



## *Curriculum Vitae*

**TORBERG FALCH**

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### **Education**

PhD in Economics, University of Oslo, 1998

Cand. polit. in Economics, University of Trondheim, 1992

### **Current academic positions**

Professor, Department of Economics, Norwegian University of Science and Technology (NTNU), 2007-

Research associate, Centre for Economic Research at NTNU, 2005-

CESifo Research Network fellow, 2004-

### **Previous Academic Positions**

Head of Department, Department of Teacher Education, NTNU, 2017-2021.

Vice Dean for Research, Faculty of Social Sciences and Technology Management, NTNU, 2015-2016

Vice Dean for Education, Faculty of Social Sciences and Technology Management, NTNU, 2013-2015.

Head of Department, Department of Economics, NTNU, 2005-2009.

Associate Professor, Department of Economics, NTNU, 2002-2007.

Post doc., Department of Economics, NTNU, 1998-2002.

Visiting researcher, Department of Economics, University of California at Santa Barbara, 1997.

Research Associate, Department of Economics, NTNU, 1993-1998.

### **Other positions**

Member of Norwegian committee on skill needs (*kompetansebehovsutvalget*), 2021-  
Senior expert, the EU think tank European Expert Network on Economics of Education, 2004-2021

Co-Editor *Education Economics*, 2014-2019

Co-editor *Economics: The Open-Access, Open-Assessment E-Journal*, 2007-2020

Member of the Norwegian Appeals Board for Taxation of Oil Companies (*Klagenemnda for petroleumsskatt*), 2010-2017

Member of board, Centre for Rural Research Ruralis, 2015-2018

Member of board, NOVA – Norwegian Social Research, 2008-2013

Editor *Samfunnsøkonomen* (Journal of the Norwegian Economic Association), 2011-2013

## Teaching

Bachelor level: Arbeidsmarkedsøkonomi, Bank- og kredittmarkeder, Innføring i makroøkonomisk analyse, Innføring i samfunnsøkonomi, Internasjonal økonomi, Makroøkonomi for ledere, Næringslivet i en globalisert økonomi, Næringsstruktur og internasjonal handel, Offentlig økonomi og økonomisk politikk, Samfunnsøkonomisk teori, Statistikk for økonomer

Master level: Videregående makroøkonomisk analyse, Videregående mikroøkonomisk analyse, Økonometri, Offentlig økonomi, Utdanning og arbeidsmarked, Kommunaløkonomi, Fiskal føderalisme

## PhD supervision

Marte Rønning, Department of Economics, NTNU, 2007

Linn Renée Naper (co-supervisor), Department of Economics, NTNU, 2008

Kaja Høiseth Brugård, Department of Economics, NTNU, 2013

Astrid Marie Jorde Sandsør (co-supervisor), Department of Economics, University of Oslo, 2016

Hege Marie Gjeften, Statistics Norway, 2017

Simon Bensnes (co-supervisor), Department of Economics, NTNU, 2017

Ole Henning Nyhus, Department of Economics, NTNU, 2021

## Consultancy

The Norwegian Ministry of Education and Research

The Norwegian Ministry of Local Government and Regional Development

The Norwegian Ministry of Labour

The Norwegian Directorate for Education and Training

The Norwegian Directorate of Integration and Diversity

Norges Bank (Norway's central bank)

The Norwegian Research Council

The Swedish Research Council

The European Union

OECD

## Referee

Economic Journal, Economica, Economics of Education Review, Education Economics, Empirical Economics, International Journal of Environmental Research and Public Health, Governance, Industrial and Labor Relations Review, International Regional Science Review, International Tax and Public Finance, Journal of Economics and International Finance, Journal of the European Economic Association, Journal of Health Economics, Journal of Human Resources, Journal of Institutional and Theoretical Economics, Journal of Intelligence, Journal of Labor Economics, Journal of Public Economics, Journal of the Royal Statistical Society, Labour Economics, The Manchester School, Nordic Journal of Literacy Research, Nordidactica, Oxford Bulletin of Economics and Statistics, Public Administration, Public Choice, Public Finance Review, Rationality and Society, Regional Science and Urban Economics, Samfunnsøkonomen, Scandinavian Journal of Economics, Scandinavian Journal of Educational Research, Southern Economic Journal, Sustainability, Søkelys på Arbeidslivet, Tidsskrift for Samfunnsforskning, Urban Studies.

