

1. Basic information**Name:** Linnosmaa, Ismo Erkki Olavi**Gender:** Male**Date of CV:** 26.2.2018**2. DATE AND PLACE OF BIRTH, NATIONALITY, CURRENT RESIDENCE**

Date and place of birth 22.6.1962, Kuopio
 Citizenship Finnish
 Kuopio, Finland Kemiläntie 6, 70340 Kuopio
 Tel: +358-40-1627937
 Email: ismo.linnosmaa@thl.fi

3. EDUCATION AND DEGREES AWARDED

Doctor of Philosophy (PhD) Economics, Department of Economics, State University of New York at Stony Brook, 19.5.2001
 Licentiate degree Economics, Department of Economics, University of Joensuu, 1995
 Master degree Economics, Department of Economics, University of Joensuu, 1990
 Title and field of docent:
 Generic paradox in pharmaceutical markets Department of Economics, University of Turku, 12.6.2009
 Health economics

4. OTHER EDUCATION AND TRAINING, QUALIFICATIONS AND SKILLS

Vocational degree in management and leadership (JET STM), Omnia Vocational School, 2016

Certificate in vocational teaching, Jyväskylä University of Applied Sciences, Finland, 2003

5. LANGUAGES

Finnish	mother language		
	Understanding	Speaking	Writing
English (self-assessment)	Good	Good	Good
Swedish (self-assessment)	Satisfactory	Satisfactory	Satisfactory
Germany (self-assessment)	Basic	Basic	Basic

6. CURRENT POSITION

Professor, 1.9.2017- Department of Social and Health Management, University of Eastern Finland

Research professor, 15.2.2010- Centre for Health and Social Economics, National Institute for Health and Welfare, Helsinki, Finland

Deputy head of the unit, Jan 2015-Aug 2017 Centre for Health and Social Economics, National Institute for Health and Welfare, Helsinki, Finland

7. PREVIOUS WORK EXPERIENCE

Unit head, 1.4.2012-31.12.2014 Centre for Health and Social Economics, National Institute for Health and Welfare, Helsinki, Finland

University lecturer, 1.1.2011-15.2.2012 Department of Health and Social Management, University of Eastern Finland, Kuopio, Finland

Senior assistant, 1.9.1997-31.12.2010	Department of Health and Social Management, University of Eastern Finland (formerly University of Kuopio), Kuopio, Finland
Researcher, 12.5.1997-31.8.1997	Planning unit, Department of Eastern Finland (formerly University of Kuopio), Kuopio, Finland
Visiting research fellow, 1.2.2008-31.7.2008	Centre for Health Economics, University of York, York, UK
Professor (health economics), 1.10.2007-31.12.2007	Department of Health and Social Management, University of Eastern Finland (formerly University of Kuopio), Kuopio Finland
Visiting Scholar and Lecturer, 1.1.2004-30.6.2004	Department of Economics, Boston University, Boston, USA
Research manager, 1.3.2001-31.3.2002	Department of Social Pharmacy, University of Eastern Finland (formerly University of Kuopio), Kuopio, Finland
PhD-student and researcher, 1.8.1993-1.8.1996	State University of New York at Stony Brook, New York, USA
Researcher, 1.8.1992-30.7.1993	Research grant, Research Foundation of the Finnish Cooperative banks, Helsinki, Finland
Researcher, 1.9.1991-31.8.1992	Research grant, Yrjö Jahnsson Foundation, Helsinki, Finland
Special researcher, 1.8.1990-31.8.1991	Finnish consumption and competition authority, Helsinki, Finland
Lecturer, 1.1.1989-31.7.1990	University of Eastern Finland (formerly University of Joensuu), Joensuu, Finland

