

## CURRICULUM VITAE

### Personal

Name: Frode Steen  
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 Norwegian School of Economics  
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 URL: <https://www.nhh.no/en/employees/faculty/frode-steen/#tab3>

### Education

Ph.D., The Norwegian School of Economics and Business Administration, 1995.  
 M.A., The University of Bergen, Department of Economics, 1991.  
 B.A., The University of Bergen, Department of Economics, 1987.

### Current Occupation

Professor in Economics and holder of Norgesgruppen's chair in Competition Economics on Food Markets since August 2016, Research Fellow Centre for Economic Policy Research (CEPR), Member of management group Bergen Center for Competition Law and Economics (BECCLE). Permanent member of the Norwegian Competition Tribunal.

### Fields of Interest

Econometrics, Empirical Industrial Organization, Applied Microeconomics, Antitrust Economics, Competition policy, Competition Law, Food markets, Airline Economics, Transport Economics

### Employment (academic)

2013.08 – 2016.07	Professor and Head of the Department of Economics, NHH
2004.10 – 2013.07	Professor at Department of Economics, NHH.
2000.01 - 2004.09	Associate professor at Department of Economics, NHH.
1996.11 - 1999.12	Senior researcher at SNF
1995.07 - 1996.10	Associate Professor at Department of Economics, NHH.
1995.01 - 1995.06	Research Associate at SNF.
1992.01 - 1994.12	Research Fellow at Institute of Economics at NHH.
1993.08 - 1994.06	Visiting Scholar, Department of Economics, Simon Fraser University, Canada
1991.09 - 1991.12	Research Fellow at SNF.
1990.06 - 1991.08	Research Assistant at Centre for Applied Research (SAF), NHH.

### Academic Honour

Scholarship, The Norwegian Bank's fund for economic research, 1995, 1996, 1997, 1998.  
 Scholarship, The NHH fund, 1995-2018  
 Scholarship, Norwegian Research Council, 1992-1994.  
 Scholarship, Ruhrgas, 1992.

### Teaching

Econometrics, empirical IO, competition analysis, retail analytics, competition law, strategy and micro economics,

### Conference Participation (with paper)

- WZBs 13th conference on Markets and Political economy organized by the CEPR, Berlin 1997, 2004.
- CEPR workshops in applied industrial organization, Lisbon 2000, Toulouse 2010
- European Economic Association (EEA), Prague 1995, Istanbul 1996, Budapest, 2007.
- Econometric Society European Meeting (ESEM), Toulouse 1997.
- European Association for Research in Industrial Economics (EARIE), Juan les Pins, 1995, Vienna, 1996, Leuven, 1997, Copenhagen, 1998, Turin, 1999, Dublin, 2001, Madrid, 2002, Helsinki, 2003, Porto, 2005, Toulouse, 2008, Rome, 2012, Evora, 2013, Munich 2015.
- The Review of Industrial Organization (RIO) conference Chicago, 2004, Boston, 2011.
- The North American Summer Meeting of the Econometric Society", (NASM98), Montreal, Canada 1998
- Canadian Economics Association, Calgary, 1995
- Norwegian Economics Association, Trondheim 1993, Bergen 1997, 2000, 2017.
- International Cooperation for Fisheries and Aquaculture Development, Keelung, Taiwan, 1994, Tromsø, 1998.