## Articles in international refereed journals

1. "Sources of cost expansion: Primary education in Norway 1946–1990". *Education Economics* vol. 4, 1996, pp. 161–185 (with Jørn Rattsø).
2. "Political economic determinants of school spending in federal states: Theory and time-series evidence". *European Journal of Political Economy* vol. 13, 1997, pp. 299–314 (with Jørn Rattsø).
3. "Local public choice of school spending: Disaggregating the demand function for educational services". *Economics of Education Review* vol. 18, 1999, pp. 361–373 (with Jørn Rattsø).
4. "School reforms and school spending growth". *Journal of Policy Reform* vol. 3, 1999, pp. 195–227 (with Jørn Rattsø).
5. "Collective bargaining in the public sector and the role of budget determination". *European Journal of Political Economy* vol. 17, 2001, pp. 75–99.
6. "Decentralised public sector wage determination: Wage curve and wage comparison for Norwegian teachers in the pre-WW2 period". *Labour: Review of Labour Economics and Industrial Relations* vol. 15, 2001, pp. 343–369.
7. "The supply of public sector services when they include quantity and quality dimensions". *FinanzArchiv* vol. 58, 2002, pp. 396–429.
8. "The flypaper effect and political strength". *Economics of Governance* vol. 3, 2002, pp. 153–170 (with Per Tovmo).
9. "Norwegian local public finance in the 1930s and beyond". *European Review of Economic History* vol. 7, 2003, pp. 127–154 (with Per Tovmo).
10. "Wage bargaining and employer objectives". *The Manchester School* vol. 72, 2004, pp. 515–534.
11. "Teacher sorting, teacher quality, and student composition". *European Economic Review* vol. 49, 2005, pp. 457–483 (with Hans Bonesrønning and Bjarne Strøm).
12. "Teacher turnover and non-pecuniary factors". *Economics of Education Review* vol. 24, 2005, pp. 611–631 (with Bjarne Strøm).
13. "Local flexibility in wage setting: Evidence from the Norwegian local public sector". *Empirical Economics* vol. 31, 2006, pp. 113–142 (with Bjarne Strøm).
14. "The influence of student achievement on teacher turnover". *Education Economics* vol. 15, 2007, pp. 177–202 (with Marte Rønning).
15. "Wage bargaining and monopsony". *Economics Letters* vol. 94, 2007, pp. 202–207 (with Bjarne Strøm).
16. "Public sector efficiency: The roles of political and budgetary institutions, fiscal capacity and democratic participation". *Public Choice* vol. 136, 2008, pp. 475–495 (with Lars-Erik Borge and Per Tovmo).
17. "Teacher shortages and the business cycle". *Labour Economics* vol. 16, 2009, pp. 648–658 (with Kåre Johansen and Bjarne Strøm).
18. "The elasticity of labor supply at the establishment level". *Journal of Labor Economic* vol. 28, 2010, pp. 237–266.

