 2019, Napoli, ESI, pp. 207-222.

- “Alcune note sulle relazioni tra incentivi economici, norme giuridiche e regole morali” [Notes on Relations among Economic Incentives, Legal Rules, and Moral Norms], in *Regole, mercati e sentimenti morali*, L.F. Minervini (Ed.), pp. 7-28.
- “La corruzione in sanità: i nuovi strumenti per individuarla e contrastarla” [Corruption in Healthcare: New Tools to Uncover It and Thwart It] (with Lara Gitto and Francesco Saverio Mennini), in *Regole, mercati e sentimenti morali*, L.F. Minervini (Ed.), pp. 277-294.
- “La gestione dei rifiuti come problema di rete” [Waste Management as a Complex Network Issue] (with Roy Cerqueti), in *Verso l'economia circolare* [Towards the Circular Economy], A. Paolini (Ed.), 2018, Macerata, Eum, pp. 65-77.
- “La spesa delle famiglie per la mensa scolastica: prezzo o contributo per il servizio?” [Families' Expenditure on School Meals: Prices or Monetary Contributions to Deliver the Services?], in *Pratiche alimentari e relazioni sociali* [Nutrition Practices and Social Relations], C. Francesconi and M. Raiteri (Eds.), Milano, Franco Angeli, 2018, pp. 126-139.
- “Sergio Steve e Duncan Black” [Sergio Steve and Duncan Black], in *Economia, politica e cultura nell'Italia del XX secolo. Attualità del pensiero critico di Sergio Steve* [Economics, Politics and Culture in 20th Century Italy. Relevance of Sergio Steve's Critical Thinking], S. Gorini, E. Longobardi and G. Vitaletti (Eds.), Milano, Franco Angeli, 2018, pp. 259-271.
- “Effetti economici delle imposte” [Economic Effects of Taxation] (with Annalisa Vinella), in *Manuale di scienza delle finanze, diritto finanziario e contabilità pubblica* [Handbook of public finance, financial law and public accounting], A. Uricchio, V. Peragine and M. Aulenta (Eds.), Bari, Nel Diritto, 2018, pp. 231-240.
- “I fallimenti di mercato” [Market Failures] (with Annalisa Vinella), in *Manuale di scienza delle finanze, diritto finanziario e contabilità pubblica* [Handbook of public finance, financial law and public accounting], A. Uricchio, V. Peragine and M. Aulenta (Eds.), Bari, Nel Diritto, 2018, pp. 77-98.
- “Compagnie di bandiera e proprietà pubblica: tra sopravvivenza e crisi” [Flag Carriers and Public Ownership: Crisis and Survival], in *Mercato e politiche pubbliche nell'industria del trasporto aereo* [Market and Public Policies in the Air Transport Industry], A. Macchiati and D. Piacentino (Eds.), Bologna, Il Mulino, 2006, pp. 175-207.
- *Privatizzazioni e riorganizzazioni delle aziende di servizi pubblici locali* [Privatization and Reorganization of Public Utility Companies], Rome, CNR (Consiglio Nazionale delle Ricerche), 2006. Available at <http://www.issirfa.cnr.it/3512,1259.html>.

#### Papers in professional journals and newspaper articles

- “Economics of Spectrum: Implications for the Netherlands” (with Martin Cave), in *Mediaforum*, 2006, n. 2, pp. 30-34.
- “Uno spettro da ridisegnare” [Spectrum Allocation: Why It Has to Be Re-Designed] (with Martin Cave), *Il Sole 24 Ore*, 12 January 2006.

#### Short notes, other papers and publications

- *Regulation by Independent Agencies: Who is the Principal, and What Does She Want – With Examples, mainly from Transport Regulation in Italy* (with Diego Piacentino), conference paper, September 2019.

