

CURRICULUM VITAE

Cees A Withagen

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1. Addresses:

Offices

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Home:

Gerard van Swietenstraat 80
5017 HB Tilburg

2. Personal:

Born October 3, 1950; married, two children.

3. Current posts:

- Professor of environmental economics at Free University, Amsterdam, Department of Economics and Business Administration
- Professor of environmental economics at Tilburg University, Department of Economics and Business Administration
- Head of the environmental economics research group at Free University

4. Past posts:

- 1968-1974 teaching assistant (student) at Tilburg University, Department of Economics
- 1974-1975 assistant professor at Delft University of Technology, Department of Philosophy and Social Sciences
- 1975-1976 teacher at the School for Higher Economic Education, Eindhoven
- 1976-1982 assistant professor at the University of Amsterdam, Department of Actuarial Sciences and Econometrics
- 1982-1988 assistant professor at Eindhoven University of Technology, Department of Philosophy and Social Sciences
- 1986-1989 (part-time) assistant professor at the Open University
- 1988-1997 associate professor at Eindhoven University of Technology, Department of Mathematics and Computing Science
- 1983-1997 (part-time) teacher at the Foundation for Management Science Eindhoven.

5. Degrees:

- Master degree in Econometrics with a specialisation in mathematical economics obtained in February 1974 (cum laude) Tilburg University.
- Doctorate/PhD degree Tilburg University, 1984 (cum laude). Title dissertation: *Economic Theory and Trade in Natural Exhaustible Resources*. Supervisors: Pieter Ruys and Claus Weddepohl.

6. Teaching experience

- Environmental Economics and Policy (Perman, Ma, McGilvray and Common, Copeland and Taylor)
- Microeconomics (Varian; Perloff; Mankiw)
- Econometric Methods (Johnston)
- Industrial Organization (Tirole)
- Statistics (Walpole and Myers)

7. PhD activities:

Committees: R. Barchiaggi, P. van Beukering, C. Brink, P. Callaway, R. Dellink R. Gerlagh, P. Hang, R. Hoekstra, J. Kamphorst, P. Kandelaars, O. Kuik, G. Lafforgue I. P  choux,, A. Mulatu (promotor), P. Mulder, J. Noailly (promotor), K. Oltmer, I. Ossokina, S. Schalk, X. Tieman, F. de Vries, H. Solem, N.Vellinga (promotor).

Present supervision: Arno Schroten, Alejandra Saravia, Alex Halsema

8. Miscellaneous:

- Conseil Scientifique Minist  re de Recherche (France)
- Chairman Committee International Affairs, Faculty of Economics and Business Administration, Free University
- Netherlands Organization for Scientific Research grant for project ‘‘Sustainability and markets for raw materials from non-renewable natural resources’’.
- Netherlands Organization for Scientific Research grant for project ‘‘Environmental Policy, Competitiveness and Location Behaviour of Firms’’ (duration 4 years, starting 1998). Coordinator of the project.
- Netherlands Organization for Scientific Research grant for project ‘‘Porter’s hypothesis: a theoretical and empirical investigation’’ (duration 2 years, starting 2001). Coordinator of the project.
- Founding member European Association of Environmental and Resource Economists.
- Council member European Association of Environmental and Resource Economists.
- Referee for: American Economic Review, Canadian Journal of Economics, De Economist, Ecological Economics, Econometrica, Economic Theory, Edward Elgar, Environment and Development Economics, Environmental and Resource Economics, European Economic Review, International Economic Review, Journal of Economic Dynamics and Control, Journal of Economic Theory, Journal of Economics, Journal of Environmental Economics and Management, Journal of Forest Economics, Journal of Public Economics, Metroeconomica, North-Holland, Oxford Economic Papers, Resource and Energy Economics, Scandinavian Journal of Economics, Springer, Structural Change en Dynamic Economics.
- Fellow Netherlands Network of Economics.
- Fellow Tinbergen Institute.
- Chairman examination board Tinbergen Institute.

