

# **Research Unit on Economic Structures and Growth**

Department of Economics, University of Helsinki

## **Annual Report 2002**

### **Director:**

*Seppo Honkapohja, Academy Professor*

### **Team Leaders:**

**Seppo Honkapohja**

**Erkki Koskela, Professor of Economics**

**Pentti Saikkonen, Professor of Statistics**

home page: <http://www.valt.Helsinki.fi/raka/>

RUESG is funded jointly by the Academy of Finland, University of Helsinki, Bank of Finland, Nokia Group and the Yrjö Jahnsson Foundation.

## Overview

2002 was the eight year of operation for the Research Unit on Economic Structures and Growth (RUESG)<sup>1</sup>. RUESG is a research unit within the Department of Economics at University of Helsinki. Its goal is to conduct top-level research in selected areas of economics (see the web pages of RUESG for details), train selected graduate students in their PhD studies and occasionally provide expertise on economic policy problems in Finland. The Academy of Finland nominated RUESG as a national centre of excellence in research in Finland for the years 2002-2007.

Research activity at RUESG continued at high pace and numerous research publications, papers, lectures and conference presentations were given by RUESG members in 2002. Four books, reports or edited volumes, 17 articles in refereed journals or in edited volumes, and 20 new working papers were published during the year.

RUESG people delivered a total of 48 invited lectures, seminars and contributed presentations. As highlights we may mention the plenary lecture by Erkki Koskela in the Annual Congress of the International Institute of Finance and the invited lecture by Seppo Honkapohja at the Journal of Money, Credit and Banking Conference. Erkki Koskela received Honorary Doctor's degree from the University of Oulu.

Of other scientific activity we mention that several people have had both international and domestic other scientific duties and served as experts in scientific and other organisations. RUESG had five international visitors during 2002. One PhD and four licentiate theses by RUESG people were completed in 2002. A detailed report of the different RUESG activities is provided below.

Currently, the personnel of RUESG consists of three professors, two senior fellows, three post doctoral fellows and nine graduate students (details are given below). All graduate students and half of the more senior personnel are full time researchers while the others have been appointed in positions with teaching and administrative obligations. In addition to research, most of the full time researchers have taught individual courses or sections of courses in the university or some other institution.

As another highlight we remark that in November Markku Lanne was appointed as Professor of Economics at University of Jyväskylä. He will also continue as a RUESG fellow in 2003.

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<sup>1</sup> In Finnish RUESG is called RAKA (Talouden rakenteiden ja kasvun tutkimusyksikkö).

## Summaries of current research

### Professors and fellows:

*Seppo Honkapohja's* research focused on the implications of adaptive learning for the conduct of macroeconomic policy. One line of work considered different forms for implementing inflation targeting. Some standard forms of implementation of optimal monetary policy under commitment can be subject to the problem of indeterminacy and instability under learning whereas a forecast based optimal interest rate rule is free from these concerns. The results also extend to situations where the policy maker estimates structural parameters of the economy. A project on fiscal policy assessed the so-called fiscal theory of the price level. Seppo has also done some work on the possibility and plausibility of liquidity traps arising from interest rate policies and on costs and benefits from tax competition.

*Erkki Koskela's* research concentrated on three different topics. The first topic considers the impact of the factor tax reforms on employment and welfare and the optimal factor taxation in the presence of imperfectly competitive labour markets due to the bargaining power of trade unions both using static and dynamic general equilibrium models. The second topic focuses on the optimal forest policies when forest stands produce timber revenues and amenity services and the determination of optimal rotation age of forest stands in the presence of variable and stochastic interest rates. His third topic focuses on the potential interaction between credit market competition and labour markets from the point of view of the determination of equilibrium unemployment.

*Pentti Saikkonen* has mainly been doing research on two topics. In the first one he developed new nonlinear models aimed at being useful for describing and forecasting highly persistent volatility. Empirical examples on exchange return series showed that the new models outperformed previous competitors especially in longer term forecasting. His second topic dealt with the problem of testing for cointegration in vector autoregressive models with a level shift at unknown time. This research produced new and convenient test procedures and, as a by-product, new preliminary results of the involved break date estimators.

*Markus Haavio's* research centred around two themes, connected by the common denominator of human mobility. The first topic is migration and the environment. Contrary to earlier literature, Markus' research has demonstrated that, in a dynamic context, costly and sluggish migration may in fact create and reinforce the incentives to overpollute so that household mobility need not internalize interregional externalities caused by transboundary pollution. He has also studied how these results depend on the choice of policy instruments. Markus' second topic consider housing markets and labour mobility. The aim of the project (joint with Heikki Kauppi) is to explain the finding that owner-occupation may be inferior to private rental housing in enhancing efficient spatial matching of labour and jobs, and more generally to analyse different housing arrangements from the perspective of labour mobility.

*Heikki Kauppi's* research involved topics in economic theory and time series econometrics. One project (with Markus Haavio) was concerned with developing theoretical models to examine the relative merits of owner occupation and rental housing in enhancing interregional mobility of households and labor. In an empirical project Heikki has developed and applied new methods to estimate potential output. In another project he applied time series econometrics to study the relation among emissions of carbon dioxide and methane, the concentration of these gases, and global surface temperature. Heikki also made an extension to his earlier study on the robustness of fully modified vector autoregression.

*Markku Lanne's* research concentrated on the econometric modelling of highly persistent time series, with three subprojects. First, unit root tests capable of taking structural breaks in time series into account, were developed and applied to economic variables. Second, new nonlinear models, both univariate and multivariate, for strongly autocorrelated time series were introduced and quite successfully fitted to inflation and interest rate data. The multivariate model is useful due to its ability to capture potential long-run relationships between persistent variables that cannot be assumed to be unit root processes, and, hence, cointegration is not a feasible concept in studying their long-run comovements. Finally, a new kind of generalized autoregressive conditional heteroskedasticity model was devised and applied to exchange rate returns.

*Mikko Leppämäki* continued several research projects. In cooperation with Micael Castanheira (ECARES, ULB) Leppämäki has been examining the information processing in organizations especially in terms of deriving the profitable outsourcing possibilities and how the structure of optimal information processing is affected by external market conditions and technological progress. In another project Mikko examined (with Vesa Kanninen, University of Helsinki) the role of financial markets in the allocation talent in an economy. A new project in progress (with Mikko Mustonen, University of Helsinki) examines signalling in software industry when skill signalling in the OS environment introduces a product market externality effect due to appearance of free OS products. Mikko served as a full time director of joint doctoral program in economics in Finland.

