

CURRICULUM VITAE

Name: Endre Bjørndal
Born: May 3rd 1966
Nationality: Norwegian
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Academic degrees

1991 Siviløkonom, NHH
1995 Siviløkonom HAE, NHH
Thesis title: "Computation of the Nucleolus of Minimum Cost Spanning Tree Games"
2002 Doctor oeconomiae, NHH
Thesis title: "Cost Allocation Problems in Network and Production Settings"

Employment record

1991-1993 Research assistant at the Department of Finance and Mgmt. Sci., NHH
1993-1996 College lecturer (høgskolelektor), Bergen College (Høgskolen i Bergen)
1996-1999 Ph.D. student, Department of Finance and Management Science, NHH
2000-2001 College lecturer, Bergen College
2001-2003 Associate professor, Department of Finance and Management Science, NHH
2003-2011 Associate professor, Dept. of Finance and Mgmt. Sci. and Dept. of Accounting, Auditing and Law, NHH
2011-2019 Associate professor, Department of Business and Management Science, NHH
2019- Professor, Department of Business and Management Science, NHH

Teaching areas

Managerial Economics, Management Science/Decision Modeling, Benchmarking/Efficiency Analysis, Simulation of Business Processes, Operations Management

Current research interests

Productivity/Efficiency Analysis, Regulation and Benchmarking of Natural Monopolies, Pricing and Congestion Management in Electricity Markets, Intermittent Renewables

Articles in refereed journals and books

Bjørndal, Endre, Maurice Koster and Stef Tijs (2004): Weighted Allocation Rules for Standard Fixed Tree Games, *Mathematical Methods of Operations Research* 59/2 (**Level 1 UHR, Level 1 ABS**)

Bjørndal, Endre, Maurice Koster and Herbert Hamers (2004): Cost Allocation in a Bank ATM Network, *Mathematical Methods of Operations Research* 59/3 (**Level 1 UHR, Level 1 ABS**)

Bjørndal, Endre, Giorgos Stamtzis, G., and Erlich, I. (2005): Finding Core Solutions for Power System Fixed Cost Allocation, *IEE Proceedings - Generation, Transmission and Distribution* 152/2 (**Level 1 UHR**)

Bjørnenak, Trond, Endre Bjørndal and Mette Bjørndal (2005): Effektiviseringskrav og kostnadsgruppering for regulering av nettselskaper, *Magma* 8/2005 (**Level 1 UHR**)

Bjørndal, Endre and Kurt Jörnsten (2009): Lower and Upper Bounds for Linear Production Games, *European Journal of Operational Research* 196/2, 476-486 (**Level 2 UHR, Level 4 ABS**)

Bjørndal, Endre and Kurt Jörnsten (2010): Flow Sharing and Bankruptcy Games, *International Journal of Game Theory* 39/1, 11-28 (**Level 1 UHR, Level 2 ABS**)

Bjørndal, Endre, Mette Bjørndal and Kari-Anne Fange (2010): Benchmarking in Regulation of Electricity Networks in Norway – An Overview, chapter in *Energy, Natural Resources, and Environmental Economics*, editors Endre Bjørndal, Mette Bjørndal and Mikael Rönnqvist, Springer (**Level 1 UHR**)

Miguéis, Vera, Ana Camanho, Endre Bjørndal and Mette Bjørndal (2012): Productivity change and innovation in Norwegian electricity distribution companies, *Journal of the Operational Research Society* 63, 982–990. (**Level 1 UHR, Level 3 ABS**)

Bjørndal, E., M. Bjørndal, and Victoria Gribkovskaia (2012): Simulation of congestion management and security constraints in the Nordic electricity market. *9th International Conference on the European Energy Market (EEM)*. IEEE conference proceedings. (**Level 1 UHR**)

Bjørndal, E., M. Bjørndal, and Linda Rud (2013): Congestion Management by Dispatch or Re-dispatch: Flexibility Costs and Market Power Effects, *10th International Conference on the European Energy Market (EEM)*. IEEE conference proceedings. (**Level 1 UHR**)

Bjørndal, E., M. Bjørndal, and Hong Cai (2014): Nodal Pricing in a Coupled Electricity Market. *11th International Conference on the European Energy Market (EEM)*. IEEE conference proceedings. (**Level 1 UHR**)

