

CURRICULUM VITAE

Lorenzo Pupillo

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Summary

Lorenzo Pupillo (Ph.D. UPENN, 1990) is currently an independent digital technologies consultant, an Associate Senior Research Fellow at the Center for European Policy Studies in Brussels and Head of the Cybersecurity@CEPS Initiative. He has more than 30 years of experience in the private sector, government, international organizations and academia. Strong expertise in ICTs and Internet Policy and Regulation with combination of activities in specific areas such as Cyber-security, Strategy, Business Development, Regulation and Policy Evaluation. Significant blend of strategy consulting and operational involvement. Multi-sector experience (telecom and energy). Extensive knowledge of national and international policies. Proven capacities in managing complex projects, large budgets and staff from different backgrounds. Experience in high level dialogue with policy makers. Strong network building capabilities within international organizations, the private sector and academia.

EDUCATION

Ph.D. Faculty of Arts and Sciences, University of Pennsylvania, Philadelphia PA, 1990.

Dissertation Topic: Essays on the Regionalization of the European Telecommunications Market

Supervisor: Prof. Almarin Phillips, Department of Public Policy and Management, Wharton School

MBA, ISTAO (Istituto Adriano Olivetti), Ancona Italy, 1981

Laurea (MS and BA) in Mathematics University of Rome, 1976. Concentration: Statistics, Computer Science

Areas of Concentration:

Industrial Organization, Public Policy and Regulation

Telecommunications Economics

Applied Econometrics

EXPERIENCE

CENTER FOR EUROPEAN POLICY STUDIES, Brussels

From January 2017 to date: Associate Senior Research Fellow and Head of the Cybersecurity@CEPS Initiative. He is promoting research, events, collaborative efforts on the economics of cybersecurity and on the impact of digital technologies on economics and society with the European institutions and other think tanks and universities worldwide.

TELECOM ITALIA, Public & Regulatory Affairs, Rome

From November 2004 to December 2016: Executive Director. Duties & Responsibilities:

- Advising senior Management on Cyber-security issues, NIS Directive, data breaches and reporting regimes. Managing the Consultation on cPPP on Cyber-security between the European Commission and the industry. Designing and managing Telecom Italia's Internet Policy. Advising senior management on Internet Policy and Economics issues such as Internet governance, net neutrality, zero rating and Future Internet models. Management of relations with OECD, ITU, ICANN, Internet Governance Forum. Designing and managing ad hoc projects on the impact of Internet on jobs and skills.
- Advising senior management and supporting the consultation process with AGCOM and the European Commission on various Market Analyses and ad hoc dossiers on Next Generation Access Networks, Network Neutrality, Network Functional Separation, Geographic Markets Regulation. Defining regulatory positioning for the following projects: Wimax: Market and Regulatory Evaluation, Peer

to Peer: Business models & Regulation, Digital Rights Management & EU Copyright Directive, Access to Video Programming in the USA & Europe, New Media Policy.

- Advising senior management and conducting policy and regulatory analysis on the models of Private Public Partnership for broadband development, with particular focus on USA, Australia, and Europe Evaluating the socio-economic impact of Next Generation Access Network's development at national and regional level.
- Designing and implementing at corporate level regulatory and policy strategies for the Italian and European markets on Cloud Computing. Managing the Public Consultation and the relations with the European Commission on Cloud Issues
- Designing and managing the Road Show of TI in the USA and Europe on the Operational Separation Model of Telecom Italia Network: organization of 13 meetings with the major regulatory agencies, international organizations (OECD, ITU, World Bank), academia (MIT, London Business School, Columbia University) and business organizations.
- Implementing impact analysis of functional separation of network infrastructures on the Italian economy.
- Designing and managing of an energy efficiency project (E-Cube) for the introduction of second generation energy smart metering, for consumer and business markets, based on wireless technologies. Policy evaluation of meters diffusion strategies and cost-benefit analysis. Privacy & Consumer Protection issues. Impact analysis on the energy sector of the smart metering diffusion. Project management of a team of 12 Italian partners from private, public sectors and academia.
- Leading and conducting policy and regulatory analysis of the development of Smart Grid and its impact on the telecom industry. Promoting a high level dialogue between the Telecom and the Electricity sectors in Europe through an ad hoc workshop managed by DG INFO of the European Commission. Acting as Telecom Italia contact point for ISGAN: International Smart Grid Action Network Project. Promoting of initiatives on Smart Grid for Telecom Italia Subsidiaries in Latin America.
- Promoting and designing of analyses and benchmarking of the major smart cities projects in the world: definition of taxonomy of smart cities and evaluation of the effectiveness of the projects' design for green growth and sustainable development.
- Designing and managing of an International Conference at Columbia Institute for Tele-Information On "Broadband Networks & Smart Grid" (December 2010)
- Designing and managing *ad hoc* programs with international organizations, such as COP (Child on Line Protection) with ITU.
- Supervising and managing ad hoc projects of the Public Affairs Unit of Telecom Italia such as: "Innovation for enterprises: Improving ICT adoption by SMEs": a joint project with Confindustria involving thousands of Italian entrepreneurs on 4 major areas of interest-adoption of digital technologies, internationalization, total quality management, energy saving . In particular, participating as member of the Advisory Group and contributing to design and manage training programs and knowledge products such as toolkits on RFID, privacy & security on line, VoIP
- Advising and supporting the preparation of International Conferences, such as the OECD "Digital Content Creation, Distribution and Access" Conference in Rome - January 2006.