- *Sergio Steve e Duncan Black*, conference paper, “Giornata Steve”, Rome, Accademia Nazionale dei Lincei and Sapienza University, 19 October 2016.
- *Incentives for Incumbent Spectrum Users in Licensed Shared Access (LSA): A Dynamic Capabilities View* (with Petri Ahokangas, Marja Matinmikko, Seppo Yrjölä, Vânia Gonçalves and Miia Mustonen), Oulu, VTT and University of Oulu, mimeo, 2015.
- *Pluralistic Licensing and Its Application to Next Generation Networks* (with Oliver Holland, Luca De Nardis, Keith Nolan, Arturas Medeisis, Peter Anker, Fernando Velez, Marja Matinmikko, John Sydor and Hamid Aghvami), mimeo, 2014.
- *Se un incendio mette a nudo tutti i mali di Fiumicino* [Fire Reveals Inefficiencies at Fiumicino Airport], [www.lavoce.info](http://www.lavoce.info), 6 October 2015.
- *Concorrenza fra aeroporti e formule di tariffazione* [On the Airport Business: Competition and Price Regulation] (with Diego Piacentino), seminar paper, Ancona, Università Politecnica delle Marche, January 2014.
- *Autorità dei trasporti: qui comanda la politica* [Transportation Authority: Politics Rule], [www.lavoce.info](http://www.lavoce.info), 6 August 2013.
- *Aeroporto Sanzio: quale futuro* [Sanzio Airport: What future?] (with Andrea Mosconi), *Realtà industriale*, no. 10(October), 2011.
- *Essays on Optimal Spectrum Management for Expanding Wireless Communications*, Coventry (UK): University of Warwick, Warwick Business School, 2011. PhD thesis supervised by prof. Martin Cave, OBE. Dissertation committee: prof. Gérard Pogorel; prof. Gregory Crawford; prof. Qing Wang.
- *Un agente senza un (vero) principale: la magistratura in Italia* [An Agent without a (Real) Principal: the Italian Judiciary] (with Diego Piacentino), mimeo, University of Macerata, July 2010.
- *Alitalia: la riorganizzazione non può attendere* [Alitalia: Its Reorganization Can Not Be Delayed] (with Diego Piacentino), [www.lavoce.info](http://www.lavoce.info), 27 June 2008.
- *New Spectrum-Using Technologies and the Future of Spectrum Management: A European Policy Perspective* (with Martin Cave), paper for ThinkTel, 2006.
- *Spectrum Management and Technological Change* (with Martin Cave), paper for ThinkTel, 2005.
- *Le privatizzazioni degli enti locali: quale ratio?* [Local Governments’ Privatizations: Which Rationale?] (with Diego Piacentino), seminar paper, Rome, Università “Sapienza”, School of Economics, 2004.
- *Economic Effects of Discretionary Powers on Accountability in the Bookkeeping of Regulated Enterprises*, Rotterdam, Erasmus University-Rotterdam Institute of Law and Economics, 2003. Available at [http://www.emle.org/index\\_org.html](http://www.emle.org/index_org.html).

### Working papers

- *Concentration of Income and Wealth in Italy and Remarks on the Sustainability of their Tax Treatment* (with Alfonso Carfora and Eleonora Cutrini).
- *The Perfect Way to Manage Spectrum* (with Arturas Medeisis and William Webb).
- *The Efficient Regulation of the Airport Business: Evidence from Italy* (with Vincenzo Patrizii).

- *Open Issues in the Economic Analysis of Contract Enforcement* (with Daniel Danau and Annalisa Vinella).
- *Purchasing Club Goods under Majority Rule*.

## RESEARCH PROJECTS (SELECTED WORK)

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### National research projects

Research on “Innovation Ecosystem: Innovation, digitalisation and sustainability for the diffused economy in Central Italy”, spoke no. 7 on “Smart solutions and educational programs for anti-fragility and inclusivity”, work package no. 3 “Industrial value chains with high growth potential”, *team member*, PNRR 2022 (Italian Ministry of Economics and Finance, The National Recovery and Resilience Plan).

Research on “Reconciling efficiency and equity in the Italian healthcare system after the pandemic crisis”, *team member*, PRIN 2022 (Italian Ministry of Research/ Research Projects of National Interest).

Research on “Social welfare and healthcare”, *team member*, PRIN 2020 (Italian Ministry of Research/ Research Projects of National Interest) – not financed.

Study on the proposed “Contratto di Programma 2012-2044” to regulate Aeroporti di Roma Spa, *team member*, AF-Mercados on behalf of Ibar and Assaereo, 2013.

Research on “Political economy ed efficienza della spesa pubblica: Evidenza sul ruolo delle istituzioni politiche nella governance dei servizi pubblici” [“Political economy and efficiency of public expenditure: Evidence on the role of political institutions in the governance of public services”], *team member*, PRIN 2012 (Italian Ministry of Research/ Research Projects of National Interest).

Research on “Pubblicità e *multihoming* nei mercati dei media a due versanti” [“Advertising and multihoming in two-sided media markets”], *team member*, PRIN 2010 (Italian Ministry of Research/ Research Projects of National Interest) – not financed.

Research on price regulation of public utility industries, *junior consultant*, Ministry of economics and finance-NARS, Italy, 2004-2005.

### International research projects

Spectrum management training program, Module SMTP OM-4 on “Economic and market tools for spectrum management”, International Telecommunication Union-Radiocommunication Bureau, ITU Academy, (with Martin Cave), 2014.

Research project on “Techno-economic regulatory framework for radio spectrum access for cognitive radio/ software defined radio (TERRA)”; *member of the Management Committee and Chair of WG4* on “Impact assessment of CR/SDR regulation”; European Cooperation in Science and Technology (COST), ICT Action IC0905, [www.cost-terra.org](http://www.cost-terra.org), May 2010 – April 2014.

