

CURRICULUM VITAE

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born: 3rd Oct. 1965 in Turku, Finland.
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EDUCATION

1995 Ph.D. (economics), University of Warwick.
1993 Lic. Sc. (economics), Turku School of Economics and Business Administration.
1990 M.Sc. (economics), Turku School of Economics and Business Administration.

PROFESSIONAL EXPERIENCE

10- Professor, Dept. of Managerial Economics, Strategy and Innovation, KU Leuven.
04-10 Director, Helsinki Center of Economic Research (HECER), University of Helsinki, and Finnish
Doctoral Programme in Economics (FDPE).
03-04 Visiting Scholar, Depart. of Economics, University of Berkeley, California.
03-04 Professor of Technology Management and Policy, Helsinki School of Economics (HSE).
99-03 Acting Professor of Technology Management and Policy, HSE.
99 Visiting Fellow, National Bureau of Economic Research.
98-99 Visiting Scholar, Massachusetts Institute of Technology, Depart. of Economics.
98-03 Assistant professor of economics, HSE .
97-99 Senior research fellow, Academy of Finland and HSE.
94-97 Research fellow, Warwick Business School.

OTHER ACADEMIC POSITIONS

ZEW Research Associate 2013 -.
Bank of Finland Research Fellow 2011 -.
CEPR Research Fellow 2009 - .
Associate/Senior Research Fellow, Research Institute of the Finnish Economy (ETLA), 2002-.
Docent, Turku School of Economics and Business Administration, 2001-.
Research Fellow, Warwick Business School, University of Warwick, 1997-.

TEACHING

Ph.D.: Empirical Industrial Organization, Applied Microeconometrics.
M.Sc.: Economics of Technological Innovation, Microeconomics of Banking.
B.A.: Economics of Strategy/ Industrial Organization, Management of Technology, Managerial Economics.

PUBLICATIONS AND RESEARCH

A. Articles in refereed journals

O. Toivanen and Lotta Väänänen, Education and inventions, *The Review of Economics and Statistics*, forthcoming.

Maija Gao, Ari Hyytinen and O. Toivanen, Problems in launching the mobile internet: Evidence from a pricing experiment, *Journal of Economics and Management Strategy*, 2014, 23, 3, 483-506.

Tuomas Takalo, Tanja Tanayama and O. Toivanen, Market failures and the additional effects of public support to private R&D: Theory and empirical implications, *International Journal of Industrial Organization*, 2013, 31, 634-642.

T. Takalo, T. Tanayama and O. Toivanen, Estimating the benefits of targeted R&D subsidies, *The Review of Economics and Statistics*, 2013, 95, 1, 255-272.

A. Hyytinen, Pekka Ilmakunnas and O. Toivanen, The return-to-entrepreneurship puzzle, *Labour Economics*, 2013, 20, 57-67.

O. Toivanen and Lotta Väänänen, Returns to inventors, *The Review of Economics and Statistics*, 2012, 94, 4, 1173-1190.

T. Takalo and O. Toivanen, Entrepreneurship, financiership, and selection, *Scandinavian Journal of Economics*, 2012, 114, 2, 601-628.

A. Hyytinen and O. Toivanen, Income inequality and technology diffusion: Evidence from developing countries, *Scandinavian Journal of Economics*, 2011, 113, 2, 364-387.

A. Hyytinen and O. Toivanen, Do financial constraints hold back innovation and growth? Evidence on the role of public policy, *Research Policy*, 2005, 34, 9, 1385-1403.

O. Toivanen and Michael Waterson, Market structure and entry: Where's the beef? *RAND Journal of Economics*, 2005, 36, 3, 680-699.

Jukka Liikanen, Paul Stoneman, and O. Toivanen, Intergenerational effects in the diffusion of new technology: The case of mobile phones, *International Journal of Industrial Organization*, 2004, 22, 8-9, 1137-1154.

A. Hyytinen and O. Toivanen, Monitoring and market power in credit markets, *International Journal of Industrial Organization*, 2004, 22, 2, 269-288.

A. Hyytinen and O. Toivanen, Vertical differentiation, asymmetric information and endogenous bank screening, *Topics in Theoretical Economics*, 2004, 4, 1, Article 5.
<http://www.bepress.com/bejite/topics/vol4/iss1/art5>

A. Hyytinen and O. Toivanen, Asymmetric information and the market structure in the venture capital industry, *Journal of Financial Services Research*, 2003, 23, 3, 241-249.

O. Toivanen, P. Stoneman, and Derek Bosworth, Innovation and the market value of UK firms, 1989-1995, *Oxford Bulletin of Economics and Statistics*, 2002, 64, 1, 39-62.

Robert Cressy and O. Toivanen, Is there adverse selection in the credit market?, *Venture Capital: An International Journal of Entrepreneurial Finance*, 2001, 3, 3, 215-238.