### **Organizing of conferences**

- The annual Bergen BECCLE conference on Competition Policy, 2015, 2016, 2017, 2018, 2019, 2022
- “Competition and regulation in markets for goods and services”, COEURE (CEPR/EEA), September 2nd 2015, Brussels
- “Inequality and Welfare: The state of the art, policy challenges and a research agenda for Europe”, COEURE (CEPR/EEA), September 3rd 2015:
- Third CEPR workshop in applied industrial organization, Bergen 2002.
- Member (attended if in bold) of the CEPR Empirical Industrial Organization steering committee 2000-2014 (<http://cepr.org/content/industrial-organization>). Conferences in Toulouse, 1999, Lisbon 2000, Bergen, 2002, Leuven 2003, Hydra, Greece 2004, Munich 2005, Tarragona, 2007, Paris 2008, Mannheim 2009, Toulouse 2010, Tel-Aviv 2011, Cyprus 2012, Bologna 2013, Athens, 2014.
- Scientific committee, EARIE, Porto 2005, Amsterdam 2006, Valencia 2007, Toulouse 2008, Stockholm 2011, Rome 2012, Evora (2013), Milan (2014), Munich (2015), Lisbon (2016), Maastricht (2017), Athens (2018), Barcelona (2019), Bologna (2020), Bergen (2021)
- “Workshop on the role of dynamics and innovations in competition policy” at NHH August 27<sup>th</sup>, 2004, (joint workshop with competition layers and economists)

### **Invited Seminars**

University of Antwerp, German Institute of Economic Research (DIW-Berlin), University of Alicante, University of Oslo, University of Kiel, University of Stavanger, Universidad Carlos III de Madrid, Directorate General for Competition, European Commission (2008, 2010), Centre for Competition Policy (CCP, East Anglia), East Anglia University, BI Norwegian School of management, Portuguese Competition Authorities, Catholic University of Leuven, Copenhagen Business School (2005, 2009), University of Warwick, Institut D’Economie Industrielle (IDEI), Toulouse, London Business School, Helsinki School of Economics, The economic council of Sweden, The CEPR roundtable conference in Barcelona 2002, Stockholm School of Economics, University of Stockholm, Simon Fraser university, Vancouver, University of Bergen, University of Tromsø, The IUI economic analysis institute in Stockholm, Wissenschaftszentrum Berlin für Sozialforschung Berlin (WZB), Ecole Nationale de l’Aviation Civile, Toulouse, Norwegian Competition Authorities (2000, 2006, 2008), The Swedish competition policy directorate, The Agency of the Republic of Kazakhstan for Competition Protection, National Bureau of Statistics, The Ministry of Finance, The Ministry of Transport and Communications, The Ministry of Local Government and Modernisation, Norwegian Civil Aviation Authority, Avinor

### **PhD examiner**

La Trobe University, Victoria, Australia, University of Helsinki, European University Institute Florence, University of Warwick, Stockholm School of Economics, University of Stockholm, The Agricultural University of Norway, University of Bergen, NHH.

### **Project coordination/management**

“Industrial organization of legal and illegal cartels: Dynamics in collusion over time and jurisdiction”, 2017-2018 Norwegian competition authorities),  
 “COEURE” Cooperation on European Research in Economics, EU, 2013-2016  
 “Industry structure, innovation and industrial policy in the new economy” (2003-2006, Norwegian Research Council)  
 ”Mark-up in the farming sector” (1999-2001, Norwegian Research Council)  
 ”Distribution of fish in Norway” (2000-2001, Norwegian Research Council)  
 ”IO modelling of Markets” (1999-2000, Norwegian competition authorities)  
 “External economics of scale in the maritime sector” (1997-2000, Norwegian Research Council)  
 “Uncertainty and stock management ” (1997-1998, Norwegian Research Council)  
 ”DEMINT” The implications for fisheries management systems of interactions between farmed and wild caught species” EU, (1996-1999)

### **Committees and publicly appointed memberships**

- Member of EEA’s standing committee on Research (2012-2017)