- Planning, organizing and managing a project of Team collaboration to improve the working style in the Public Affairs Division of TI. This project –involving about 60 people- was based on the adoption of new collaborative services from the TI SW Griffon Platform and the redesign and managing of the division Intranet, with a particular responsibility as Editor in chief.
- Acting as a focal point for the TI relations with OECD, World Bank, Columbia Institute for Tele Information, London Business School, Communications Future Program – MIT in Boston, and ITU.

WORLD BANK GROUP, Global Information and Communication Technologies Department, Washington D.C., USA

From November 2003 to November 2004: ICT Policy Advisor, in secondment from Telecom Italia Public and Economic Affairs Division. Duties & responsibilities:

- Advising on and writing policy papers: review of telecom policy for countries in the Middle East and North Africa; analysis of new technologies and Open Access Models in developing countries.
- Designing of knowledge products such as toolkits, for the following projects: Intellectual Property Rights and Information and Communication Technologies for development; ICT Regulation Toolkits, E-Strategies Monitoring and Evaluation Toolkit.
- Contributing to the repositioning of Infodev Program: “Infodev Business Development Project: From Free to Free and Fee-Based Services –A case Study”.
- Conceiving, promoting and preparing cooperation programmes with the Private Sector on the M-Banking in developing countries
- Contributing to the training program of the GICT Department

TELECOM ITALIA, Learning Services Division, Rome 2000-2003

From September 2000 to 2003: Executive Director and direct report to the Executive Vice President. Duties & responsibilities:

- Designing and managing the Business Case for the creation of a NewCO in the e-learning sector.
- Identifying financial opportunities, designing and managing specific research and training projects on the Digital Divide, on the impact of the New Economy on the Telecom Industry and on the Digital Literacy. Designing and developing Knowledge Products.
- Conceiving, planning, and managing the e-Business@telecomitalia, program in cooperation with the London Business School. This project involved the training of more than 100 executives and managers of Telecom Italia over two years (2001 & 2002)
- Acting as focal point for TI relations with the World Economic Forum for two years (2001&2002) as Member of the Steering Committee on Education of the WEF Digital Divide Task Force.
- Identifying funding, designing and managing of a feasibility study on an ICT thematic park in Rome. This project, funded by the regional government, involved the coordination of an highly interdisciplinary working group of 15 senior consultants and professionals.

TELECOM ITALIA, Strategy, Regulatory and Business Development Divisions, Rome 1992-2000

- **From September 1992 to June 1997, Director Consumer Market Analysis Group.** Extensive designing of market research and managing business cases for many consumer market services. Conceiving, planning and managing the Video on Demand Trial of Telecom

Italia - a 15 million euro project. Extensive market research, pricing, regulatory and profitability analysis for video on demand, on line and broadband network services. Supporting of regulatory filing for Telecom Italia Multimedia Offerings. Designing of Telecom Italia Consumer Laboratory for testing and evaluating new services and products.

- **From July 1997 to April 1998, Director Competitive Analysis Group:** analyzing competitors' strategies, alliances, regulatory practices, entry models, Resale vs. Facilities based competition. Relative Cost Positioning Analysis, Best Practices of New Entrants.
- **From May 1998 to September 2000: Executive Director and direct report to the Executive Vice President for Strategy.** Designing and managing an e-business strategy for the company. Market and financial assessment for the following projects: Astrolink, Skybridge, CAI Wireless, MCI Backbone, Level 3. Market and regulatory assessment for UMTS Corporate Strategy. Next Generation Internet Policy and Regulation.

AT&T BELL LABORATORIES, Murray Hill, NJ USA 1990-1992

Member of technical staff from 1990 to 1992:

- Discrete choice modeling of carrier selection.
- Designing of Optional calling Plans.
- Designing of price promotions in the long distance markets.
- Consumer market segmentation. Elasticities by bill size.
- Designing of Price Cap regulation.

RESEARCH ACTIVITIES 1981-1989

Wharton School, Department of Public Policy and Management, University of Pennsylvania, Philadelphia.