*Anne Mikkola* has been completing the empirical work initiated earlier on the behavior of exchange rates and their forecasting. She has also started to plan a new area of research towards issues of development and the status of women as it relates to growth and development. Anne also served as a new fixed-term Professor in the department of economics.

## **Graduate students<sup>2</sup>**

*Marja-Liisa Halko's* research concentrated on the implications of different systems of unemployment insurance financing for labour unions' wage decisions and thereby for employment. The special focus was on the effects of so called EMU-buffers which were formed in Finland in the end of 90's with the aim to stabilize the cost of labour, and thereby employment, over business cycles. In the modeling it turned out that

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<sup>2</sup> For more junior graduate students, the summaries provide a description of their graduate studies and research (when applicable).

when wages are flexible buffer funding stabilizes employment variation. When wages are rigid, buffer funding levels down net wage fluctuation but it has almost no effect on employment variation.

*Ilkka Kiesepää* worked, before joining RUESG, for three months as a researcher at the Software Business and Engineering institute (SoberIT) of the Helsinki University of Technology. During that time he wrote a report which summarized the currently available research concerning a variety of economic issues that are raised by OS software. Ilkka joined RUESG in September, after which his work has mostly consisted in doing the required graduate studies in economics. He completed the course on microeconomic theory. After completion of course work, Ilkka's research will focus on the problems of applying the theory of economic growth to the new information economy.

*Anja Mankila* started in RUESG in September. She completed the FPPE Course in Microeconomics and attended the mini-course "Matching Theory with Applications" (held by Eric Smith) and the FPPE Workshop on Public Economics.

*Inka Mattila* finished her required course work in the first half of the year. She also participated in two Summer Schools, the Macroeconomic summer school (University of Pompeu Fabra) and the European science days summer school "Growth, Values and Welfare". Inka started her PhD research that will focus on currency crises and contagion effects in emerging markets. Its emphasis is on the interrelation of debt and currency crisis and on the possibility of an increase in the crisis vulnerability of a country due to liabilities in foreign currency and possible balance-sheet effects.

*Toni Nordlund's* research revolved around optimal stopping problems implicit in venture financing. The basic ideas were merged into a licentiate thesis that was accepted by the Faculty of Social Sciences in December, with the grade *magna cum laude approbatur*. The thesis presented a stopping rule that maximises the expected payoff to a venture capitalist acting in the capacity of an inside investor. In addition to an optimal rule, the thesis also introduced the concept of a near-optimal rule that was argued to capture factors extraneous to rational real-option valuation, most notably grandstanding. The impact of substitute investment opportunities and entrepreneurial exit options for the venture capitalist and sufficient periodic conditions to rule out an initial public offering were also examined. The optimal-stopping methodology employed in the thesis will serve as a basis for Toni's future research.

*Leena Rudanko* completed all the requirements for her Licentiate degree in 2002. Her licentiate thesis considered the implications of balanced budget rules in dynamic macroeconomic models by means of an adaptive learning perspective. The results indicate that such rules can lead to problems of indeterminacy and instability under learning. The thesis earned the grade *eximia cum laude approbatur*. In the fall Leena left RUESG in order to continue her PhD studies in the department of economics, University of Chicago.

*Timo Seppälä* completed the compulsory PhD courses (macroeconomics and econometrics) during the spring term. Timo also participated in a Summer school and in Arne Ryde memorial lectures in Lund. In the autumn term Timo continued his PhD studies and started to do his own research for a licentiate thesis. The subject of

the thesis is hyperbolic discounting, backward-looking behaviour and widely recognised self-control problems will be studied in the context of optimal savings plans for retirement.

*Anssi Rantala* continued his PhD research, which focuses on the economics of monetary union. One project studies the determination of labor market flexibility and labor market policy coordination between the member countries in a monetary union. Another project deals with adaptive learning in the presence of multiple inflation equilibria and unemployment persistence. Learning is used as an equilibrium selection mechanism in the model. It is argued that the formation of a monetary union is a good example of a situation where the application of the theory of adaptive learning may provide a better description of the behaviour of the agents than assuming rational expectations.

*Juuso Vanhala* continued his doctoral research, which is focused on matching models and equilibrium unemployment. He completed his Licentiate degree with a thesis grade *eximia cum laude approbatur*. An ongoing study discusses the impact of technical acceleration on the determination of reservation wages /productivities for workers and firms. It investigates the influence of endogenous reservation rules on wage growth, job creation and job destruction. A joint project with Gianluca Violante (NYU) deals with technical change, human capital and labor markets. In particular, transferability of skills between jobs of different capital vintages is studied and its effects on job flows, equilibrium unemployment and wage inequality are addressed.

*Timo Vesala's* research agenda is to examine the effects of banking sector construction and competitiveness on the efficiency of resource allocation, welfare and economic growth. Timo is especially interested in the potential interaction between competition and the way in which banks select their financing projects. His research topics also include price formation and so called 'double competition' characteristics to financial intermediation business. In 2002 Timo completed Licentiate degree, with the grade *eximia cum laude approbatur* for his thesis. Since fall 2002, he has been as a Visiting PhD-student and Fulbright Scholar in the department of economics, University of Chicago.

*Tommi Vuorenmaa* put most of his effort in course studies, especially the core courses (micro and macroeconomics). In anticipation his forthcoming research and thesis in the field of financial econometrics, Tommi also took part in some selected courses at the mathematics department. By the end of the year his credits summed up close to the amount required for Licentiate and Doctoral degrees.

## Personnel

At the end of 2002 RUESG had the following personnel:

### **Team leaders:**

Seppo Honkapohja

Erkki Koskela

Pentti Saikkonen

**Senior fellows:**

Markku Lanne  
Anne Mikkola<sup>3</sup>

**Post-doctoral fellows:**

Markus Haavio  
Heikki Kauppi  
Mikko Leppämäki<sup>4</sup>

**Graduate students:<sup>5</sup>**

Marja-Liisa Halko  
Ilkka Kiesepä  
Anja Mankila  
Inka Mattila  
Toni Nordlund  
Anssi Rantala  
Timo Seppälä  
Juuso Vanhala  
Timo Vesala  
Tommi Vuorenmaa

**Secretary:**

Päivi Leskinen

During 2002 Markus Haavio, Marja-Liisa Halko, Markku Lanne and Anssi Rantala visited the Research Department of the Bank of Finland.