### External expert in competition cases

- 2017-2022 Expert advisor European truck cartel case on behalf of Norwegian buyer, Posten
- 2021/2022 Expert adviser ‘price hunter case’, Rema
- 2020/2021 Expert advisor acquisition publishers Bonnier & Strawberry
- 2019 Expert witness in court, 2<sup>nd</sup> court, Telecom regulation, Ministry of Transportation vs Telenor
- 2017 Expert witness in court, 1<sup>st</sup> court, Telecom regulation, Ministry of Transportation vs Telenor
- 2013-2016 Expert witness in court, Margin squeeze case between TDC and Telenor, TDC
- 2007-2015 Contracted to BA-HR as a preferred competition consultant
- 2013-1014. Analysed the competition in the Swedish gasoline market, The Swedish Competition Authorities
- 10-12.2014. Expert witness in court, competition analysis of the Norwegian diesel market, Representing The Ministry of Finance
- 2013 Expert witness in court, Exclusivity case between Tele2 and Telenor, Tele2
- 10-11.2012 Expert witness in court, competition analysis of the market for mobile network termination in Norway, Tele2
- 6:2011-02:2012 Econometric analysis on Norwegian airlines, Norwegian competition Authorities
- 2009-2010 Competition analysis of the Norwegian market for social networks, Dagbladet NO
- 2008-2013 Competition analysis on termination rates and network economics, Tele 2 Norway, Tele2 Sweden and Tele2 Kazakhstan
- 10:2007-5:2008 Expert witness Sweden in court, competition analysis of the Swedish car market, Volvo.
- 5:2007-08:2007 Expert witness Sweden in court, competition analysis of the market for mobile network termination in Sweden, Tele2
- 06:2006. Expert witness in the case between the Norwegian Competition Authorities and SAS on the predation case between Coast-Air and SAS on the Oslo-Haugesund route, Norwegian Competition Authorities.
- 2006-2007. Market delineation analysis of the North Sea ferry market, Color Line
- 2005-2006. Econometric competition analysis of the North Sea ferry market, Color Line
- 2005-2006. Econometric competition analysis of the Swedish Asphalt market, Skanska Sweden
- 08:2005. Competition analysis of the market for call termination in the Norwegian mobile market, Norwegian Tele2
- 06:2005. Competition analysis of the market for fixed network termination in Sweden, Swedish Tele2
- 06:2005. Econometric competition analysis in Norwegian airlines, Norwegian Competition Authorities.
- 06:2004. Econometric competition analysis of potential predation in Norwegian airlines, Norwegian Competition Authorities.
- 11:2003. Econometric competition analysis in the merger case between the two Norwegian banks DnB and Gjensidige NOR, BA-HR
- 1:2002-4:2003. Econometric tests of market power due to bottle-necks in Norwegian power supply, Statkraft.
- 2000- 2003. Econometric competition analysis and expert witness in court in the case of the Swedish gasoline cartel 1999-2005, Swedish Competition Authorities.
- 5:2001-09:2001 Econometric competition analysis in the merger case between the airline companies Braathens and SAS, Norwegian Competition Authorities.
- 11.2001-3:2002 Competition analysis of the competitive situation in Scandinavia, Nordic Competition Authorities in Norway, Sweden, Denmark and Finland
- 09:1999. Competition analysis of the Norwegian Airline market, Norwegian Airline Companies Union
- 1998-1999. Competition analysis an econometric market delineation analysis of the North Sea ferry market, Norwegian Competition Authorities

### Commissioned government reports

- 2007. “An analysis of whether an airline company’s geographical proximity influence on the local route structure in a country”, (in Norwegian) commissioned by The Ministry of Transport and Communication
- 2011-2012 “Cost benchmarking of Norwegian airports” commissioned by The Ministry of Transport and Communication
- 2012-2013 “Buyer power in the grocery sector” (in Norwegian), commissioned by the Ministry of Government Administration Reform and Church Affairs, co-authored with Tommy Staahl Gabrielsen, Lars Sjørgard and Steinar Vagstad. (<https://www.regjeringen.no/nb/dokumenter/kjopermakt-i-dagligvaresektoren/id723054/>)

- 2012-2014 “The Seafood Industry – An analysis of the Norwegian Seafood Industry, NOU 2014:16 (<https://www.regjeringen.no/no/dokumenter/nou-2014-16/id2354149/?ch=1&q=>)
- 2017-2019 “From a symbol of status to common transport –Norwegian aviation in change”, NOU 2019:22 (NOU 2019: 22 - [regjeringen.no](http://www.regjeringen.no))