19. "The effect of education on cognitive ability". *Economic Inquiry* vol. 49, 2011, pp. 838-856 (with Sofia Sandgren Massih).
20. "Teacher mobility responses to wage changes: Evidence from a quasi-natural experiment". *American Economic Review* vol. 101, 2011, pp. 460-465.
21. "Public sector decentralization and school performance: International evidence". *Economics Letters* vol. 114, 2012, pp. 276-279 (with Justina AV Fischer).
22. "The effect of early cognitive ability on earnings over the life-cycle". *Labour: Review of Labour Economics and Industrial Relations* vol. 26, 2012, pp. 287-312 (with Sofia Sandgren Massih).
23. "Geographical constraints and educational attainment". *Regional Science and Urban Economics*, vol. 43, 2013, pp. 164-176 (with Päivi Lujala and Bjarne Strøm).
24. "Schools, ability, and the socioeconomic gradient in education choices". *Journal of Socio-Economics*, vol. 43, 2013, pp. 49-59 (with Bjarne Strøm).
25. "Post-compulsory education and imprisonment". *Labour Economics*, vol. 23, 2013, pp. 97-106 (with Kaja Høiseth Brugård).
26. "Educational evaluation and gender gaps in student achievement". *Economics of Education Review*, vol. 36, 2013, pp. 12-25 (with Linn Renée Naper).
27. "Performance of young adults: The importance of different skills". *CESifo Economic Studies*, vol. 60, 2014, p. 435-462 (with Ole Henning Nyhus and Bjarne Strøm).
28. "Causal effects of mathematics". *Labour Economics*, vol. 31, 2014, p. 174-187 (with Ole Henning Nyhus and Bjarne Strøm).
29. "Wages and Recruitment: Evidence from External Wage Changes". *Industrial & Labor Relations Review*, vol 70, 2017, p.483-518.
30. "Do smaller classes always improve students' long run outcomes?". *Oxford Bulletin of Economics and Statistics*, vol. 79, 2017, 654-688 (with Astrid Marie Jorde Sandsør and Bjarne Strøm).
31. "Long-run effects of local government mergers on educational mergers and income". *Oxford Bulletin of Economics and Statistics*, vol. 84, 2022, 185-213 (with Astrid Marie Jorde Sandsør and Bjarne Strøm).
32. "The effects of voting franchise extension on education policy". *Education Economics*, vol. 30, 2022, 66-90 (with Bjarne Strøm and Per Tovmo).
33. Quality measures in higher education: Norwegian evidence. *Economics of Education Review*, vol. 87, 2022, 102235 (with Jon Marius Vaag Iversen, Ole Henning Nyhus and Bjarne Strøm).

### **Articles in international books and international reports**

1. "A cost model of schools: School size, school structure and student composition". In N. Soguel and P. Jaccard (eds), *Governance and performance of education systems*, Springer, 2008 (with Marte Rønning and Bjarne Strøm).
2. "Financing lifelong learning: Funding mechanisms in education and training". EENEE Analytical Report No. 10, 2011. Prepared for the European Commission (with Hessel Oosterbeek).

3. "Innovations in education for better skills and higher employability". EENEE Analytical Report No. 23, 2015. Prepared for the European Commission (with Constantin Mang).
4. "OECD Reviews of School Resources: Denmark 2016". OECD report, November 2016 (with Deborah Nusche, Thomas Radinger and Bruce Shaw).
5. "Teacher education: Into the future in Norway and at NTNU". In P. Gray and P. Ramberg (eds), *Servants of the school: Building teacher education in Mid-Norway, 1998-2018* (with Mari Nygård).
6. "The role of teacher quality in education production". In Steve Bradley and Colin Green (Eds.), *The Economics of Education. A Comprehensive Overview*, 2. edition, 2020, p. 307-319. Academic Press (with Bjarne Strøm).
7. "Teaching scientific structures for new generations". In Lucie Sara Zavodna and Torberg Falch (Eds.), *Teaching generation snowflakes. New challenges and opportunities*, 2022, p. 134-147. Oeconomica Publishing House (with Mari Nygård).