- Fellow CentER, Tilburg University.
- Member programme committee Meeting of the European Association of Environmental and Resource Economists, 1996, 1999, 2001, 2003, 2005, 2006.
- Member Editorial Board Environmental and Resource Economics
- Member RSEE program committee 2005.
- Member Evaluation Committee Netherlands Organisation for Scientific Research
- Alumnus IIASA (Laxenburg, Austria).
- Alumnus Xi'an Jiaotong University (Xi'an, China).
- Netherlands Organization for Scientific Research grant to visit "Resources for the Future", Washington D.C. May-August 1994.
- Netherlands Organization for Scientific Research grant EURO 50,000 for research on Natural Resources 2004-2005.
- Organizer conferences on Environmental Policy, Competitiveness and Location Behaviour of Firms (Schiermonnikoog 1998, Vaeshartelt 1999, Rolduc 2000, Aquafredda 2000). Rolduc and Aquafredda are Euresco sponsored conferences.
- Member American Economic Association, Association of Environmental and Resource Economists, Econometric Society, European Economic Association, Royal Economic Society, Royal Netherlands Economic Association

PUBLICATIONS

a. Monographs

1. *Economic Theory and International Trade in Natural Exhaustible Resources*, Springer Verlag, Berlin, 1985.
2. *Milieubeleid en Concurrentievermogen*, Inaugural Address Free University Amsterdam, (in Dutch), 1998.
3. *Market Dynamics: Imperfect Competition and Non-renewable Resources*, Princeton University Press (forthcoming), (co-author Aart de Zeeuw).

b. Books edited

1. *Equilibrium, Markets and Dynamics*, Springer, Berlin, 2002, (co-editors Cars Hommes and Roald Ramer).
2. *The International Dimension of Environmental Policy*, Kluwer, Dordrecht, 2002, (co-editors Laura Marsiliani and Michael Rauscher).
3. *Environmental Policy in an International Perspective*, Kluwer, Dordrecht, 2003, (co-editors Laura Marsiliani and Michael Rauscher).

c. Publications in books (refereed)

1. "Topics in resource economics", in F. van der Ploeg (ed.), *Advanced Lectures in Quantitative Economics*, Academic Press, London, pp. 381-419, 1990.
2. "Comments on: Economic models of optimal energy use under global environmental constraints, by Hans Gottinger", in R. Pethig (ed.), *Conflicts and Cooperation in Managing Environmental Resources*, Springer Verlag, Berlin, pp. 188-193, 1992.
3. "Theoretical aspects of the economic modelling of sustainable development", in J. van den Bergh and M. Hofkes (eds.), *Theory and Implementation of Economic models for Sustainable Development*, Kluwer Academic Publishers, Dordrecht, pp. 101-110, 1998.
4. "Optimal extraction of non-renewable resources", in J. van den Bergh (ed.), *Handbook of Environmental and Resource Economics*, Edward Elgar Publishing, pp. 49-58, 1999.

5. “Imperfect competition in natural resource markets”, in J. van den Bergh (ed.), *Handbook of Environmental and Resource Economics*, Edward Elgar Publishing, pp. 59-67, 1999, (co-author Aart de Zeeuw).
6. “Weak and Strong Sustainability”, in *Encyclopaedia of Life Supporting Systems*, UNESCO, 2001.
7. “An Economic-Theoretical Perspective on Green and Sustainable National Income”, in *Encyclopaedia of Life Supporting Systems*, UNESCO, 2001.
8. “The international dimension of environmental policy, Introduction”, in L. Marsiliani, M. Rauscher and C. Withagen (eds.), *The International Dimension of Environmental Policy*, Kluwer, 2002, pp. 9-15, (co-authors Laura Marsiliani and Michael Rauscher)
9. “Environmental regulation and international trade: a general equilibrium approach”, in J. List and A. de Zeeuw (eds.), *Recent Advances in Environmental Economics*, Edward Elgar, Camberley, pp. 98-118, 2002, (co-author Chris Elbers).
10. “Environmental policy and Bertrand competition: a general equilibrium approach” in C. Hommes, R. Ramer and C. Withagen (eds.), *Equilibrium, Markets and Dynamics*, Springer, Berlin, pp. 183-195, 2002, (co-author Chris Elbers).
11. “Environmental policy and international trade: are policy differentials optimal?”, L. Marsiliani, M. Rauscher and C. Withagen (eds.), *Environmental Policy in an International Perspective*, Kluwer 2003, (co-author Chris Elbers).
12. “Environmental Regulation and Competitiveness: A meta-analysis of international trade studies”, forthcoming A. Löschl (ed.), *Empirical Modelling of the Economy and the Environment*, Physica Verlag, Berlin, pp. 23-55, 2004, (co-authors Abay Mulatu and Raymond Florax).
13. “Should environmental policy discriminate between exposed and sheltered sectors?” in Ch. Böhringer and A. Lange (eds.), *Applied Research in Environmental Economics*, ZEW Economic Studies vol. 30, 2005. Physica Verlag, Heidelberg, pp. 83-98

d. Publications in international journals

1. “The optimal exploitation of natural exhaustible resources, a survey”, De Economist, vol. 129, pp. 504-531, 1981.
2. “The exploitation of Dutch natural gas, an alternative approach”, De Economist, vol. 130, pp. 71-100, 1982.