P. Stoneman and O. Toivanen, The impact of revised recommended accounting practices on R&D reporting by UK firms, *International Journal of the Economics of Business*, 2001, 8, 1, 123-136.

O. Toivanen and M. Waterson, Empirical research on discrete choice game-theoretic models of entry: an illustration, *European Economic Review, Papers and Proceedings*, 2000, 44, 4-6, 985-992. Reprinted in *Joskow, P. and Waterson, M. (eds.) Empirical industrial organization. Volume 1*, 2004, 107-14, Elgar Reference Collection. International Library of Critical Writings in Economics, vol. 172. Cheltenham, U.K. and Northampton, Mass. Edgar Elgar.

O. Toivanen and P. Stoneman, Dynamics of R & D and investment: UK evidence, *Economics Letters*, 1998, 58, 119-126.

O. Toivanen, Economies of scale and scope in the Finnish non-life insurance industry, *Journal of Banking and Finance*, 1997, 21, 759-779.

P. Stoneman and O. Toivanen, Diffusion of multiple technologies: an empirical study, *Economics of Innovation and New Technology*, 1997, 5, 1-17.

B. Books

Paul Diederer, P. Stoneman, O. Toivanen and Arjan Wolters, *Innovation and Research Policies: An International Comparative Analysis*, 1999, Edward Elgar Publishing Ltd.

C. Chapters in books

Innovation Policy, Entrepreneurship, and Development: A Finnish View, in *Innovation, Entrepreneurship and Development*, M. Goedhuys, W. Naudé and E. Szirmai, (eds.), 2011, Oxford University Press.

P. Stoneman and O. Toivanen, "Technological diffusion under Uncertainty: A Real Options Model Applied to the International Diffusion of Robot Technology" in C. Antonelli, D. Foray, E. Steinmuller, P. Swann (eds.), *New Frontiers in the Economics of Innovation: Essays in Honour of Paul David*, Edward Elgar, 2007.

O. Toivanen, P. Stoneman and P. Diederer, Uncertainty, macroeconomic volatility and investment in new technology C. Driver and P. Temple (eds.), *Investment, Growth and Employment: Perspectives for Policy*, Routledge, 1999.

D. Selected other publications

A. Hyytinen and O. Toivanen, Kartellivahinkojen arviointi, Kilpailuoikeudellinen vuosikirja 2011.

A. Hyytinen and O. Toivanen, Kilpailunrajoitukset Suomessa 1958-1992, *Kansantaloudellinen aikakauskirja* 2/2010, 127-140.

Reinhilde Veugelers, T. Tanayama, Education, Research and the Economy, in *Evaluation of the Finnish National Innovation System – Full Report*. Taloustieto 2009/ Ministry of Education and Ministry of Employment and Industry.

National innovation policy in an international world – perspectives from Finland, in *Going Global: The challenges for knowledge-based economies*, M. Squicciarini, and T. Loikkanen (eds.), Publications of the Ministry of Employment and the Economy, Innovation 20/2008.

Luke Georghiou, Keith Smith, O. Toivanen and Pekka Ylä-Anttila, 2003, *Evaluation of the Finnish innovation support system*, Ministry of Trade and Industry publications 5/2003.

RECENT AND ON-GOING RESEARCH

Cartels uncovered (with Ari Hyytinen and Frode Steen).

Anatomy of cartel contracts (with Ari Hyytinen and Frode Steen).

Service firm expansion (with Michael Waterson).

Microcredit and Crime (with Khondker Aktaruzzaman and Pertti Haaparanta).
Innovation policy reform (with Tuomas Takalo and Tanja Tanayama).

OTHER ACADEMIC ACTIVITIES

Positions of Trust:

Member, Organization Committee, CEPR and Bank of Finland conference on Entrepreneurial Finance, Innovation and Growth, 2015
Member, Expert Group for Programme Monitoring and Evaluation, European Research Council 2014-.
Member, Economic Advisory Group on Competition Policy, EU Commission, DG Competition 2013-.
Chair, Scientific Committee, EARIE 2010.
Member, Scientific Council of the Government Institute for Economic Research, 2010-2012.
Member, Scientific Council of Statistics Finland 2007-2011.
Member, Economic Council of the Finnish Ministry of Finance, 2005-2010.
Member, Scientific Council of the Research Institute of the Finnish Economy (Etila), 2005-2010.
Member, Organization Committee, CEPR Conference on Industrial Economics, 2005-.
Member, Scientific Committee of EARIE, 2004-, ESEM 2008, 2009, EEA 2001.
Member, Executive Committee of EARIE, 2003-2009.
Member, Local Organization Committee, EARIE 2003, Helsinki.

Editorial service: Editor, *Kansantaloudellinen Aikakauskirja* (Finnish Economic Journal), 2005-2010.
Associate editor, *Journal of Industrial Economics*, 2004-2009.
Editor, *Finnish Economic Papers*, 2005-2006.
Associate editor, *Finnish Economic Papers*, 2002-2005.