Anssi Rantala, Juuso Vanhala and Timo Vesala have been on visits abroad, respectively, at Institute for International Economic Studies, University of Stockholm and University College, United Kingdom and University of Chicago, USA.

Inka Mattila has been on leave at UNDP since November.

**Changes in personnel:**

Tuomas Takalo moved to the Bank of Finland in the beginning of January.  
Leena Rudanko moved to the University of Chicago in September for Ph.D. studies.

**Visitors to RUESG:**

George W. Evans (University of Oregon), Kaushik Mitra (University of London), Leopold von Thadden (Deutsche Bundesbank), Arja Turunen-Red (University of New Orleans) and Roope Uusitalo (University of Uppsala).

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<sup>3</sup> Main job as Professor of Economics (international economics).

<sup>4</sup> Main job as Director of the Finnish Post-Graduate Programme in Economics.

<sup>5</sup> Kiesepä and Mankila joined RUESG in September 2002.

## Details of scientific and other activity

### 1. Scientific activity 2002

#### 1.1 Publications

##### Books and research reports

Corsetti Giancarlo, Flemming John, Honkapohja Seppo, Leibfritz Willi, Gilles Saint-Paul, Sinn Hans-Werner, Xavier Vives: *Report on the European Economy 2002, European Economic Advisory Group at CESifo*, CESifo Forum, 2002, Ifo Institute for Economic Research, Munich, Germany, 95 pp.

Dahlström Tom: *Essays on the Theory of Irreversible Investment*, Research Reports No. 94:2002, *Dissertationes Oeconomicae*, Helsingin yliopiston kansantaloustieteen laitos, pp. 142.

Rudanko Leena: *On the Implications of a Balanced Budget Rule - An Adaptive Learning Perspective*, Research Reports No. 93:2002, Helsingin yliopiston kansantaloustieteen laitos, pp.53

##### Edited books and reports

Ilmakunnas Seija, Koskela Erkki (eds.): *Towards Higher Employment: the Role of Labour Market Institutions*, VATT-julkaisu 32, Helsinki 2002, Valtion taloudellinen tutkimuskeskus, s. 222, Gummerus Kirjapaino Oy.

##### Unpublished theses

Nordlund Toni: *Real-Option Model for Venture Projects with Near-Optimal Stopping Rules*, Licentiate thesis, unpublished, Department of economics, University of Helsinki, 82 pp.

Vanhala Juuso: *Technical Progress, Skill Transferability and Equilibrium Unemployment*, Licentiate thesis, unpublished, Department of economics, University of Helsinki, 45 pp.

Vesala Timo: *Competition in Banking and Economic Growth*, Licentiate thesis, unpublished, Department of economics, University of Helsinki, 68 pp.

##### Articles in refereed journals

Amacher Gregory S., Koskela Erkki, Ollikainen Markku: *Optimal Forest Policies in an Overlapping Generations Economy with Timber and Money Bequests*, *Journal of Environmental Economics and Management*, 44 (2002), 346-369.

Amacher Gregory S., Koskela Erkki, Ollikainen Markku, Conway Christine M.: *Bequest Intentions of Forest Landowners: Theory and Empirical Evidence*, *American Journal of Agricultural Economics*, 84 (4), November 2002, 1103-1114.

Honkapohja Seppo, Turunen-Red Arja: *Complementarity, growth, and trade*, *Canadian Journal of Economics*, 35, No.3, August 2002, 495-516.

Koskela Erkki, Ollikainen Markku, Puhakka Mikko: *Renewable Resources in an Overlapping Generations Economy Without Capital*, *Journal of Environmental Economics and Management*, 43, 2002, 497-517.

Koskela Erkki, Schöb Ronnie: *Optimal Factor Income Taxation in the Presence of Unemployment*, *Journal of Public Economic Theory*, Vol. 4 (3), 2002, 387-404.

Koskela Erkki, Schöb Ronnie: Why Governments Should Tax Mobile Capital in the Presence of Unemployment, *Contributions to Economic Analysis & Policy*, Vol. 1, No. 1, 2002, 1-20.

Lanne Markku: Testing the Predictability of Stock Returns, *The Review of Economics and Statistics*, August 2002, 84 (3), 407-415.

Lanne Markku, Lütkepohl Helmut: Unit root tests for time series with level shifts: a comparison of different proposals, *Economics Letters* 75 (2002), 109-114.

Lanne Markku, Lütkepohl Helmut, Saikkonen Pentti: Comparison of Unit Root Tests for Time Series with Level Shifts, *Journal of Time Series Analysis*, Vol. 23, No. 6, 2002, 667-685.

Lanne Markku, Saikkonen Pentti: Threshold Autoregressions for Strongly Autocorrelated Time Series, *American Statistical Association, Journal of Business & Economic Statistics*, April 2002, Vol. 20, No. 2, 2002, 282-289.

Saikkonen, Pentti, Lütkepohl Helmut: Testing for a unit root in a time series with a level shift at unknown time. *Econometric Theory*, 18, 2002, 313-348.

### Articles in collected volumes

Honkapohja Seppo: Indeterminacy in Economic Growth: A Commentary, In *Tutkimus ja talouspolitiikka* ed. by Kajanoja Jouko, Kiander Jaakko, Voipio Iikko B., VATT-julkaisuja 33, Helsinki 2002, 113-134.

Honkapohja Seppo, Mörttinen Leena, Vihriälä Vesa: Rahoitusmarkkinat, in *Kansantaloutemme -rakenteet ja muutos*, ed. by Loikkanen Heikki A., Pekkarinen Jukka, Vartia Pentti, Taloustieto Oy, Helsinki 2002, 3rd revised edition, 321-360.

Ilmakunnas Seija, Koskela Erkki: Employment and Labour Market Institutions: Experiences from Europe, in *Towards Higher Employment: the Role of Labour Market Institutions*, ed. by Ilmakunnas Seija & Koskela Erkki, VATT-julkaisuja 32, Helsinki 2002, Valtion taloudellinen tutkimuskeskus, 15-28.