### Research stays abroad

Fall 1993/spring 1994, Visiting Scholar at Department of Economics at Simon Fraser University i Vancouver, Canada.  
 Spring 2003, Visiting Scholar at Institute D’Economie Industrielle (IDEI), Toulouse, France  
 Spring 2009, Visiting professor at Department of Economics, Copenhagen Business School, Denmark  
 Fall 2017, Visiting Professor at Department of Economics, University of Alicante, Spain  
 Spring 2018, Visiting Professor at Department of Economics, University of California, Berkeley

### Referee work

The Economic Journal, RAND, Economic Journal, Journal of the European Economic Association, European Economic Review, Scandinavian Journal of Economics, Oxford Bulletin of Economics and Statistics, International Journal of Industrial Organisation, Journal of Industrial Economics, Review of Industrial Organization, Journal of Industry, Competition and trade, Regional Science & Urban Economics, Journal of Transport Economics and Policy, International Journal of the Economics of Business, Information Economics & Policy, Aquaculture Economics and Management, Journal of Agricultural Economics Canadian Journal of Agricultural Economics, European Review of Agricultural Economics.

### Selected Publications

#### Papers in International Refereed Journals

“Hump-shaped cross-price effects and the extensive margin in cross-border shopping”, 2021, co-authored with Richard Friberg and Simen A. Ulsaker, *American Economic Journal: Microeconomics*. Vol 14(2), pp.408-438

“The Effects of a Day Off from Retail Price Competition: Evidence on Consumer Behavior and Firm Performance in Gasoline Retailing”, 2021, co-authored with Øystein Foros and Mai Nguyen-Ones, forthcoming in *International Journal of Economics of Business*.

“Norwegian Cartels: Law, policy, registration and practice under the Price and Competition Act 1954-1993”, 2020, co-authored with Eirik Østerud, *Oslo Law Review*, 02/2020(7) pp. 84-104.

“An anatomy of cartel contracts”, 2019 co-authored with Ari Hyytinen and Otto Toivanen, *The Economic Journal*, Vol. 129 (621), pp. 2155–2191

“Uncovering Cartels”, 2018, co-authored with Ari Hyytinen and Otto Toivanen, *American Economic Journal: Microeconomics*, Vol 10 (4), pp 190-222

“Vertical control and price cycles in gasoline retailing?”, 2013, co-authored with Øystein Foros, *The Scandinavian Journal of Economics*, Vol. 115, Issue 3, pp. 640-661.

“Semicollusion”, 2009, *Foundations and Trends® in Microeconomics*: Vol. 5: No 3, pp 153-228 or (Co-authored with Lars Sørsgard).

“Text and Voice: Complements, Substitutes or Both” co-authored with Kjetil Andersson and Øystein Foros, *Industrial and Corporate Change*, 2009, Volume 18, Number 6, pp. 1231–1247

“On the Workings of a Cartel: Evidence from the Norwegian Cement Industry from 1955-1968”, 2006, co-authored with Lars-Hendrik Röller, *American Economic Review*. Vol. 96, No.1, March 2006, pp.321-338.

“Hotelling in the air? Flight departures in Norway“, co-authored with Lars Sørsgard and Kjell. G. Salvanes, *Regional Science & Urban Economics* 35, Issue 2, March 2005, 193-213,

“Compete, Collude or Both - Deregulation in the Norwegian airline industry”, co-authored with Kjell G. Salvanes and Lars Sørsgard, *Journal of Transport Economics and Policy*, 2003, vol. 37, iss. 3, pp. 383-416(34).

“From a regulated duopoly to a private monopoly: The deregulation of the Norwegian airline Industry”, co-authored with Las Sørsgard, *Swedish Economic Policy Review*, Vol. 9, 2003, 191-221.