Bjørndal, E., M. Bjørndal, and Xiaomei Cheng (2014): Cost Efficiency Analysis based on The DEA and StoNED Models: Case of Norwegian Electricity Distribution Companies, *11th International Conference on the European Energy Market (EEM)*. IEEE conference proceedings. (**Level 1 UHR**)

Saastamoinen, A., Bjørndal, E., & Bjørndal, M. (2017). Specification of merger gains in the Norwegian electricity distribution industry. *Energy Policy*, 102, 96-107. (**Level 1 UHR, Level 2 ABS**)

Bjørndal, E., Bjørndal, M., Cai, H., & Panos, E. (2017). Hybrid pricing in a coupled European power market with more wind power. *European Journal of Operational Research* 264/3. (**Level 2 UHR, Level 4 ABS**)

Bjørndal, Endre, Mette Bjørndal, Astrid Cullmann, Maria Nieswand (2018): Finding the Right Yardstick: Regulation of Electricity Networks under Heterogeneous Environments. *European Journal of Operational Research* 265/2. (**Level 2 UHR, Level 4 ABS**)

Endre Bjørndal, Mette Bjørndal, Kjetil Midthun, Asgeir Tomasgard (2018): Stochastic electricity dispatch: A challenge for market design, *Energy*, Volume 150, Pages 992-1005. (**Level 2 UHR**)

Zakeri, Golbon, Geoff Pritchard, Mette Bjørndal, Endre Bjørndal (2018): Pricing wind: A revenue adequate, cost recovering uniform price for electricity markets with intermittent generation. *INFORMS Journal on Optimization* 1/1.

Other publications

Bjørndal, Endre (2002): Cost Allocation Problems in Network and Production Settings. Thesis for the degree of dr. oecon., NHH.

Bjørndal, Endre, Mette Bjørndal and Trond Bjørnenak (2004): Nettregulering DEL 1: Effektivitetskrav og kostnadsgruppering, SNF-rapport 23/04

Bjørndal, Endre and Mette Bjørndal (2006): Effektivitetsmåling av nettselskaper i kraftsektoren – kommentarer til ny reguleringsmodell, Energibedriftenes landsforening, rapport 207/2006

Bjørndal, Endre and Mette Bjørndal (2006): Nettregulering 2007: Effektivitetsmåling, gjennomsnittlig effektivitet og aldersparameter, SNF-rapport 37/06

Bjørndal, Endre and Mette Bjørndal (2006): Effektivitetsmåling av regional- og distribusjonsnett – fellesmåling, kostnadsvariasjon og kalibrering, SNF-rapport 38/06

Bjørndal, Endre, Mette Bjørndal og Thore Johnsen (2008): Justeringsparameteren i inntektsrammereguleringen – vurdering av behov for endringer, SNF-rapport 37/08

Bjørndal, Endre, Mette Bjørndal and Ana Camanho (2008): Weight Restrictions on Geography Variables in the DEA Benchmarking Model for Norwegian Electricity Distribution Companies, SNF report 33/08

Bjørndal, Endre, Mette Bjørndal and Ana Camanho (2009): Weight Restrictions in the DEA Benchmarking Model for Norwegian Electricity Distribution Companies – Size and Structural Variables, SNF report 22/09

Bjørndal, Endre og Mette Bjørndal (2010): Evaluering av energileddet i sentralnettstariffen og bruk av marginaltapssatser, SNF-rapport 22/10

Eden, Maria-Magdalena, Robert Hooper, Endre Bjørndal og Mette Bjørndal (2010): Distributed Generation in Electricity Networks: Benchmarking Models and Revenue Caps, SNF report 23/10

Bjørndal, Endre, Mette Bjørndal and Victoria Gribkovskaia (2012): Congestion Management in the Nordic Power Market – Nodal Pricing versus Zonal Pricing, SNF report 15/12.

Cheng, Xiaomei, Endre Bjørndal and Mette Bjørndal (2015): Optimal Scale in Different Environments – The Case of Norwegian Electricity Distribution Companies, discussion paper 2015/22, Department of Business and Management Science.

Cheng, Xiaomei, Jonas Andersson and Endre Bjørndal (2015): On the Distributional Assumptions in the StoNED model, discussion paper 2015/24, Department of Business and Management Science.

Cheng, Xiaomei, Endre Bjørndal and Mette Bjørndal (2015): Malmquist Productivity Analysis based on StoNED, discussion paper 2015/25, Department of Business and Management Science.