3. “Reply to: the exploitation of our gas, some remarks by W. Adriaansen”, De Economist, vol. 131, pp. 93-94, 1983.
4. “The optimal exploitation of a natural resource when there is full complementarity,” Journal of Economic Dynamics and Control, vol. 6, pp. 239-252, 1983.
5. “Trading in exhaustible resources in the presence of extraction costs, a general equilibrium approach”, Journal of Economic Dynamics and Control, vol. 8, pp. 197-209, 1985, (co-author Chris Elbers).
6. “On the Negishi approach to dynamic economic systems”, Nieuw Archief voor Wiskunde, vol. 8, pp. 295-311, 1990, (co-author Jan van Geldrop).
7. “Mathematical economics, an introduction”, Nieuw Archief voor Wiskunde, vol. 8, pp. 273-279, 1990, (co-author Dave Furth).
8. “A differential game between government and firms: comments”, Journal of Economics, vol. 52, pp. 285-290, 1990.
9. “Existence of general equilibria in economies with natural exhaustible resources and an infinite horizon”, Journal of Mathematical Economics, vol. 20, pp. 225-248, 1991, (co-authors Jan van Geldrop and Shou Jilin).
10. “Pollution control and the Ramsey problem”, Environmental and Resource Economics, vol. 1, pp. 215-236, 1991, (co-author Frederick van der Ploeg).
11. “Optimal localized production experience and schooling”, International Economic Review, vol. 33, pp. 1-20, 1992, (co-authors Charles van Marrewijk and Casper de Vries).
12. “Note on the open loop von Stackelberg equilibrium in the cartel versus fringe model”, Economic Journal, vol. 102, pp. 1478-1484, 1992, (co-authors Fons Groot and Aart de Zeeuw).
13. “Optimal management of the growth potential of renewable resources”, Journal of Economics, vol. 56, pp. 297-309, 1992, (co-author David Levhari).
14. “Local asymptotic stability of optimal steady states”, Economics Letters, vol. 40, pp. 7-11, 1992, (co-author Henri Huijberts).
15. “General equilibrium and international trade with exhaustible resources,” Journal of International Economics, vol. 34, pp. 341-357, 1993 (co-author Jan van Geldrop).
16. “General equilibrium in an economy with exhaustible resources and an unbounded horizon”, Journal of Economic Dynamics and Control, vol. 18, pp. 1011-

1037, 1994, (co-author Jan van Geldrop).

17. “Pollution and exhaustibility of fossil fuels”, Resource and Energy Economics, vol. 16, pp. 235-242, 1994.

18. “Pollution, abatement and balanced growth”, Environmental and Resource Economics, vol. 5, pp. 1-8, 1995.

19. “Optimality of irreversible pollution accumulation”, Journal of Economic Dynamics and Control, vol. 20, pp. 1775-1797, 1996, (co-author Olli Tahvonen).

20. “On the concept of green national income”, Oxford Economic Papers, vol. 48, pp. 499-514, 1996, (co-author Nico Vellinga).

21. “A note on sustainability and investment rules”, Economics Letters, vol. 53, pp. 1-6, 1996

22. “The rise, fall and sustainability of capital-resource economies”, Scandinavian Journal of Economics, vol. 100, pp. 513-527, 1998, (co-author John Pezzey).

23. “Untested hypotheses in resource economics”, Environmental and Resource Economics, vol. 11, pp. 623-634, 1998.

24. “Characterizing sustainability: The converse of Hartwick’s rule”, Journal of Economic Dynamics and Control, vol. 23, pp. 159-165, 1998, (co-author Geir Asheim).

25. “General equilibrium and resource economics”, Economic Theory, vol. 14, pp. 689-702, 1999, (co-author Jan van Geldrop).

26. “Natural capital and sustainability,” Ecological Economics, vol. 32, pp. 445-455, 2000, (co-author Jan van Geldrop).

27. “Open-loop von Stackelberg equilibrium in the cartel versus fringe model”, Energy Economics, vol. 22, pp. 209-223, 2000, (co-authors Fons Groot and Aart de Zeeuw).

28. “Accumulative pollution, “clean technology,” and policy design”, Resource and Energy Economics, vol. 22, pp. 367-384, 2000, (co-author Mike Toman).

29. “Complexities due to sluggish expansion of backstop capacities”, Journal of Economics, vol. 72, pp. 153-174, 2000, (co-author Franz Wirl).

30. “Endogenous growth and the environment”, Growth and Change, vol. 32, pp. 92-109, 2001, (co-author Nico Vellinga).