### Articles in Norwegian journals

1. "Lønnsdanning for kommunalt ansatte ingeniører" (Wage determination of municipal engineers). *Norsk Økonomisk Tidsskrift* vol. 107, 1993, pp. 277-299.
2. "Stat, kommune og velgere: Kommunesektorens politiske økonomi" (The state, the local governments, and the voters: The political economy of local governments). *Norsk Økonomisk Tidsskrift* vol. 113, 1999, pp. 89-113.
3. "Lønnsstrukturen i kommunesektoren" (The wage structure in the local government sector). *Søkelys på arbeidsmarkedet* vol. 17, 2000, pp. 213-222.
4. "Bør lærerlønnen økes?" (Should teacher wages increase?). *Sosialøkonomen*, no 4, april 2000, pp. 4-10.
5. "Utbyggingsavgifter: Effektiv finansiering av kommunal infrastruktur?" (Impact fees: Efficient financing of local infrastructure?). *Økonomisk Forum* vol. 56, no 7, 2002, pp. 30-35 (with Lars-Erik Borge).
6. "Om innretningen på skolereformer" (On the design of school reforms). *Økonomisk Forum* vol. 56, no 4, 2002, pp. 8-12 (with Hans Bonesrønning og Bjarne Strøm).
7. "Hvorfor friskoler?" (Why charter schools?). Med Hans Bonesrønning og Bjarne Strøm. Aktuell kommentar *Økonomisk Forum* vol. 57, no 7, 2003, pp. 6-9 (with Hans Bonesrønning og Bjarne Strøm).
8. "Arbeidsmarkedet i offentlig sektor" (The labour market in the public sector). *Økonomisk Forum* vol. 61, no 3, 2007, pp. 7-15 (with Bjarne Strøm).
9. "Progresjon og frafall i videregående opplæring" (Progression and dropout in upper secondary education). *Økonomisk Forum* vol. 61, no 4, 2007, pp. 31-42 (with Karen N. Byrhaugen and Bjarne Strøm).
10. "Intelligens, utdanning og lønn" (Intelligence, education, and earnings). *Søkelys på arbeidsmarkedet* vol. 24, 2007, pp. 43-52 (with Sofia Sandgren).
11. "Videregående opplæring og arbeidsmarkedstilknytning for unge voksne" (Secondary education and labor market attachment for young adults). *Tidsskrift for velferdsforskning* vol. 14, 2011, pp.25-37.

12. "Betydningen av fullført videregående opplæring for sysselsetting og inaktivitet blant unge voksne" (The importance of high school completion for employment and inactivity for young adults). *Søkelys på arbeidslivet* vol. 28, 2011, pp. 285-301 (with Ole Henning Nyhus).
13. "Fullføring av videregående opplæring: Kan vi forklare variasjonen mellom fylker og regioner?" (Completion of upper secondary education: Can we explain the variation between counties and regions?). *Samfunnsøkonomen* vol. 125, no 5, 2011, pp. 22-33 (with Lars-Erik Borge and Bjarne Strøm).
14. "Nasjonal regulering av lærertetthet?" (National rules on teacher density?). *Samfunnsøkonomen*, vol. 126, no 2, 2012, pp. 4-11 (with Lars-Erik Borge and Bjarne Strøm).
15. "Kvalitetsforskjell mellom videregående skoler?" (Quality differences across upper secondary schools?). *Tidsskrift for samfunnsforskning* vol. 54, 2013, pp. 437-462 (with Bjarne Strøm).
16. "Er regional høyere utdanning viktig for regional rekruttering av kompetanse?" (Is regional higher education important for regional recruitment of competence?). *Samfunnsøkonomen* vol. 136, no 2, 2022, s. 39-49.

### Working papers

1. "Mobility of novice teachers". Working Paper 4/2021, Department of Economics, NTNU (with Bjarne Strøm).
2. "Homework assignment and student achievement in OECD countries". Discussion Papers No. 711, Statistics Norway, 2012 (with Marte Rønning).
3. "Does a generous welfare state crowd out student achievement? Panel data evidence from international student tests". CESifo Working Paper No. 2383, 2008 (with Justina AV Fischer).
4. "Wage bargaining and political strength in the public sector". CESifo Working Paper No. 1629, 2005 (with Bjarne Strøm).

### Reports and other publications in Norwegian

1. "Gjennomgang av 3 studier av ressursbruken i kommunal tjenesteproduksjon" (Evaluation of three studies on the resource use in local government service production), Allforsk 1999 (with Lars-Erik Borge). For the Norwegian Ministry of Local Government and Regional Development, 1999.
2. "Produksjonsindeks for kommunale tjenester" (Production index for local government services), Allforsk 2001 (with Lars-Erik Borge and Per Tovmo). For the Norwegian Ministry of Local Government and Regional Development, 2001.
3. "Hvordan virker lønnsforskjeller i skoleverket? Evaluering av virkemiddelordningen rettet mot skoler i Nord-Norge med særskilt lærermangel" (The effects of wage differentiation across schools), Allforsk 2011. For the Norwegian Ministry of Education and Research, 2001.
4. "Samfunnsøkonomiske konsekvenser av utbyggingsavtaler" (Economic consequences of impact fees), Allforsk 2002 (with Lars-Erik Borge and Jørn Rattsø). For the Norwegian Ministry of Local Government and Regional Development, 2002.