Cheng, Xiaomei, Endre Bjørndal, Mette Bjørndal and Gudbrand Lien (2015): Productivity Development for Norwegian Electricity Distribution Companies 2004-2013, discussion paper 2015/27, Department of Business and Management Science.

Bjørndal, Endre, Mette Bjørndal, Kjetil Midthun, Golbon Zakeri (2016): Congestion Management in a Stochastic Dispatch Model for Electricity Markets. Discussion paper 2016/12, Department of Business and Management Science.

Bjørndal, Endre & Mette Bjørndal (2016): Evaluation of the StoNED Method for Benchmarking and Regulation of Norwegian Electricity Distribution Companies, SNF report 2016/11.

Bjørndal, E., M. Bjørndal and H. Cai (2018): Flow-Based Market Coupling in the European Electricity Market – A Comparison of Efficiency and Feasibility, Discussion paper 2018/?, Department of Business and Management Science (submitted to EJOR).

Bjørndal, E., M. Bjørndal and H. Cai (2018): The Flow-Based Market Coupling Model and the Bidding Zone Configuration. Discussion paper 2018/?, Department of Business and Management Science.

Research projects

2005-2008	Supply Chain Management of a Refinery. Financed by Statoil.
2004-2006	Efficiency Models for Electricity Network Companies. Financed by EBL (The Norwegian Electricity Industry Association).
2007-2010	Congestion Management in the Nordic Power Market. Financed by NVE (The Norwegian Water Resources and Energy Directorate). Model development. <i>Project leader.</i>
2008	Adjusting for Time Lags in the Regulation Model for the Norwegian Electricity Network Companies. Financed by NVE.
2008-2009	Weight Restrictions in the DEA Model for the Norwegian Electricity Distribution Companies. Financed by NVE. <i>Project leader.</i>
2009-2010	Marginal losses in the Norwegian power system. Financed by Energy Norway.

- 2009-2010 Distributed Generation in Electricity Networks – Benchmarking Models and Revenue Caps. Financed by Energy Norway. *Project leader.*
- 2010-2011 Evaluation of Alternative Methods for Congestion Management in the Nordic Power Market. Financed by NVE. *Project leader.*
- 2012-2015 Intermittent Renewables, Balancing Power and Electricity Market Design (INTREPED). Financed by the Norwegian Research Council.
- 2014 Evaluation of the StoNED method for benchmarking of Norwegian electricity distribution companies. Financed by NVE. *Project leader.*
- 2015- Elbench (Benchmarking for Regulation of Norwegian Electricity Networks). *Project leader.*
- 2018- Energimarked 2.0. Activation of end-user flexibility via an aggregator, e.g., for use by DSOs. Financed by the Norwegian Research Council and BKK/Tibber.

Referee activity

European Journal of Operational Research, IEEE Transactions on Power Systems, Energy Journal, International Journal of Production Research, Electric Power Systems Research, Energy Systems, International Transactions of Operational Research, Energy Efficiency, Data Envelopment Analysis Journal

Previous PhD students

Victoria Gribkovskaia, Xiaomei Cheng, Hong Cai, Ørjan Mydland

Current PhD students

Somayeh Rahimi Alangi (NHH), Benjamin Fram (NHH), Guanqing Wang (UiT)

Evaluation committees

NHH, Molde University College, Norwegian University of Science and Technology, Sør-Trøndelag University College, University of Tromsø, Technische Universität Berlin,

Other professional activities

- 2006-2010 Responsible for planning teaching activities, Department of Accounting, Auditing and Law, NHH
- 2006-2007 Coordinator for Business Analysis and Performance Management, one of the profiles offered as part of the M.Sc. programme in Economics and Business Administration, NHH
- 2011-2017
- 2007-2009 Member of organizing committee (and book editor) in connection with the workshop Energy, Resources and Environmental Resources, NHH
- 2008-2017 Member of NRØA sub-committee for management accounting/control (bachelor level)
- 2008-2010 Board member, Department of Accounting, Auditing and Law, NHH
- 2014-2016 External supervisor for master level grading at Sør-Trøndelag University College
- 2017- Programme Leader, MSc in Economics and Business Administration (MØA), NHH
- 2017- Representative for NHH in UHR-Economics and administration (UHR-ØA)