31. “Quasi-equilibrium in economies with infinite dimensional commodity spaces: a truncation approach” Journal of Economic Dynamics and Control, vol.27, pp. 423-444, 2002, (co-author Gerard van der Laan).

32. “Evolution of harvesting strategies replicator and resource dynamics”, Journal of

Evolutionary Economics, vol 13, pp. 183-200, 2003 (co-authors Joelle Noailly and Jeroen van den Bergh).

33. “On the sustainable program in Solow’s model”, Natural Resource Modelling, vol. 16, pp. 219-231, 2003 (co-authors Geir Asheim and Wolfgang Buchholz).

34. Maximin, discounting, and separating hyperplanes”, Natural Resource Modelling, vol. 16, pp. 213-218, 2003 (co-authors Geir Asheim and Wolfgang Buchholz).

35. “The Hartwick rule: Myths and Facts”, Environmental and Resource Economics, vol. 25, pp. 129-150, (co-authors Geir Asheim and Wolfgang Buchholz)

36. “Strong time-consistency in the cartel-versus-fringe model”, Journal of Economic Dynamics and Control, vol.28, pp.287-306, 2003 (co-authors Fons Groot and Aart de Zeeuw).

37. “Optimal investments in clean production capacity”, Environmental and Resource Economics, vol. 28, pp. 325-345, 2004 (co-authors Carolyn Fischer and Michael Toman).

38. “Environmental policy, population dynamics and agglomeration”, Contributions to Economic Analysis and Policy, vol. 3, no. 2, article 3, 2004 (co-author Chris Elbers).

39. “The dynamics of China’s regional development and pollution”, Environment and Development Economics, vol. 9, pp. 507-537, 2004 (co-authors Henri de Groot and Zhou Minliang).

40. “International trade, species diversity, and habitat conservation”, Journal of Environmental Economics and Management, vol. 48, pp. 891-910, 2004 (co-authors Sjak Smulders and Daan van Soest)

41. "Environmental Regulation and International Trade: Empirical Results for Germany, the Netherlands and the US, 1977-1992", Contributions to Economic Analysis and Policy, vol. 3: no. 2, article 5, 2004, (co-authors Abay Mulatu and Raymond Florax).

e. Scientific publications in Dutch

1. “De economie van uitputbare natuurlijke hulpbronnen, enige voorbeelden”, in P. Verheyen, T. Bemelmans, A. Kapteyn, J. Kriens. P. Ruys and G. van Schijndel (eds.), *De Praktijk van de Econometrie, Opstellen van Tilburgse Econometristen*, Stenfert Kroese, Leiden, pp. 120-133, (in Dutch), 1984.

2. “Milieubeleid en concurrentievermogen”, Tijdschrift Milieu, 14, pp. 46-55, 1999.

3. “Groen en duurzaam nationaal inkomen”, Economisch en Sociaal Tijdschrift,

vol. 51, pp. 371-403, 1998.

4. “Milieueconomie”, Tijdschrift Milieu, 17, pp. 186-210, 2002, (co-author Jeroen van den Bergh).
5. “Discrete tijd benaderingen van economieën in continuë tijd”, in R. van den Brink and R. Gilles (eds.), *Wiskundig Economische Perspectieven, Opstellen aangeboden aan Prof. Dr. Pieter H.M. Ruys*, VAET Tilburg, pp. 45-57, 2003.
6. “Milieubeleid, concurrentievermogen en locatiegedrag van bedrijven”, *Economisch Statistische Berichten*, June 2, 2005, pp. 6-7 (co-authors Henk Folmer and Henk van der Veen)
7. “Profijt van het Mestbeleid”, forthcoming in *Kwartaalschrift Economie* (co-author Mariken Betsema)

f. Policy reports and popularising publications in Dutch:

1. “Monetising Monetary Losses”, Central Bureau of Statistics LNM series 9701, pp. 1-75, 1997, (co-authored with the members of the Discussieplatform Monetarisering Milieuverliezen).
2. “Porter’s hypothesis, a survey of the literature”, RMNO publication 140, pp. 7-43, 1999.
3. “Environmental policy and competitiveness”, Report for the Dutch Ministry of Economic Affairs, 1999, (co-author Joulia Ossokina).
4. “Sustainable Development of Moerdijkse Hoek”, Report for Foundation Moerdijkse Hoek, Telos Publication, pp. 1-31, 2000 (co-authors Trudy van Gurp and Martijn Koobs).
5. “Economics and Sustainable Development”, Position paper Committee for Sustainable Higher Education, 2000, (co-author Jeroen van den Bergh).
6. “Porter’s hypothesis”, Efact 14, pp. 18-23, 2000.
7. “Vrijhandel emissierechten CO2 leidt tot tweedeling”, Financieel Dagblad, 6 februari 2002.
8. “Duurzaam inkomen”, Trouw, 5 september
9. “Klimaatbeleid en Europese concurrentieposities”, Report for the Ministry of Finance, pp. 1-101, 2002, (co-authors Johannes Bollen, Henri de Groot, Ton Manders, Paul Tang and Herman Volleberg).