Koskela Erkki: Labour Taxation and Employment in Trade Union Models: A Partial Survey, in *Towards Higher Employment: the Role of Labour Market Institutions*, ed. by Ilmakunnas Seija & Koskela Erkki, VATT-julkaisuja 32, Helsinki 2002, Valtion taloudellinen tutkimuskeskus, 63-85.

Koskela Erkki, Loikkanen Heikki A., Tuomala Matti: Julkinen sektori Suomessa, in *Kansantaloutemme -rakenteet ja muutos*, ed. by Loikkanen Heikki A., Pekkarinen Jukka, Vartia Pentti, Taloustieto Oy, Helsinki 2002, 3rd revised edition, 173-224.

Koskela Erkki, Schöb Ronnie: Alleviating unemployment: The case for green tax reforms, in *Environmental Policy Making in Economies with Prior Tax Distortions*, ed. Goulder Lawrence H., Edward Elgar, 2002, 355-378.

### Articles in other scientific journals

Honkapohja Seppo: Poliitiikka, päättäjät ja ekonomistit, *Kansantaloudellinen aikakauskirja* 98. vsk., 1/2002, 70-73.

Kauppi Heikki, Hyytiäinen Ari: Rahoituksen markkinaehtoistuminen ja talouden toimialarakenne. Havainnot Suomesta 1980-2000, *Kansantaloudellinen aikakauskirja* 98. vsk., 2/2002, 177-198.

Koskela Erkki: Kotimaisen työttömyyden syitä ja korjauskeinoja, *PTT-katsaus* 4/2002, Pellervon taloudellinen tutkimuslaitos, Helsinki, 25-31.

Leppämäki Mikko: Kohtuulliset ja oikeudenmukaiset optiot, *Kansantaloudellinen aikakauskirja* 98. vsk., 2/2002, 112-114.

**Articles and working papers in the Department of economics, University of Helsinki or other series**

Alvarez Luis H.R., Koskela Erkki: Irreversible Investment under Interest Rate Variability: New results, Working Paper No. 640, January 2002, CESifo Working Papers, Center for Economic Studies & If, Institute for Economic Research, Munich, Germany, 20 pp.

Alvarez Luis, Koskela Erkki: On Forest Rotation under Interest Rate Variability, Discussion Paper No. 540:2002, Department of Economics, University of Helsinki, 13 pp.

Amacher Gregory S., Koskela Erkki, Ollikainen Markku: Forest Rotations and Stand Interdependency: Ownership Structure and Timing of Decisions, Working Paper No. 673 (8), February 2002, CESifo Working Papers, Center for Economic Studies & Ifo Institute for Economic Research, Munich, Germany, 37 pp.

Amacher Gregory S., Koskela Erkki, Ollikainen Markku: Forest Rotations and Stand Interdependency: Ownership Structure and Timing of Decisions, Discussion Paper No. 525:2002, Department of Economics, University of Helsinki, 36 pp.

Castanheira Micael, Leppämäki Mikko: Information Processing and Technological Progress, Discussion Paper No. 524:2002, Department of Economics, University of Helsinki, 13 pp.

Evans George W., Honkapohja Seppo: Monetary Policy, Expectations and Commitment, Discussion Paper No. 533:2002, Department of Economics, University of Helsinki, 39 pp. and European Central Bank, Working Paper No. 124, February 2002, 40 pp.

Evans W. George, Honkapohja Seppo: Adaptive learning and monetary policy design, Bank of Finland Discussion Papers 29/2002, Bank of Finland, 34 pp.

Evans W. George, Honkapohja Seppo: Policy interaction, learning and the fiscal theory of prices, Discussion Paper No. 3564, October 2002, Center for Economic Policy Research, London UK, 28 pp. and Bank of Finland Discussion Papers 18/2002, Bank of Finland, 28 pp.

Halko Marja-Liisa: Financing Unemployment Insurance, Discussion Paper No. 543:2002, Department of Economics, University of Helsinki, 24 pp.

Halko Marja-Liisa, Kultti Klaus, Niinimäki Juha-Pekka: Evolutionary Stability of Trading Rules in an Urn-ball Matching Model, Discussion Paper No. 541:2002, Department of Economics, University of Helsinki, 11 pp.

Honkapohja Seppo, Mitra Kaushik: Learning Stability in Economics with Heterogenous Agents, European Central Bank, Working Paper No. 120, January 2002, s. 44 and Discussion Paper No. 534:2002, Department of Economics, University of Helsinki, 36 pp. also revised version as Working Paper No. 772, September 2002, CESifo Working Papers, Center for Economic Studies & Ifo Institute for Economic Research, Munich, Germany, 36 pp.

Honkapohja Seppo, Mitra Kaushik: Performance of Monetary Policy with Internal Central Bank Forecasting, Bank of Finland Discussion Papers 3/2002, Bank of Finland, 44 pp. and European Central Bank, Working Paper No. 127, February 2002, 45 pp.

Kanniainen Vesa, Leppämäki Mikko: Financial institutions and the allocation of talent, Bank of Finland Discussion Papers 5/2002, Bank of Finland, 23 pp.

Koskela Erkki, Ollikainen Markku: Optimal Forest Taxation Under Private and Social Amenity Valuation, Discussion Papers No. 815/2002, ETLA, Elinkeinoelämän tutkimuslaitos, 23 pp.

Koskela Erkki, Ollikainen Markku, Puhakka Mikko: Saddles, Indeterminacy and Bifurcations in an Overlapping Generations Economy with a Renewable Resource, Discussion Papers No. 789/2002, ETLA, Elinkeinoelämän tutkimuslaitos, 30 pp.

Koskela Erkki, Schöb Ronnie: Optimal Capital Taxation in Economies with Unionised and Competitive Labour Markets, Working Paper No. 819, December 2002, CESifo Working Papers, Center for Economic Studies & Ifo Institute for Economic Research, Munich, Germany, 14 pp. and Discussion Paper No. 544:2002, Department of Economics, University of Helsinki, 14 pp.