Research Fellow from Spring 1988 to Summer 1990. Experience in estimating demand cross elasticities in the telecommunications sector and in analyzing telecommunications public policy issues and the economics of standardization.

Department of Economics, University of Pennsylvania, Philadelphia

Visiting Fellow 1984-1985. Research Fellow, 1985-86, 1986-87, Fall 1987. Extensive experience in constructing and analyzing business survey data for the USA and many European Countries using log linear probability models. . Formulation and estimation of models of firms' behavior. Last project: Dun and Bradstreet Quarterly Survey of Manufacturing Establishments.

ISAE (National Institute for Economic Analysis – previously ISCO) Rome, Italy

Economist/Econometrician 1982-1987: Extensive experience in constructing and evaluating business test data for Italian firms.

IBM Scientific Center, Pisa Italy

Internship for Econometrics Research, 1981

CONSULTING ACTIVITIES

OECD, Paris, 2000-2001

Project: Services Experts Meeting, Relevance of Empirical Research for the Telecom Industry

S.S.G. Reiss Romoli (Postgraduate School in Telecommunications), L' Aquila, Italy, 1989.

Project: Design and Management of workshops on tariff policy.

CNR (National Research Council), Rome Italy, 1987-1988.

Projects: a) Pricing Rules in the Telecommunications Sector: Theory and Applications;
b) Telephone Demand for Access and Cross-subsidization: The Italian Case.

IRI (Istituto per la Ricostruzione Industriale) (Parent Company for all state managed enterprises)
Rome, Italy, 1986-87.
Project: Economies of Scale, Natural Monopoly and Public Policy: The Case of Telecommunications.

L' Aquila Savings Bank. L' Aquila Italy. 1985
Project: Regional Impact of Monetary Policy

PROFESSIONAL ACTIVITIES

Dr. Pupillo delivered many papers and speeches at EU workshops, International Telecommunications Society and IIR conferences. He is member of the Columbia Institute for Tele-Information Advisory Board and Affiliated Researcher at Columbia Institute for Tele Information. He is member of the Board of Directors of the International Telecommunications Society and of the Scientific Committee of EURO CPR. He is member of the International Editorial Board of Communications & Strategies and of Telecommunications Policy. In the year 2000, he was program coordinator of the International Telecommunications Society World Conference in Buenos Aires.

He was member of the Steering Committee on Education of the World Economic Forum Digital Divide Task Force 2001-2002 and of the Advisory Council of the EU Project PRISM on the Economics of Intangibles 2002 and of the Advisory Committee for the Innovation Report 2003 of the Italian Minister for Innovation.

He acts as external peer reviewer of policy papers and reports from various units of the World Bank. In particular, in 2011, he has been external Peer Reviewer for the World Bank IEG Evaluation of the ICT Activities of the World Bank in the last decade.

He has been adjunct Professor of "Economics of ICT" at Università La Sapienza in Rome from 2001 to 2003 and from 2004 to 2006. He is currently adjunct professor of Global Governance of Digital Technologies at University of Urbino.

PUBLICATIONS

Books:

"Strengthening the EU's Cyber Defence Capabilities" (edited with Melissa K. Griffith, Steven Blockmans and Andrea Renda), Report of a CEPS Task Force, CEPS November 2018

"Digitized Labor: The Impact of the Internet on Employment" (edited with Eli Noam and Leonard Waverman), Palgrave June 2018

"Software Vulnerability Disclosure in Europe: Technology, Policies and Legal Challenges" (edited with Afonso Ferreira and Gianluca Varisco), Report of a CEPS Task Force, CEPS, June 2018

"Global Internet Governance in Transition", (edited with Eli Noam), forthcoming for Springer, Winter 2019

"Broadband Networks, Smart Grid and Climate Change", (edited with Eli Noam and Johann Kranz), Springer, 2013

"Internet Policy and Economics: Challenges and Perspectives", (edited with William Lehr) Springer 2009

"Peer to Peer Video: The Economics, Policy and Culture of Today's New Mass Medium" (edited with Eli Noam), Springer 2008.

"Cyber Policy and Economics in an Internet Age", (edited with William Lehr) Kluwer Academic Publishers, 2002.

Papers:

“Multistakeholderism with Variable Geometry”, in *Global Internet Governance in Transition*, edited by Eli Noam & Lorenzo Pupillo, forthcoming for Springer, Winter 2019

“Verso una nuova Governance Globale di Internet”, *Notiziario Tecnico di Telecom Italia*, N. 1, 2013

“Energy Smart Metering and Policy Issues”, Columbia Institute for Tele Information Conference on Broadband and Smart Grid, New York, December 2010

“Energy Smart Metering and Policy Approaches: The E-Cube Project”, 18th ITS World Conference, Tokyo, and June 2010

“Broadband impact on economic growth: a review of empirical evidence”, in *L'Industria*, Il Mulino December 2009.