”Vertical industry linkages: Sources of productivity gains and cumulative causation?”, co-authored with Karen Helene Midelfart Knarvik, *Review of Industrial Organization*, Vol. 21, 2002, 3-20

"Semi-Collusion in The Norwegian Cement Market", co-authored with Lars Sørsgard, *European Economic Review*, Vol. 43, 1999, 1775-96.

"Testing for Market Power using a Dynamic Oligopoly Model", co-authored with Kjell G. Salvanes, *International Journal of Industrial Organization*, 1999, Vol. 17, Issue 2, 147-177.

«Self-reinforcing Agglomerations? An empirical Industry Study», co-authored with Karen Helene Midelfart Knarvik, *The Scandinavian Journal of Economics*, Vol.101, No. 4, 1999.

"Market Delineation and Demand Structure" co-authored with Frank Asche and Kjell Salvanes, *American Journal of Agricultural Economics*, 1997, Vol. 79, pp. 139-150

"Optimal Capacity with Stochastic Demand", *Journal of Productivity Analysis*, 1994, Vol. 5, pp. 375-384.

"Testing for relative performance between seasons in a fishery ", co-authored with Kjell G. Salvanes, *Land Economics*, 1994, Vol. 70, No.4, pp.431-47.

#### **Ph.D. thesis**

"Testing for Market Boundaries and Oligopolistic Behaviour: An Application to the European Union Market for Salmon", The Norwegian School of Economics and Business Administration, 1995.

#### **Books Edited, Book chapters and Policy Papers**

“Against common knowledge in the Norwegian food sector”, Edited with Ivar Pettersen, Cappelen Damm, March 2020, <https://doi.org/10.23865/noasp.93>

“Against common knowledge in the Norwegian food sector”, co-authored with Ivar Pettersen, pp. 7-34, in “Against common knowledge in the Norwegian food sector”, Edited with Ivar Pettersen, Cappelen Damm, March 2020, <https://doi.org/10.23865/noasp.93>

“Norway a different country? Store availability and market concentration in Sweden and Norway”, co-authored with Richard Friberg, Ivar Pettersen and Simen A. Ulsaker, pp. 35-70, in “Against common knowledge in the Norwegian food sector”, Edited with Ivar Pettersen, Cappelen Damm, March 2020, <https://doi.org/10.23865/noasp.93>

“Productivity development in the Norwegian grocery sector”, co-authored with Ivar Pettersen and Simen A. Ulsaker, pp. 71-123, in “Against common knowledge in the Norwegian food sector”, Edited with Ivar Pettersen, Cappelen Damm, March 2020, <https://doi.org/10.23865/noasp.93>

“Economics Without Borders – Economic Research for European Policy Challenges”, (2017). Edited together with Laszlo Matyas, Richard Blundell, Estelle Cantillon, Barbara Chizzolini, Marc Ivaldi, Wolfgang Leininger, Ramon Marion, Cambridge University Press, May 2017

”The SMS Bandwagon in Norway: What Made the Market?”, co-authored with Kjetil Andersson and Øystein Foros, in “Governance of Communication Networks, Connecting Societies and Markets with IT” Brigitte Preissl and Jurgen Müller, (2006) pp. 187-202

“Inefficiency of cartels: The Norwegian cement cartel 1923 to 1968”, co-authored with Lars Sørsgard, in Competition and Welfare, The Norwegian experiment, Lars Sørsgard, (2006), pp. 125-148, The Norwegian Competition Authority

“From failure to success in the Norwegian Airline Industry”, co-authored with Lars Sørsgard, in Competition and Welfare, The Norwegian experiment, Lars Sørsgard, (2006) pp. 149-172, The Norwegian Competition Authority

“Deregulation of the Norwegian airline market”, co-authored with Kjell G. Salvanes and Lars Sørsgard in “*Competition Policy Analysis*”, Ed.: Einar Hope, Routedledge, 2000