Koskela Erkki, Stenbacka Rune: Equilibrium Unemployment and Credit Market Imperfections: The Critical Role of Labour Mobility, Working Paper No. 654, January 2002, CESifo Working Papers, Center for Economic Studies & Ifo Institute for Economic Research, Munich, Germany, 28 pp.

Koskela Erkki, von Thadden Leopold: Optimal factor taxation under wage bargaining - a dynamic perspective, Discussion Paper 31/02, December 2002, Economic Research Centre of the Deutsche Bundesbank, 32 pp. and Discussion Paper No. 546:2002, Department of Economics, University of Helsinki, 32 pp.

Lanne Markku: Nonlinear dynamics of interest rate and inflation, Bank of Finland Discussion Papers 21/2002, Bank of Finland, 27 pp.

Lanne Markku, Saikkonen Pentti: Nonlinear GARCH Models for Highly Persistent Volatility, Discussion Paper 20:2002, Sonderforschungsbereich 373, Humboldt-Universität zu Berlin, 42 pp.

### **Popular articles**

Honkapohja Seppo: Ennusteet ja odotukset talouden ilmiönä, *Chydenius*, Osuuspankkiryhmän talousjulkaisu 2/2002, 23-27.

## **1.2 Honours**

### **Erkki Koskela**

Honorary doctor, Faculty of Economics and Industrial Management University of Oulu.

## **1.3 Scientific visits abroad**

### **Seppo Honkapohja**

- University of Oregon and University of New Orleans, Louisiana, USA, 6-12.2.2002, 6 days, research visit.
- University of Pompeu Fabra, Barcelona, Spain, 14-18.4.2002, 4 days, research visit
- University of Oregon, USA, 22-30.5.2002, 8 days, research visit
- University of Cambridge, Great Britain, 19-24.9.2002, 5 days, research visit
- University of Oregon, USA, 7-18.10.2002, 12 days, research visit
- Federal Reserve Bank of Cleveland, USA, 4-10.11.2002, 7 days, research visit
- Royal Holloway College, University of London, Great Britain, 7-11.12.2002, 5 days, research visit

### **Erkki Koskela**

- Deutsche Bundesbank, Frankfurt, Germany, February-March, 21 days, research visit
- Deutsche Bundesbank, Frankfurt, Germany, May, 7 days, research visit

- University of Magdeburg, Germany, June, 14 days, research visit
- University of Uppsala, Sweden, September, 7 days, research visit
- Deutsche Bundesbank, Frankfurt, Germany, November, 7 days, research visit
- University of Uppsala, Sweden, 7 days, research visit

#### **Pentti Saikkonen**

- European University Institute, Department of Economics, Italy, July - August, 21 days, research visit

#### **Markku Lanne**

- Department of Economic Statistics, Stockholm School of Economics, Sweden, 10. - 11.10., 2 days, research visit

#### **Inka Mattila**

- Universitat Pompeu Fabra, Macroeconomic Summer School (Courses: International Capital Flows, Monetary Policy and Nominal Rigidities), Spain, 17. - 21.6.2002, 5 days, research visit
- European Science Days, Summer School: Growth, Values and Welfare, Austria, 7. - 12.7.2002, 6 days, research visit
- Visitor to UNDP 1.11. - 31.12., 61 days, training visit

#### **Toni Nordlund**

- Stockholm School of Economics, Sweden, 23 - 24.5.2002, 2 days, research visit

#### **Anssi Rantala**

- Institute for International Economic Studies, Stockholm University, Sweden, 1.1. - 30.6.2002, 181 days, research visit

#### **Leena Rudanko**

- University of Chicago, Northwestern University, USA, 28.3. - 7.4.2002, 9 days, research visit

#### **Timo Seppälä**

- Stockholm School of Economics, Sweden, 23 - 24.5.2002, 2 days, research visit

#### **Juuso Vanhala**

- University College London, Great Britain, 1.1. - 9.6.2002, 160 days, research visit
- University of Tartu, Estonia, 26.9. - 27.9.2002, 2 days, teaching visit

#### **Timo Vesala**

- University of Chicago, USA, 1.9. - 31.12.2002, 122 days, research visit
- Stockholm School of Economics, Sweden, 23 - 24.5.2002, 2 days, research visit

#### **Tommi Vuorenmaa**

- Centre de Recerca Matemàtica, Campus of the Universitat Autònoma de Barcelona (Bellaterra), Spain, 1 - 6.6.2002, 6 days, research visit
- Bachelier Finance Society - 2nd World Congress, 12 - 15.6.2002 Crete, Greece. 3 days research visit

### **1.4 Visits by foreign scholars to RUESG**

**Host: Seppo Honkapohja**

- Evans, George W., PhD, professor, University of Oregon, USA, 6 - 12.2.2002, 6 days, research visit
- Evans, George W., PhD, professor, University of Oregon, USA, 1 - 7.5.2002, 7 days, research visit
- Turunen-Red Arja, PhD, professor, University of New Orleans, USA, 30.5. - 7.6.2002, 9 days, research visit
- Mitra Kaushik, PhD, senior lecturer, Royal Holloway College, University of London, Great Britain, 4 - 11.8.2002, 7 days, research visit

**Host: Erkki Koskela**

- Leopold von Thadden, Deutsche Bundesbank, Frankfurt, Germany, July, 7 days, research visit
- Roope Uusitalo, University of Uppsala, Sweden, August, 7 days, research visit