“Guidelines for Industry on Child on line Protection”, ITU, 2009

"Intellectual Property, Digital Technologies and the Developing World, in *"Internet Policy and Economics: Challenges and Perspectives"*, edited by William Lehr & Lorenzo Pupillo, Springer, 2009.

The Economics of Peer-to-Peer”, (with Alain and E. Bourdeau de Fontenay). in *“Peer to Peer Video: The Economics, Policy and Culture of Today’s New Mass Medium”*, edited by Eli Noam & Lorenzo Pupillo, Springer, 2008.

“The Economics of Next Generation Access Networks: Towards Regional Patterns of Regulation” (with Giovanni Amendola), *Communications & Strategies* n. 68, 2008

The WEF Global Information Technology Report 2004-2005: some comments”, mimeo March 2005

“Report on Innovation and Digital Technologies in Italy” (chapter on Digital Content and Cultural Heritage), Minister of Innovation & Technologies, 2003

“Relevance of Empirical Research for the Telecom Industry”, OECD, mimeo March 2002.

"UMTS: fixed-mobile integration value" (joint with Alberto Micalizi) mimeo, July 2000.

“Asymmetric Regulation of Converging Markets: Problems, Pitfalls and Potential” (joint with M. Shankerman and L. Waverman), mimeo, June 1998.

“Alternative Approaches To the Regulation of Local Access- An Economic Analysis” (joint with A. and E. de Fontenay), mimeo, June 1998.

“The Economics of Local Loop Architectures for multimedia services” (joint with A. Conte), *Information Economics and Policy* 10, 1998.

“Open Video System as an evolution of Video Dial Tone” (joint with A. de Fontenay), *Communications & Strategies* 26: 125-140, 1997.

“Building a Bridge to the 21st Century: The Need for a New Regulatory Framework for Multimedia,” (with Alain & E. Bourdeau de Fontenay), EuroCPR’97, Venice, Italy.

“USA Telecom Act 1996: implications for the Italian case”, mimeo June 1996.

“Servizi di Telecomunicazioni tra monopolio e concorrenza” (joint with F. de Massari). *Quaderni di ricerca dell’* Università LUISS di Roma, December 1994.

“OCCs Modeling: Identification of OCC Users by Their Outbound and Inbound AT&T Call Detail” AT&T Bell Laboratories Technical Memorandum n. 51164-911227-19, December 1991.

“A Targeting Model for a Weekend Price Promotion” AT&T Bell Laboratories Technical Memorandum

N. 51164-911216-18, December 1991.

“Relative Export Prices and Firm Size in Imperfect Markets” (joint with K. Zimmerman) in *Open Economies Review*, October 1991.

“Determinants of Export Activity in Italian Manufacturing Industries: Results from Panel Data” (joint with K. Zimmerman), in “Empirical Studies of Export Activity and Strategic Trade Policy”, K. Zimmermann ed., Springer-Verlag, New York, 1991.

“Domanda di Accesso al Telefono e Mutualità delle Tariffe: il Caso Italiano, in Regolamentazione, Efficienza, Mercato”, A. Pera ed., Franco Angeli, Milano 1991.

“Essays on the Regionalization of the European Telecommunications Market”, Ph.D. dissertation, 1990

“Price and Production Adjustment of British and Italian Industrial Firms” (joint B. Chizzolini, M. Nerlove and D. Ross) - CIRET Conference Proceedings 1988.

“Demand Expectations, Production Plans, Prices and Inventories “(joint with B. Chizzolini and M. Nerlove) ISCO - Rassegna dei lavori dell’ Istituto, 1987.

“La metodologia ARIMA e la Correlazione Storica Quali Possibili Strumenti per lo Studio della Congiuntura” ISCO - Rassegna dei lavori dell’Istituto, 1985.

“ISCOMODEL”. ISCO, lavori interni dell’Istituto, 1984.

“Application of Validation Techniques to a NonLinear Model of The Italian Economy”, in Note da Studi e Ricerche” - IBM Italia, 1982

Editor

Editor of the following Special Issues of *Communications and Strategies*:

“Next Generation Access Networks “, *Communications & Strategies* n. 68, 2008

“Green ICT, Energy and Climate Change”, *Communications and Strategies* n. 76, 2009

New business models for Next Generation Access”, *Communications and Strategies*, n. 78, 2010

“A Single Market for eCommunications? “, *Communications and Strategies*, n. 82 July 2011

“Cloud ecosystems and platform competition”, *Communications and Strategies*, n. 85 March 2012

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