Study on the future of spectrum usage rights and wireless licensing in an increasingly competitive environment, *team member*, International Telecommunication Union-Radiocommunication Bureau, 2007.

Research project on “Cost-benefit analysis of options for better functioning of the internal market in electronic communications”, *team member*, European Commission-Information society and media Directorate-general, 2007.

Study on spectrum policy options, *team member*, Department of communications information technology and the arts (DCITA), Australia, 2006.

Research project on “Spectrum policies and radio technologies viable in emerging wireless societies (SPORTVIEWS)”, *team member*, European Commission-Information society and media Directorate-general, 2006.

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#### ADDITIONAL INFORMATION ABOUT RESEARCH ACTIVITIES

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- Reviewer for: - *Administrative Sciences*; - *Advances in Economics and Business*; - *Communications and Strategies*; - *European Journal of Law and Economics*; - *Information Economics and Policy*; - *International Journal of Manpower*; - *Jahrbücher für Nationalökonomie und Statistik*; - *Journal of Industrial and Business Economics*; - *International Journal of Technology, Policy and Management*; - *Sustainability*; - *The Italian Journal of Public Economics*; - *Technological and Economic Development of Economy*; - *Telecommunications Policy*; - *Telecommunications Systems*.
- Editorial Board Member of *Modern Economy and Management*, Innovation Forever PGL (since April 2023).
- Editorial Board Member of *SCIREA Journal of Education*, Science Research Association (since July 2019).
- Panel member in evaluating candidates for research positions (tenure track and junior ones).
- Panel member in PhD awarding committees.
- Member of the ICT 2014 technical committee.
- Member of the IEEE/PIMRC 2013 technical committee.

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#### PRIZES AND AWARDS

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Winner of national competition for funds for basic research, “Fondo di finanziamento per le attività base di ricerca (FFABR)”, Anvur [National Agency for Evaluation of Universities and Research] (year 2017).

## TEACHING

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University of Macerata – Department of Economics and Law, and Department of Law (since academic year 2004/05): courses in *Public Economics* and *Public Finance*.

University of Macerata – Department of Law (since academic year 2014/15): course in *Fundamentals of Planning and Administration of Services: Economics of Welfare and Public Goods*.

University of Urbino “Carlo Bo” – Department of Economics, Society, and Politics (since academic year 2014/15): course in *Economic Analysis of Public Policies and Social Services*.

University of Macerata – Department of Economics and Law (academic years 2014/15 to 2016/17): course in *Topics of Applied Economics*.

University of Macerata – Department of Law (academic year 2016/17): course in *Fundamentals and Methods of Empirical Research in Social Sciences*.

University of Macerata – Department of Law (academic years 2011/12 to 2013/14): course in *Fundamentals of Planning and Administration of Services: Management of profit and Not-for-Profit Organisations*.

University of Macerata - Inter-university School for Specialization in Higher Education (academic years 2006/07 to 2007/08): course in *Teaching Public Economics and Finance*.

University of Macerata - School of Political Sciences (academic year 2005/06): course in *Accountancy for the Public Sector*.

University of Urbino “Carlo Bo” - School of Law (academic years 2004/05 to 2006/07): course in *Public Economics and Finance*.

University of Urbino “Carlo Bo” - School of Law (academic year 2004/05): lectures on evaluation of investment projects in the public sector, for the course in *Microeconomics*.

Luiss “Guido Carli”, Rome - School of Economics (academic years 2003/04, 2004/05, 2010/11): teaching assistant in *Public Economics and Finance*.

## FURTHER INFORMATION

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*Institutional tasks at the University of Macerata, by election or nomination:*

- Member of the Working group on Open Science Policy (since 2023).
- Member of the Committee for Research Ethics Policy (since 2021).
- Researchers’ representative in the Academic Senate (since 2021).
- Department of Economics and Law, member of the Research Committee (since November 2021).
- Department of Economics and Law, student advisor for the course programme in “Economia, Territorio e Ambiente” [Economics, Land, and Environment] (code: L-33) (since November 2021).
- Department of Economics and Law, member of the joint committee lecturers-students (since 2020).
- Department Chair’s representative for Open science policy (since 2022).



- Department Chair’s representative for Campus libraries (since 2018).
- Scuola di Studi Superiori “Giacomo Leopardi” – tutor (since 2014).
- Researchers’ representative in the Academic Senate (year 2018).
- Department Chair’s representative for projects involving not-for-profit organisations and local fiscal policies (years 2012 - 2018).

## LANGUAGE SKILLS

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- Italian – mother tongue;
- English – fluent;
- German – basic knowledge.

Macerata, 8 March 2024

Signed: Leo Fulvio Minervini