8. RESEARCH FUNDING, LEADERSHIP AND SUPERVISION

Research funding

1993-1996	Grants for PhD studies at Department of Economics, State University of New York at Stony Brook, USA, Yrjö Jahnsson Foundation. Year 1993-94: Yrjö Jahnsson Fulbright Scholarship, Personal grant
1998	Travel grant: Handbook of Health Economics Conference, University of Chicago, Yrjö Jahnsson Foundation
2000	Research grant, Project: Willingness to pay for online physician services, Yrjö Jahnsson Foundation
2002	Research and travel grant, Project: Incentives and regulation in health care. Finnish Cultural Foundation
2003	Research and travel grant, Teaching and research visit to Department of Economics, Boston University, Boston, USA, Saastamoinen Foundation and University of Kuopio
2003	Research and travel grant, Teaching and research visit to Department of Economics, Boston University, Boston, USA, Yrjö Jahnsson Foundation
2007	Research grant, Research visit to the Centre for Health Economics at University of York in spring 2008. Project: Advertising, prices and entry in pharmaceutical markets, Yrjö Jahnsson Foundation
2006	Alan Williams fellowship, Research visit to the Centre for Health Economics at University of York in spring 2008. Project: Advertising, prices and entry in pharmaceutical markets, The Centre for Health Economics, University of York
2007	Research grant (joint project with University of Joensuu and Government Institute for Economic Research), Project: Physician prescription behavior and the demand for pharmaceuticals, Yrjö Jahnsson Foundation, Principal investigator

2010	Research funding, Project: Physician prescription behavior and the demand for pharmaceuticals, Academy of Finland. Principal investigator (Project leader)
2011	Research funding, Project: Vouchers in social care, Helsinki City, Principal investigator (Project leader)
2012	Research funding, Project: Cost-effectiveness of primary health care and social care services, National Institute for Health and Welfare, Principal investigator (Chair of the program)
2013	Research funding, Price competition and market structure in the Finnish pharmaceutical markets, Kela, Principal investigator (Project leader)
2014	Research funding, Project: Social Protection Innovative Investment in Long Term Care, European Union (Horizon 2020), Principal investigator in Finland, Project leader: Bernard Casey, PSSRU, London School of Economics
2015	Research funding, Exploring Comparative Effectiveness and Efficiency in Long-term care, NORFACE, Principal investigator in Finland, Project leader: Julien Forder, PSSRU, University of Kent
2015	Research funding, Network on cost-effectiveness and quality in long-term care, EU, Senior researcher in WP5 in Finland, Project leader: Jose-Luiz Fernandes, PSSRU, London School of Economics

Supervision of doctoral students

Completed theses:

- Satu Jäntti, Kansalainen terveystaloutta valitsemassa. Kolmivaiheinen valintamalli julkisissa ja yksityisissä lääkäripalveluissa (Citizens' choices of health services. The three-stage choice model of the physician services in the public and private Sectors), University of Eastern Finland, 2008
- Eila Kankaanpää, Studies on Purchasers and Providers of Occupational Health Services in Finland, Dissertation in Social Sciences and Business Studies, University of Eastern Finland, 2012
- Jaana Hurri, Institutionaalinen taloustaloustieteellinen vertailu uudelleenorganisoinnin kustannuksista: Tutkimus ei-laskennallisista kustannustekijöistä kunnallisessa ja liikelaitostetussa terveydenhuollon laboratoriossa 2002-2009 (Comparing reorganization costs in the frame of Institutional Economics: Case study of the non-deferred costs in municipal enterprise types of health care laboratory 2002-2009), Dissertation in Social Sciences and Business Studies, University of Eastern Finland, 2016
- Piia Pekola, Effects of competition and regulation on quality in physiotherapy, University of Eastern Finland, 2018

PhD students:

- Joni Hokkanen, University of Eastern Finland
- Antti Väisänen, University of Eastern Finland
- Elisa Rissanen, University of Eastern Finland
- Taru Haula, University of Eastern Finland

Supervision of master students

Supervision of 23 (completed) master theses during the years 1997-2015 at the Department of Social and Health Management, University of Eastern Finland

Current master students:

Irja Skogström, Health economics, University of Eastern Finland
 Anne Lipponen, Health economics, University of Eastern Finland
 Stina Kettunen, Health economics, University of Eastern Finland
 Sara Parttimaa, Health economics, University of Eastern Finland
 Juha Ahonen, Health economics, University of Eastern Finland
 Tuuli Suomela, Health economics, University of Eastern Finland

9. MERITS IN TEACHING AND PEDAGOGICAL COMPETENCE

Pedagogical training and competence

Training:

- 1993 Teaching practicum, Department of Economics, State University of New York at Stony Brook, New York
- 2003 Vocational teaching certificate (35 cr.), Jyväskylä polytechnic university

Teaching approach and theory:

I encourage students to evaluate critically information that is presented to them. To my opinion, the objective of university studies is deeper understanding, which allows the application of the principles and information taught and learnt.

Since I acknowledge that there are different ways to learn the same material, my approach to teaching is constructivist.

Published study materials or textbooks:

Linnosmaa, I., Karjalainen-Jurvelin, R., and Hyvärinen, H., 2005. Massakurssista verkkokurssiksi. Kokemuksia kansantaloustieteen perusteiden opettamisesta (From a mass course to a web course: Experiences in teaching basic economics in the web), *Pedaforum*, 1, 4-6

A textbook on the basic principles of economics: Miettinen, A., Linnosmaa, I., Kannisto, K., 2010, *Toimiva talous: kuluttaja, yritys ja kansantalous* (Economics in action: consumers, firms, and the national economy), WSOYpro, Helsinki

Teaching assessments:

- Teaching assessment (Opetusnäyte), University of Kuopio, Grade: good, 1997
- Teaching assessment (Opetusnäyte), Ammatillinen opettajakoulutus, Jyväskylän ammattikorkeakoulu, 2002
- Teaching assessment (Opetusnäyte), University of Turku, Grade: excellent, 2009
- Student assessments from the PhD-course (Health economics) at the Department of Economics, Boston University

Involvement in curriculum planning and implementation of courses

A Teaching at universities:

Regular teaching at the Department of Economics, University of Joensuu

1989-1990: Teaching basic, intermediate and graduate level courses in economics

Regular teaching at the Department of Social and Health Management, University of Eastern Finland (formerly University of Kuopio)

Unless otherwise mentioned, the following courses (typically around 30 hours of teaching) were offered for undergraduate students

- 1998-2000: Health economics (twice)
Health economic evaluation (several times)
Basic econometrics (several times)
Seminar for bachelor students (annually)
- 2001-2004: Finnish economy and the basic principles of economics (annually)

	Introduction to microeconomics (annually)
	Seminar for bachelor students (annually)
	Mathematical economics (every other year)
2005-2009:	Introduction to microeconomics (annually)
	Microeconomics 1 (annually)
	Seminar for bachelor students (annually)
	Industrial organization 1 (every other year)
	Mathematical economics 1 (every other year)
2017	Mathematical economics
	Microeconomics

Occasional teaching

2000	Economic and technological evaluation of drugs Department of Social Pharmacy, University of Kuopio
2006, 2007	Game theory and economic applications Department of Social and Health Management (2006), University of Kuopio (course was also offered to postgraduate students) and Department of Economics (2007), University of Joensuu
2004	Health economics, a PhD course (course was offered to postgraduate students) Department of Economics, Boston University
2001	Introduction to Microeconomics MBA programme, University of Kuopio
2011, 2013	Industrial organization 1 Department of Social and Health Management, University of Eastern Finland

B Other teaching:

I have taught health economics and economic evaluation of health care technologies several times for nurses working at hospitals and health authorities working in Finnish municipalities during the years 2000, 2001 and 2006.