5. "Ressurssituasjonen i grunnskolen" (Resource use in compulsory education), Allforsk 2002 (with Lars-Erik Borge and Ivar Pettersen). For the Norwegian Ministry of Education and Research, 2002.
6. "Om barnehagenes finansiering etter stortingets avtale for 2002-2005" (On the financing of childcare in the parliament decision for 2002-2005). (With Jørn Rattsø, Lars-Erik Borge and Fredrik Carlsen). For the Norwegian Ministry of Children and Family, 2002.
7. "Om innretningen på skolereformer" (On the design of school reforms), *Økonomisk Forum* nr. 4, 2002 (with Hans Bonesrønning and Bjarne Strøm).
8. "Bruk av informasjons- og belønningssystemer i offentlig skole" (Information and incentive schemes in public schools), Allforsk 2003 (with Hans Bonesrønning, Lars-Erik Borge and Bjarne Strøm). For the Norwegian Ministry of Education and Research, 2003
9. "Forhold som påvirker kommunenes utgiftsbehov i grunnskolen" (Determinants of resource use in compulsory education), Report 04/05, Center for Economic Research at NTNU (with Marte Rønning and Bjarne Strøm). For the Norwegian Ministry of Local Government and Regional Development, 2005.
10. "Fordeling av lærerressurser mellom norske grunnskoler" (The distribution of teacher resources across Norwegian schools). In *Utdanning 2005 – deltakelse og kompetanse* (Education 2005 – Participation and skills), Statistics Norway 2005 (with Bjarne Strøm).
11. "Frafall i videregående opplæring: Betydningen av grunnskolekarakterer, studieretninger og fylke" (Dropout in upper secondary education. The role of performance in lower secondary education, study track, and region), Report 08/06, Center for Economic Research at NTNU (with Karen N. Byrhagen and Bjarne Strøm). For the Norwegian Ministry of Education and Research, 2006.
12. "Samfunnsøkonomiske konsekvenser av ferdighetsstimulerende førskoletiltak" (Economic consequences of early childhood education), Report 04/06, Center for Economic Research at NTNU (with Ragnild Bremnes and Bjarne Strøm). For the Norwegian Ministry of Education and Research, 2006.
13. "Ressurssituasjonen i grunnopplæringen" (Resources use in primary and secondary education), Report 01/07, Center for Economic Research at NTNU (with Per Tovmo). For Norwegian Directorate for Education and Training, 2007.
14. "Lærerkompetanse og elevresultater i ungdomsskolen" (Teacher credentials and student performance in lower secondary education), Report 01/08, Center for Economic Research at NTNU (with Linn Renée Naper). For Norwegian Directorate for Education and Training, 2008.
15. "Lærerkvalitet, lærerrekruttering og konjunkturer" (Teacher quality, teacher recruitment, and the business cycle). In *Utdanning 2009 – læringsutbytte og kompetanse*, Statistics Norway 2009 (with Bjarne Strøm).
16. "Frafall fra videregående opplæring og arbeidsmarkedstilknytning for unge voksne" (dropout in high school and labour market attachment for young adults). Report 07/09, Center for Economic Research at NTNU (with Ole Henning Nyhus). For the Norwegian Ministry of Labour, 2009.
17. "Kostnader av frafall i videregående opplæring" (The social costs of dropouts in upper secondary education in Norway). Report 08/09, Center for Economic Research at NTNU (with Anne Borge Johannesen and Bjarne Strøm). For the Norwegian Ministry of Education



and Research, 2009.