### **VoxEU**

“*Cross-price effects and the extensive margin in cross-border shopping*”, (2019), July 2<sup>nd</sup>, co-authored with Richard Friberg and Simen A. Ulsaker. <https://voxeu.org/article/cross-price-effects-and-extensive-margin-cross-border-shopping>

“*When or where to buy under saw-tooth gasoline price cycles*”, (2018) October 11<sup>th</sup>, co-authored with Øystein Foros and Mai Nguyen-Ones. <https://voxeu.org/article/when-or-where-buy-under-saw-tooth-gasoline-price-cycles>

“*Anatomy of cartel contracts*”, (2013), June 14<sup>th</sup>, co-authored with Ari Hyytinen and Otto Toivanen, VOX, Research-based policy analysis and commentary from leading economists, <http://www.voxeu.org/article/anatomy-cartel-contracts>

“*Cartels Uncovered*”, (2010), May 10<sup>th</sup>, co-authored with Ari Hyytinen and Otto Toivanen, VOX, Research-based policy analysis and commentary from leading economists, <http://www.voxeu.org/article/catching-cartels-new-toolkit>

### **Papers in Refereed Norwegian Journals**

«Norwegian cartel: They were many and they were legal as late as in 1992» (2020) coauthored with Ari Hyytinen and Otto Toivanen, *Samfunnsøkonomen*, 2020(1), 21-32

“The sugar tax is expected to increase tax income and reduce the sugar consumption – but does it work?”, (2019), co-authored with Simen A. Ulsaker, *Praktisk økonomi og finans*, 2019(1), 69-84

“Individual prices in the grocery sector”, (2017), co-authored with Øystein Foros and Hans J. Kind, *MAGMA*, 2017(4), 44-49

”What went wrong in Norwegian airlines”, (2002), co-authored with Lars Sørsgard, *Praktisk økonomi og finans*”, 2002(2), 72-79.

”The future of Norwegian airlines”, (2000), co-authored with Lars Sørsgard, *Økonomisk forum*, 2000(9), 19-22.

”From 3 to 2 to 1 in Norwegian Airlines”, (2001), co-authored with Siri P. Strandenes and Lars Sørsgard, *Samferdsel*, 2001 (5) 12-13.

“Agglomeration forces in the maritime industry”, (1998), co-authored with Karen Helene Midelfart Knarvik, *Sosialøkonomen*, 1998(2).

«Are more deregulation the answer to the Norwegian farming industry’s challenges?», (1996), *Sosialøkonomen*, 1996(5).

### **Ongoing research**

“*The effect of cross-border shopping on commodity tax revenue: Results from a natural experiment*”, 2022, co-authored with Richard Friberg, Emil M. Strøm Halseth and Simen A. Ulsaker, DP 9/2022, Department of Economics, NHH

“Co-location, good, bad or both: [How does new entry of discount variety stores affect local grocery business?](#)”, 2021, co-authored with Charlotte B. Evensen and Simen A. Ulsaker, RR status in *Journal of European Economic Association*.

“[Unemployment shocks, cyclical prices and shopping behavior](#)”, 2021, co-authored with Thor Andreas Aursland and Simen A. Ulsaker, DP 03/2021, Department of Economics, NHH

“Asymmetric cost transmission and market power: An examination of the Swedish retail gasoline market.”. 2022, coauthored with Ritvana Rrukaj, WP NHH.



“Paywalls and the demand for online news”, 2019, co-authored with Frode Skjeret and Timothy G.A. Wyndham

“Live cartels, Determinants of cartel efficiency” (with Tommy Stahl Gabrielsen). Work in progress

“Market Power in Gasoline Retailing: A Market-, or a Station Phenomenon?”, 2018, co-authored with Mai Nguyen-Ones

“Disadvantageous semicollusion: Price competition in the Norwegian airline industry”, 2015, co-authored with Lars Sørgard

Bergen, June 2022