Development of teaching methods

Teaching basic principles in economics utilizing WebCT learning environment, 2003-2004, University of Kuopio

Supervision of theses

See Section 8

10. AWARDS, PRIZES AND HONOURS

Yrjö Jahnsson Fulbright Scholarship for advanced studies in Economics in the US, 1993

Alan William fellowship for research at the Centre for Health Economics, University of York, York, UK, 2007

11. OTHER SCIENTIFIC OR ACADEMIC MERITS

Service as a pre-examiner or as an opponent of a doctoral dissertation, as a member in dissertation committees (abroad)

Pre-examiner and opponent of the PhD-thesis of Gisela Hostenkamp, University of Southern Denmark, Odense, 26.10.2012

Evaluation of academic/scientific competence

Pre-evaluation of the PhD-thesis of Gisela Hostenkamp, University of Southern Denmark, Odense, 2012

Scientific expert in the field of health economics, Yrjö Jahnsson Foundation, 1.1.2012- , evaluating scientific quality and competence of funding applications in health economics

Member of international peer review panels for funding applications

No membership

Memberships and positions of trust in scientific and scholarly societies

Board member (vice chair) in the Finnish Society for Health Economics

Membership in the Finnish Society for Health Economics and the International Health Economics Association

Active cooperation with researchers in health and social economics in US, UK and Nordic countries

Membership in national or international expert groups, evaluation or steering committees, as well as other expert duties

Chair of the management group steering THL research activities on cost-effectiveness of primary health care and social care services at THL, 2011-2015

Member of the expert group on productivity and effectiveness in social and health care at THL, 2015-

Member of the ASCOT International Advisory Committee, 2014-

Positions as editor-in-chief, editor, or member of editorial boards of scientific and scholarly journals and publication series

Member of the editorial advisory board in The Open Pharmacoconomics and Health Economics Journal

Referee for scientific and scholarly journals

Referee work in Journal of Economics and Management Strategy, Journal of Economic Behavior and Organization, Pharmacoconomics, Hallinnontutkimus, Health Economics, The European Journal of Health Economics, The BE Journal of Economic Analysis and Policy, Journal of Health Economics, Social Science and Medicine

Administrative responsibilities at higher education institutions or at research organisations, responsibilities in the higher education community

Research professor at the Centre for Health and Social Economics (CHESS), National Institute for Health and Welfare, 15.2.2010-

Duties: Planning, management and finance of economic research on social care services and lead of a research group consisting of four researchers

Unit head of the Centre for Health and Social Economics (CHESS), National Institute for Health and Welfare, Helsinki, Finland, 1.4.2012-31.12.2014

Duties: General management of the CHESS research unit (size of the personnel approximately 20 employees)

Deputy head of the Centre for Health and Social Economics (CHESS), National Institute for Health and Welfare, Helsinki, Finland, 1.1.2015-

Duties: Managerial duties at CHESS in cooperation with the unit head

Invited keynote lectures abroad

None

12. SOCIETAL IMPACT OF RESEARCH

Merits related to the application of research results

Application of our research findings¹ about the economic effects of the government law reform on organizing health and social care services in Finland. Findings of the evaluation research were utilized in the government bill to the Finnish parliament.

¹ Erhola M, Vaarama M, Pekurinen M, Jonsson P.M, Junnila M, Hämäläinen P, Nykänen E, Linnosmaa I (2014) SOTE-uudistuksen vaikutusten ennakoarviointi, Terveysten ja hyvinvoinnin laitos, Raportti 14/2004, Juvenes Print, Tampere.

Participation in societal preparatory and policy-related processes

Member of the independent advisory group to the Government of Finland, evaluation economic effects of the government bill on elderly care services, 2012

Expert opinion to the social affairs and health committee of the Finnish parliament about the economic effects of the government bill on elderly care services, 2012

Member of the independent advisory group to the Government of Finland, evaluating effects of the government bill on organizing social and health care services, 2013-2014

Expert opinion to the social affairs and health committee of the Finnish parliament about the government bill on reforming the state subsidy system of Finnish municipalities, 2014

Expert opinion to the social affairs and health committee of the Finnish parliament about the plan of the public spending for the years 2017-2020 (Julkisen talouden suunnitelma vuosille 2017-2020), 2016

Merits related to the production and distribution of research results and data

Annual appearances in international, European and Nordic conferences and seminars in health economics presenting the most recent findings of own research since 1997.