18. "Årsaker til og konsekvenser av manglende fullføring av videregående opplæring" (Completion and dropout in upper secondary education in Norway: Causes and consequences). Report 03/10, Center for Economic Research at NTNU (with Lars-Erik Borge, Päivi Lujala, Ole Henning Nyhus and Bjarne Strøm). For the Norwegian Ministry of Labour and the Norwegian Ministry of Education and Research, 2010.
19. "Videregående opplæring og arbeidsmarkedstilknytning for unge voksne innvandrere" (Secondary education and labor market attachment for immigrants). Report 04/10, Center for Economic Research at NTNU (with Ole Henning Nyhus). For the Norwegian Directorate of Integration and Diversity, 2010.
20. "Betydningen av fullført videregående opplæring for sysselsetting blant unge voksne" (The importance of high school completion for employment among young adults). Report 01/11, Center for Economic Research at NTNU (with Ole Henning Nyhus). For the Norwegian Ministry of Labour, 2011.
21. "Grunnskolekarakterer og fullføring av videregående opplæring" (Grades in compulsory education and completion of upper secondary education). Report 03/11, Center for Economic Research at NTNU (with Ole Henning Nyhus and Bjarne Strøm). For the Norwegian Ministry of Education and Research, 2011.
22. "Karakterbruk og kvalitet i høyere utdanning" (Grading behavior and quality in higher education). Report 03/13, Center for Economic Research at NTNU (with Bjarne Strøm, Trude Gunnes og Marianne Haraldsvik). For the Norwegian Ministry of Education and Research, 2013.
23. "Entreprenørskap og høyere utdanning" (Entrepreneurship and higher education). Report 05/15, Center for Economic Research at NTNU (with Bjarne Strøm). For the Norwegian Ministry of Education and Research, 2015.
24. "Lokal opplæring i samarbeid med arbeidslivet (LOSA) i Finnmark. En kort vurdering av resultater". (Local education in cooperation with working life in Finnmark. A short consideration of the results). (With Simon Bensnes.) For the county of Finnmark, 2016.
25. "Skolekvalitet i videregående opplæring. Utarbeidelse av skolebidragsindikatorer og mål på skolekvalitet» (School quality in upper secondary education. Development of value-added indicators and a measure of school quality). Report 01/16, Center for Economic Research at NTNU (with Simon Bensnes and Bjarne Strøm). For the Norwegian Ministry of Education and Research, 2016.
26. "Kvalitetsindikatorer i universitets- og høgskolesektoren" (Quality indicators in higher education institutions). Report 05/16, Center for Economic Research at NTNU (with Bjarne Strøm, Jon Marius Vaag Iversen and Ole Henning Nyhus). For the Norwegian Ministry of Education and Research, 2016.
27. "NOU 2017:3. Folketrygdens ytelser til etterlatte" (National social insurance scheme for widows). Official report from an expert committee,
28. "Yrkesfagelevers utbytte av intensivundervisning i matematikk" (The return to intensive teaching in Mathematics for students in vocational studies). Report 02/19, Center for Economic Research at NTNU (with Ole Henning Nyhus, Jon Marius Vaag Iversen and Bjarne Strøm). For the Norwegian Ministry of Education and Research, 2019.



29. "Intensivundervisning i matematikk for yrkesfagelever: Sluttrapport» (Intensive teaching in mathematics for students on upper secondary vocational study tracks: Final report). Report 01/20, Center for Economic Research at NTNU (with Jon Marius Vaag Iversen, Ole Henning Nyhus and Bjarne Strøm). For the Norwegian Ministry of Education and Research, 2020.
30. «Lærere og elevprestasjoner» (Teachers and student performance). In Gudmund Hernes (Ed.), *Festskrift til Astrid Søgner 70 år*, 2021 (with Bjarne Strøm).
31. "Sikring av feriepenger" (Securization of holiday pay). Report to the Ministry of Labour and Social Inclusion from of multi-party committee, 2022.
32. "Høyere yrkesfaglig utdanning for et arbeidsliv i endring" (Higher vocational education for a changing labour market). Report from the Norwegian Committee on Skill Needs, 2022.