## 1.5 Lectures and conference presentations

**Seppo Honkapohja**

- "Monetary Policy, Expectations and Commitment", Research seminar, 8.3.2002, University of New Orleans, USA, international, invited lecture
- "Monetary Policy, Expectations and Commitment", NBER Money Workshop, 12.4.2002, Cambridge, USA, international, invited lecture
- "Monetary Policy, Expectations and Commitment", Research seminar, 16.4.2002, University of Pompeu Fabra, Barcelona, Spain, international, invited lecture
- "Presentation of EEAG Report 2002", Circulo Economico, 17.4.2002, Barcelona, Spain, international, invited lecture
- "Policy Interaction, Expectations and the Fiscal Theory of Prices", CEPR Conference on Fiscal Policy, 19-21.5.2002, University of Pompeu Fabra, Barcelona, Spain, international, invited lecture
- "Learning Stability in Economies with Heterogenous Agents", CENDEF Workshop on Nonlinear Dynamics, 24-27.6.2002, Leiden, the Netherlands, international, invited lecture
- "Learning Stability in Economies with Heterogenous Agents", European Meeting of the Econometric Society, 24-27.8.2002, Venice, Italy, international, contributed presentation
- "Monetary Policy, Expectations and Commitment", World Congress of the International Economic Association, 7-10.9.2002, Lisboa, Portugal, international, contributed presentation
- "Monetary Policy, Expectations and Commitment", Conference on Policy Rules, 19-20.9.2002, University of Cambridge, Great Britain, international, invited lecture
- "Policy Interaction, Expectations and the Fiscal Theory of Prices", Research seminar, 11.10.2002, University of Washington, Seattle, USA, international, invited lecture
- "Learning Stability in Economies with Heterogenous Agents", Research seminar, 15.10.2002, University of Southern California, Los Angeles, CA, USA, international, invited lecture
- "Policy Interaction, Expectations and the Fiscal Theory of Prices", Research seminar, 16.10.2002, University of California Davis, USA, international, invited lecture

- "Policy Interaction, Expectations and the Fiscal Theory of Prices", Research seminar, 5.11.2002, Federal Reserve Bank of Cleveland, USA, international, invited lecture
- "Adaptive Learning and the Monetary Policy Design", Journal of Money Credit and Banking Annual Conference, 7-8.11.2002, Federal Reserve Bank of Cleveland, USA, international, invited lecture
- "Adaptive Learning and the Monetary Policy Design", 13.11.2002, Bank of Finland, Helsinki, Finland, invited lecture
- "Adaptive Learning and the Monetary Policy Design", 28.11.2002, CERGE-EI, Charles University, Prague, Czech Republic, international, invited lecture
- "Adaptive Learning and the Monetary Policy Design", 10.12.2002, Royal Holloway College, University of London, Great Britain, international, invited lecture
- "Performance of Monetary Policy with Internal Central Bank Forecasting", Conference on Belief Formation and Fluctuations in Economic and Financial Markets, 12-13.12.2002, University of Heidelberg, Germany, international, invited lecture

### **Erkki Koskela**

- "Capital Structure, Wage Bargaining and Employment", 22.2.2002, Deutsche Bundesbank, Frankfurt, Germany, invited lecture
- "Equilibrium Unemployment and Credit Market Imperfections: A Bargaining Approach", 29.5.2002, Center for European Inmigration Studies, Bonn, Germany, invited lecture
- "Welfare, Unemployment and Tax Reform", lecture of conferment of degrees (Promootio), May, University of Oulu, Finland, invited lecture
- "Equilibrium Unemployment and Credit Market Imperfections: A Bargaining Approach", 11.6.2002, University of Magdeburg, Germany, invited lecture
- "Wicksellian Theory of Forest Rotation under Interest Rate Variability", 2nd world congress of environmental and resource economists, June, Monterey, California, USA, contributed presentation
- "Forest Rotation and Stand Interdependence: Ownership Structure and Timing of Decisions", 2nd world congress of environmental and resource economists, June, Monterey, California, USA, contributed presentation
- "Forest Economics", 58th Annual Conference of the International Institute of Public Finance, 28.8.2002, Helsinki, Finland, invited lecture
- "Optimal Factor Taxation under Wage Bargaining - A Dynamic Perspective", 3.9.2002, University of Uppsala, Sweden, invited lecture
- "Katsaus metsätaloustieteen kehitykseen", 17.10.2002, Pellervon taloudellinen tutkimuslaitos, Helsinki, Finland, contributed presentation
- "Profit Sharing and Unemployment: An Approach with Bargaining and Efficiency Wage Effects", joint seminar with Deutsche Bundesbank, European Central bank and University of Frankfurt, 13.11.2002, Frankfurt, Germany, invited lecture
- "The Un-intended Convergence: How Finnish Unemployment Reached the European Level", Conference on Unemployment in Europe: Reasons and Remedies, 7.12.2002, München, Germany, invited lecture

### **Pentti Saikkonen**

- "Stability Results for Nonlinear Vector Autoregressions with an Application to a Nonlinear Error Correction Model", 57th European Meeting of the Econometric Society, Venice, Italy, 24. - 28.8., other lecture

**Markus Haavio**

- "Housing markets, borrowing constraints and labor mobility", Spring Meeting of Young Economists, April, Paris, France, international, contributed presentation
- "Housing markets, borrowing constraints and labor mobility", Econometric Society European Meeting (ESEM), August, Venice, Italy, international, contributed presentation
- "Housing markets, borrowing constraints and labor mobility", The Annual Meeting of the European Regional Science Association, August, Dortmund, Germany, international, contributed presentation
- "Housing markets, borrowing constraints and labor mobility", Umeå Economic Workshop, April, Umeå, Sweden, international, contributed presentation

**Maisa Halko**

- "Buffer funding of unemployment insurance", 2002 meeting of the European Public Choice Society, 4. - 7.4., Belgirate, Italy, international, poster

**Heikki Kauppi**

- "Housing Markets, Borrowing Constraints and Labor Mobility", The Seventh Spring Meeting of Young Economists, April, Paris, France, international, contributed presentation

**Markku Lanne**

- "Nonlinear GARCH models for highly persistent volatility", North American Summer Meeting of the Econometric Society, 24.6., Los Angeles, USA, international, contributed presentation
- "Nonlinear GARCH models for highly persistent volatility", Advances in Modelling and Forecasting Financial Markets, 19.8., Glasgow, United Kingdom, international, contributed presentation
- "Valuuttakurssituottojen empiirinen mallittaminen", 17.9., University of Jyväskylä, invited lecture
- "Nonlinear GARCH models for highly persistent volatility", 10.10., Department of Economic Statistics, Stockholm School of Economics, Sweden, international, invited lecture
- "Nonlinear dynamics of interest rate and inflation", 15.10., Bank of Finland, Finland, invited lecture

**Mikko Leppämäki**

- "Communication and Information management: Organizations and Markets", North American Summer Meeting of Econometric Society, June, UCLA, Los Angeles, USA, international, contributed presentation
- "Allocation of talent and Financial Institutions", taloustutkijoiden XIX kesäseminaari, 5. - 6.6.2002, Jyväskylä, Finland, contributed presentation
- "Allocation of talent and Financial Institutions", European Meeting of Econometric Society, August, Venice, Italy, international, contributed presentation