RECENT PRESENTATIONS/LECTURES

“Environmental Policy and Competitiveness”, Dutch Science Foundation, May 1998.

“On green and on sustainable national income”, Groningen University, May 1998.

“Intertemporal Expansion of Backstop Capacities”, World Meeting of the European Association of Environmental and Resource Economists and the Association of Environmental and Resource Economists, Venice, June 1998.

“The converse of Hartwick’s rule”, European Meeting of the Econometric Society, Berlin, September 1998.

“General equilibrium models of environmental regulation and international trade”, workshop on Environmental Policy and Competitiveness, Schiermonnikoog, October 1998 and University Maastricht, November 1998.

“Endogenous growth and environmental policy”, Symposium on “Endogenous growth and regional development: a comparative approach on the role of governments and institutions”, Tinbergen Institute Amsterdam, February 1999.

“Porter’s hypothesis”, workshop of the Advisory Council for Research on Nature and Environment, Utrecht, April, 1999.

“General equilibrium models of environmental regulation and international trade”, Meeting of the European Association of Environmental and Resource Economists, Oslo, June 1999, 12th Congress of the International Economic Association, Buenos Aires, August 1999, and Congress of the European Economic Association, Santiago de Compostela, September 1999.

“Intertemporal expansion of backstop capacities”, Congress of the European Economic Association, Santiago de Compostela, invited session, September 1999.

“Milieu en locatiekeuze”, Stichting Natuur en Milieu, Utrecht, September 1999.

“Nederlands Milieubeleid in Europees Perspectief”, Seniorenacademie, Tilburg, February 2000.

“Natural Capital and Sustainability”, Meeting of the European Association of Environmental and Resource Economists, Rethymnon, June 2000.

“Quasi-equilibrium in economies with infinite dimensional commodity spaces: a truncation approach”, European Workshop on General Equilibrium Theory, Maastricht,

May 2000

“Environmental Regulation and Competitiveness: A meta-analysis of international trade studies”, Workshop in Honour of Klaus Conrad, Mannheim, May 2001

“The dynamics of China’s regional development and pollution”, Meeting of the European Association of Environmental and Resource Economists, Southampton, June 2001.

“Quasi-equilibrium in economies with infinite dimensional commodity spaces: a truncation approach”, Congress of the European Economic Association, Lausanne, August 2001.

“General equilibrium models of environmental regulation and international trade”, Congress of the European Economic Association, Lausanne, August 2001.

“Meta-analysis, an assessment”, CPB and Master Point Workshop on Meta-Analysis and Policy Oriented Macro-Economic Research, Amsterdam, February 2002

“On the sustainable program in Solow’s model”, World Congress of the Association of Environmental and Resource Economists and the European Association of Environmental and Resource Economists, Monterey, June 2002

“The Hartwick rule: Myths and Facts”, Congress European Economic Association, Venice, September 2002; Seminar Tilburg University, Tilburg, May 2002; and Seminar Université de Toulouse, Toulouse, October 2002.

“Environmental Regulation and Competitiveness”, University of Technology Trondheim, March 2003.

“International trade, species diversity, and habitat conservation”, Workshop on Spatial Environmental Economics, Heidelberg, April 2003, First Congress of the South American and Caribbean Association of Environmental and Resource Economists Cartagena, July 2003; Congress of the European Association of Environmental and Resource Economists Bilbao, July 2003, Université de Montreal, October 2003, University of Maryland, November 2003, University of Central Florida, December 2003, and The World Bank, December 2003.

“Spatial evolution of social norms in a common resource-pool game”, Third Bioecon Workshop, Montpellier, May 2003

“Trade, environment and resource use”, ZEW workshop "Frontiers in Applied Environmental and Resource Economics", Mannheim, March 2004.

“Spatial evolution of social norms in a common-pool resource game”, University of Durham, March 2004 and SURED Conference Ascona, June 2004.

“Tradable emission permits in a federal system”, Meeting of the European Association of Environmental and Resource Economists, Budapest, June 2004, and Meeting of the European Economic Association, Madrid, August 2004.

“Optimal environmental policy differentials under emissions constraints”, Meeting of the European Association of Environmental and Resource Economists, Budapest, June 2004