Evaluation of research proposals: National Science Foundation, EU FP7, ESRC.

Referee for: *American Economic J.: Applied Economics*, *Applied Economics*, *BE J. of Economic Analysis and Policy*, *Cambridge University Press*, *Econometrica*, *Economic J.*, *Economics of Innovation and New Technology*, *Finnish Economic Papers*, *Information Economics and Policy*, *Industrial and Corporate Change*, *International J. of Industrial Organization*, *International R. of Economics and Finance*, *J. of Banking and Finance*, *J. of Business and Economics*, *J. of Business Venturing*, *J. of Economic Behavior and Organization*, *J. of European Economic Association*, *J. of Industrial Economics*, *J. of Economics and Management Strategy*, *J. of Media Economics*, *J. of Regulatory Economics*, *J. for the Scientific Study of Religion*, *European Economic R.*, *Management Science*, *Metroeconomica*, *RAND J. of Economics*, *Reinvention*, *Research Policy*, *R. of Economics and Statistics*, *R. of Economic Studies*, *R. of Industrial Organization*, *Scientometrics*, *Small Business Economics*.

Invited presentations at conferences:

EARIE 2012 Rome, DRUID 2012 Copenhagen, EEA 1999 Santiago de Compostela

Invited seminar presentations at Warwick, Bergen, Boston U., Stockholm SSE, WZB Berlin, Barcelona, Princeton, Michigan, Yale, MIT, Stanford, Stanford SITE, UC Berkeley, UC Davis, LSE, Leuven, Umeå, NBER IO, Productivity & IEP programs, Bern, Toulouse, Tel Aviv, Hebrew University, U. of Cyprus, Bocconi, Oxford, Alicante, Zürich, Mannheim/MACCI, Helsinki, Stockholm U., Aachen, EIEF Rome, CEPR IO Meetings in Toulouse, Bergen, München and Mannheim.

Congress presentations at EARIE 1993, 1994, 2002, 2004 - 2009, EEA 1994, 1996, 1999, 2002, ESEM, 1996, 1997, Econometric Society Summer Meetings 1997, Royal Economic Society 1994-97,

Econometric Society World Meeting 1995, 2000, International Industrial Organization Conference, 2004, 2005, and others.

Other professional service:

Examiner and/or pre-examiner on 9 Ph.D. theses (Helsinki U. Tech., Uppsala U., NHH Bergen, HSE, Åbo Akademi U., U. of Helsinki, KU Leuven).

Ph.D. STUDENTS

Anni Heikkilä 2015 Aalto School of Business (former HSE)
Tanja Saxell U. of Helsinki 2014 (1st placement VATT)
Torsten Santavirta Aalto School of Business 2011 (U. of Stockholm)
Valtteri Ahti U. of Helsinki 2011 (AIM Capital)
Lotta Väänänen HSE 2010 (winner of Aalto U. School of Business dissertation award, U. of Mannheim)
Anni-Maria Pulkki-Brannström, WBS 2009 (UCL Centre for International Health and Development)
Khondker Aktaruzzaman, U. of Helsinki 2009 (U. of Helsinki and HECER)
Charlotta Grönqvist, Hanken School of Economics 2009 (Bank of Finland)
Janne Tukiainen, U. of Helsinki 2008 (VATT and HECER)
Tanja Tanayama, HSE 2007 (HECER)
Mikko Mäkinen, HSE 2007 (ETLA)
Xavier Carpentier, HSE 2006 (Nokia)
Ari Hyytinen, HSE 2000 (winner of HSE (Aalto U. School of Business) dissertation award, ETLA)

NON-ACADEMIC ACTIVITIES

Public sector consulting: Finnish Technology Agency (Tekes), Ministry of Trade and Industry/Ministry of Employment and Industry, European Commission, DG Industry and Enterprise, DG Economics and Finance, DG Competition, European Investment Bank.

Private sector consulting on competition cases, pricing.

MAJOR RESEARCH GRANTS SINCE 2005

2012	1.7M€ SIMPATIC “Social Impact Policy Analysis of Technological Innovation Challenges “ (joint with Reinhilde Veugelers, Paul Zagame), EUFP7.
2008	400 000€ “Economic studies using twin data” (joint with Ari Hyytinen and Pekka Ilmakunnas) Academy of Finland. 200 000€ “Economics of public procurement” (joint with Ari Hyytinen and Janne Tukiainen) Eemil Aaltonen Foundation.
2007	300 000€ “Structural modeling of the R&D subsidy process II” (joint with Tuomas Takalo and Tanja Tanayama) National Technology Agency of Finland (Tekes).
2005	280 000€ “Structural modeling of the R&D subsidy process” (joint with Tuomas Takalo and Tanja Tanayama), Tekes.
2005	256 020€ “Cartel organization” (joint with Ari Hyytinen and Susanna Fellman) Academy of Finland.

Total value of major research grants prior to 2005 circa 1 000 000€.