**Inka Mattila**

- "Currency Crises and Contagion Effect in Emerging Markets: A Brief Review of the Existing Literature and Ideas for Possible Extensions", FPPE Workshop on

International Macroeconomics, 4.-5.6.2002, Jyväskylä, Finland, international, contributed presentation

### **Juuso Vanhala**

- "Technical Change, Skill-Transferability and Equilibrium Unemployment", VII Spring Meeting of Young Economists, 17.4. - 20.4.2002, Université Paris 1 Sorbonne, France, international, contributed presentation

- "Technical Change, Skill-Transferability and Equilibrium Unemployment", European Association of Labour Economists Conference 2002, 19.9. - 22.9.2002, Université Paris 1 Sorbonne, France, international, contributed presentation

### **Tommi Vuorenmaa**

- "The Fractal Character of Stock Market Prices: Some Empirical Evidence from the Helsinki Stock Exchange", Miniworkshop on Stochastic Analysis and Finance, 27 - 28.5.2002, Jyväskylä, Finland, international, contributed presentation

## **1.6 Expert duties in journals and other publications**

### **Seppo Honkapohja**

- German Economic Review, All year, international journal, associate editor  
 - Macroeconomic Dynamics, All year, international journal, associate editor  
 - Scandinavian Journal of Economics, All year, international journal, associate editor  
 - Journal of Economic Surveys, All year, international journal, associate editor  
 - European Economics Abstract Journal, All year, international journal, associate editor

- International Economic Review, 11.1.2002, international journal, referee  
 - Scandinavian Journal of Economics, 7.2.2002, international journal, referee  
 - Review of Economic Studies, 22.3.2002, international journal, referee  
 - Journal of Monetary Economics, 2.4.2002, international journal, referee  
 - Journal of Economics Behaviour and Organization, 30.5.2002, international journal, referee  
 - Scandinavian Journal of Economics, 5.6.2002, international journal, referee  
 - Review of Economics Dynamics, 31.7.2002, international journal, referee  
 - Berkeley Press Electronic Journals in Macroeconomics, 17.8.2002, international journal, referee  
 - Journal of Political Economy, 11.9.2002, international journal, referee  
 - International Economic Review, 25.9.2002, international journal, referee

### **Erkki Koskela**

- Forest Science, international journal, member of editorial staff, all year  
 - European Economic Review, 21.1.2002, international journal, referee  
 - Homo Oeconomus, 21.1.2002, international journal, referee  
 - Forest Science, 5.2.2002, international journal, referee  
 - Canadian Journal of Forest Research, 16.3.2002, international journal, referee  
 - Forest Science, 18.5.2002, international journal, referee  
 - Journal of Public Finance, 18.5.2002, international journal, referee  
 - Scandinavian Journal of Economics, 19.6.2002, international journal, referee  
 - Oxford Economic Papers, 1.7.2002, international journal, referee  
 - Finnish Economic Papers, 2.7.2002, referee

- Homo Oeconomics, 8.7.2002, international journal, referee
- Journal of Economics, 29.7.2002, international journal, referee
- Forest Science, 31.8.2002, , international journal, referee
- Journal of Environmental Economics and Management, 26.10.2002, international journal, referee
- Environmental and Resource Economics, 31.10.2002, international journal, referee
- Resource and Energy Economics, 21.12.2002, international journal, referee
- Journal of Environmental Economics and Management, 27.12.2002, international journal, referee
- "Issues of Monetary Integration in Europe" 15.7.2002; chapter on edited volume, referee.

### **Pentti Saikkonen**

- Econometric Theory, Membership in Editorial Board, Co-Editor,
- Journal of Multivariate Analysis, 4. February, international journal, referee
- Annals of Statistics, 21. May, international journal, referee
- Statistics, 12. November, international journal, referee
- Econometrics Journal, 22. November, international journal, referee
- Journal of Econometrics 19. December, international journal, referee

### **Markus Haavio**

- Environmental and Resource Economics, February, international journal, referee

### **Heikki Kauppi**

- Econometric Theory, international journal, referee

### **Markku Lanne**

- Finnish Economic Papers, all year, editor
- International Review of Economics & Finance, 11.2., international journal, referee
- Journal of Applied Econometrics, 18.3., international journal, referee
- Econometrica, 17.4., international journal, referee
- Journal of Business, 10.6., international journal, referee
- Journal of Econometrics, 12.6., international journal, referee
- Macroeconomic Dynamics, 12.6., international journal, referee

### **Mikko Leppämäki**

- Journal of Economic Behavior & Organisation, June, The Netherlands, international journal, referee
- Finnish Economic Journal (Kansantaloudellinen aikakauskirja), all year, editor

## **1.7 Positions of trust in scientific societies and other organizations**

### **Seppo Honkapohja**

- International Economic Association, 1.1. - 15.9.2002, international, member of executive committee
- European Economic Association, all year, international, member of council
- CREI, Universitat Pompeu Fabra, international, member of advisory board
- European Economic Advisory Group, CESifo, Germany, all year, international, member and vice chairman (1.7.-)

**Erkki Koskela**

- Economics Education and Research Consortium Russia –foundation, evaluations of projects;

**Heikki Kauppi**

- Vice Chairman, Finnish Society for Economic Research, February -.