Appearances in CHESS-seminars organized during the years 2010-2014 either as a presenter or a chair. CHESS-seminar is organized by Centre for Health and Social Economics (CHESS), National Institute for Health and Welfare, every year and is a platform for researchers and decision-makers to meet and discuss about topical policy-relevant research findings.

Appearances and presentations in annual Health Economics Day, organized by Finnish Society for Health Economics, since the year 1998. Health Economics Day is organized annually at the beginning of February and is a place to present the most recent findings of the Finnish health economics research. Health economics day is also

a place for researchers to meet and discuss with social and health care professionals and policy makers, who often attend the meeting.

Merits related to science communication, science popularisation and media appearances as an expert

Several short articles on the economics of social and health care in THL's OPTIMI newsletter since 2010

Several press releases about research findings in THL publications and seminars from 2010 onwards

Expert opinions in the Finnish media about

- economic effects of vouchers in social care, 2012
- current state of carers' allowance (omaishoidon tuki) in Finnish municipalities, 2014
- living arrangement and care of elderly, 2016

13. POSITIONS OF TRUST IN SOCIETY AND OTHER SOCIETAL MERITS

Significant positions of trust, expert duties and assignments

Vice president of the Finnish Society for Health Economics, 2013-2017

President of the Finnish Society for Health Economics, 2017-

Scientific expert (health economics) of the Yrjö Jahnsson Foundation, 2012-2017

14. OTHER MERITS

Member of the advisory board on Finnish health and social economics at THL, 2010-2015

Substitute member (for Marja Vaarama) of the coordination group of OECD issues at the Ministry of Foreign Affairs, Finland, 2012-2017.

Ten most important scientific articles:

1. Sintonen, H., and Linnosmaa, I., 2000. Economics of dental services, in Culyer, A. and Newhouse J. (eds.), Handbook of Health Economics, Elsevier Science, North-Holland, Amsterdam, 2000
2. Kivioja, A., Linnosmaa, I., Vehviläinen, A., and Vohlonen, I., 2004. Cost-minimization analysis of treatment of gastroesophageal reflux disease. Implications of varying holding time on conclusions, European Journal of Pharmaceutical Sciences, 21, 171-178
3. Linnosmaa, I., Hermans, R., and Hallinen, T., 2004. Price-cost margin in the pharmaceutical industry: Empirical evidence from Finland, The European Journal of Health Economics, 5, 122-128,
4. Martikainen, J., Kivi, I., and Linnosmaa, I., 2005. European prices of newly launched reimbursable pharmaceuticals – a pilot study, Health Policy, 74, 235-246
5. Linnosmaa, I., 2008. Advertising, Free-riding, and Price Differences in the Market for Prescription Drugs, The BE Journal of Economic Analysis and Policy, 8, Iss. 2, Article 8
6. Kalavainen, M., Karjalainen, S., Martikainen, J., Korppi, M., Linnosmaa, I., and Nuutinen, O., 2009, Cost-effectiveness of routine and group programs for treatment of obese children, Pediatrics International, 51, 606-611
7. Kankaanpää, E., Linnosmaa, I., and Valtonen, H., 2011, Public health care providers and market competition: The case of Finnish occupational health services, The European Journal of Health Economics, 12, 3-16

8. Steffanson, M., Pulliainen M., Kettunen A., Linnosmaa I., Halonen M., 2016, The association between freedom of choice and effectiveness of home care services, *International Journal of Integrated Care* 16(1), 1-11.
9. Pekola P., Linnosmaa I., Mikkola HM., 2017, Competition and quality in a physiotherapy market with fixed prices, *European Journal of Health Economics*, 18: 97-117
10. Pekola P., Linnosmaa I., Mikkola HM., 2017, Does competition have an effect on price and quality in physiotherapy, *Health Economics*, 26: 1278-1290