**1.8 Evaluation reports for positions****Seppo Honkapohja**

- University of Frankfurt, 15.3.2002, Germany, position: Professor  
 - University of Copenhagen, 15.5.2002, Denmark, position: Professor  
 - University of Copenhagen, 15.5.2002, Denmark, position: Professor

**1.9 Examinations and pre-examinations of doctoral dissertations****Seppo Honkapohja**

- Arpita Dhar, Indian Statistical Institute, 14.7.2002, India, pre-examination Ph.D. dissertation in economics  
 - Cryssi Giannitsarou, London Business School, 29.8.2002, United Kingdom, examination, Ph.D. dissertation in economics

**Erkki Koskela**

- Maria Kopsakangas-Savolainen, University of Oulu, 8.2.2002, Finland, examination, Ph.D. dissertation in economics  
 - Tuulia Hakola, University of Helsinki, 28.1.2002, pre-examination, Ph.D. thesis in economics

**Pentti Saikkonen**

- Niklas Ahlgren, Svenska Handelshögskolan, 25.10.2002, Finland, Pre-examination, Examiner of Ph.D. thesis

**Markus Haavio**

- Chiara Lombardini-Riipinen: "Essays on Environmental Quality Competition in a Vertically Differentiated Duopoly Model", University of Helsinki, Finland, pre-examination Ph.D. dissertation in economics

**Mikko Leppämäki**

- Essi Eerola: "Essays on The design of Environmental Policy", University of Helsinki, Finland, pre-examination Ph.D. dissertation in economics

**Anne Mikkola**

- Omar Farooq Saqib: "Currency Crises in Emerging Economies. Essays in International Macroeconomics.", University of Joensuu, 8/2002, pre-examination Ph.D. dissertation in economics

**1.10 Other scientific activity:****Seppo Honkapohja**

- IEA World Congress, member of program committee, May 2002;
- Letter of reference on Dr. Kaushik Mitra, Royal Holloway College, University of London UK, 15.5.2002,
- Evaluation of licentiate thesis by DI Leena Rudanko: "On the implications of a balanced budget rule - an adaptive learning perspective", 22.10.2002.

### **Erkki Koskela**

- Evaluation of licentiate thesis by M.Soc.Sc. Juuso Vanhala: "Technical Progress, Skill Transferability and Equilibrium Unemployment" 28.1.2002, University of Helsinki, Faculty of Social Sciences,
- Application for docentship of Economics to D.Soc.Sc. Seppo Laakso, University of Helsinki, Faculty of Social Sciences,
- Evaluation of licentiate thesis by M.Soc.Sc. Kristiina Huttunen "Trade, Technology and the Skill Structure of Labour Demand in Finland" 14.5.2002,
- Application for Docentship of Environmental economics by DBA Marko Lindroos 27.8.2002, University of Helsinki, Faculty of Agriculture and Forestry
- Evaluation of licentiate thesis by M.Soc.Sc. Timo Vesala: "Competition in Banking and Economic Growth" 30.9.2002, University of Helsinki, Faculty of Social Sciences,
- Evaluation of licentiate thesis by M.Soc.Sc. Harri Hietala: "Suorien Investointien Verorasituksen Mittaaminen Efektiivisellä Keskimääräisellä Veroasteella" 31.10.2002, University of Helsinki

### **Mikko Leppämäki**

Evaluation of licentiate thesis by M.Soc.Sc. Helena Holopainen, "Ownership structures, human capital investments, and the corporate governance debate", 7.8.2002, University of Helsinki

## **2. Other societal duties 2002**

### **2.1 Expert duties and positions of trust**

#### **Seppo Honkapohja**

- Economic Council of the Ministry of Finance, Helsinki, Finland, member
- Monetary committee of the University of Helsinki, all year, chairman
- Okopankki Oyj, Helsinki, all year, chairman of supervisory board
- Economic Council of the Ministry of Finance, all year, member
- Research Foundation of Finnish Cooperative Banks, all year, member of scientific council
- Research Fellow of Centre for Economic Policy Research, London UK
- Research Fellow of CESifo Munich, Germany

#### **Erkki Koskela**

- Economic Council of the Ministry of Finance, all year, member
- KATTI (Kansainvälisen talousoikeuden instituutti), member of board
- Söderberg Prize, Royal Swedish Academy of Sciences, selection committee, international, member
- A Research Fellow of CESifo, Munich, Germany

- Honorary Doctor and docent in the Faculty of Economics and Industrial Management, University of Oulu.
- Docent in the department of economics, University of Turku.
- A Member of the Committee for the pro gradu prize in energy economics in Finland.
- Organization of FPPE workshop in Labour Economics (quest speaker: Peter Fredriksson, University of Uppsala)
- Organization of FPPE workshop in Public Economics (quest speaker: Vidar Christiansen, University of Oslo)

### **Juuso Vanhala**

Finnish Society for Economic Research, secretary-treasurer

### **Timo Vesala**

Academy of Finland/Vuoden Viksu –competition, member of jury, January 2002

## **2.2 Other:**

### **Seppo Honkapohja**

Many appearances and interviews in different media.

### **Erkki Koskela**

- columns to Talous~Sanomat, 15 pieces,
- "Työllisyys ja verotus", Palkkatyöläinen -lehti, 5.2.2002, interview
- "Työreformit ja rahaliiton laajeneminen", Kauppalehti, 27.8.2002, interview
- "Pätkätyöt", Keskisuomalainen -lehti, 6.10.2002, interview

### **Mikko Leppämäki**

- Member of programme committee, The 7<sup>th</sup> Spring Meeting of Young Economists in Paris. 2002.
- Coordinator, Workshop in Microeconomics and Industrial Organization, Finnish Postgraduate Programme in Economics, since January 2002.

### **Heikki Kauppi**

- Member of programme committee, The 7<sup>th</sup> Spring Meeting of Young Economists in Paris.
- Coordinator, Research Seminar in Economics, Helsinki, since fall 2002.
- Coordinator, Workshop in Econometrics and Computational Economics, Finnish Postgraduate Programme in Economics, since fall 2002.

### **Markku Lanne**

- Coordinator, Workshop in Econometrics and Computational Economics, Finnish Postgraduate Programme in Economics, since fall 2002.

## **3. Degrees attained**

The following RUESG members (or former members) attained doctor's or licentiate's degree during 2002.

**Dahlström Tom**, D.Soc.Sc. 1.11.2002;

(supervisors: Honkapohja, Koskela; examiners: Alvarez, Stenbacka, Lund)

**Nordlund Toni**, Lic.Soc.Sc. 4.12.2002;

(supervisors: Honkapohja, Koskela; examiners: Jokivuolle, Valkeila)

**Rudanko Leena**, Lic.Soc.Sc. 13.11.2002;

(supervisors: Honkapohja, Koskela; examiners: Honkapohja, Puhakka)

**Vanhala Juuso**, Lic.Soc.Sc. 6.2.2002;

(supervisors: Honkapohja, Koskela; examiners: Koskela, Kultti)

**Vesala Timo**, Lic.Soc.Sc. 23.10.2002;

(supervisors: Honkapohja, Koskela; examiners: Koskela, Widgren)