

## Curriculum Vitae

### Personal information

First name / Surname **Péter ELEK**  
Date of birth 5<sup>th</sup> May 1978  
Nationality Hungarian  
E-mail peter.elek 'at' tatk 'dot' elte 'dot' hu  
Homepage elekp.web.elte.hu

### Education and training

2002 – 2010 **PhD in Applied Mathematics (Statistics)**  
**Department of Probability and Statistics, Eötvös Loránd University (ELTE), Hungary**

- Supervisor: András Zempléni

1996 – 2002 **MSc in Mathematics (with specialisation in Statistics)**  
**Eötvös Loránd University (ELTE), Hungary**

1997 – 2003 **MA in Economics (with specialisation in Finance)**  
**Budapest University of Economics and Public Administration (now Corvinus University)**

1999 – 2000 **Erasmus scholarship**  
**University of Sheffield, UK**

### Work experience

April 2011 – **Assistant Professor**  
**Department of Economics, Eötvös Loránd University (ELTE), Hungary**  
1/a Pázmány Péter sétány, Budapest, H-1117, Hungary

- research: microeconometrics, empirical labour and health economics
- teaching: econometrics, microeconometrics, time series analysis;

January 2011 – Senior econometric / statistical expert in various projects (see below for details)

April 2011 – December 2014 Consultant (part-time), Ecostat Government Centre for Impact Assessment, Hungary

September 2013 – October 2014 External Lecturer (part-time), Central European University (CEU), Hungary

October 2010 – September 2012 Researcher (part-time), Institute of Economics, Hungarian Academy of Sciences

February 2010 – December 2010 **Senior Economist**  
**Office of the Fiscal Council, Hungary**

- Head of tax forecasting team

May 2009 – February 2010

**Head of Division**

**Economic Research Division, Ministry of Finance, Hungary**

- coordinating empirical research of the tax system and the labour market

September 2005 – May 2009

**Analyst**

**Economic Research Division, Ministry of Finance, Hungary**

- empirical analysis of the tax system and of the labour market; macroeconomic modelling;
- participation in a working group of the EU Economic Policy Committee

**Research experience**

Research interests

microeconometrics, time series analysis, empirical public and health economics

Publications

journal articles and book chapters in English and Hungarian; see list of publications

Research and consulting activities

2015

Quantitative health economic analyses  
(Syreon Research Institute)

2011 – 2014

Behavioural microsimulation modelling and methodological guidance in impact assessment  
(SROP 1.1.10. project, Ecostat Government Centre for Impact Assessment)

2012 – 2013

Ex post quantitative evaluation of public health developments  
(Budapest Institute for Policy Analysis)

2010 – 2012

“Employment and wages in the public sector: microeconomic analyses”  
(Hungarian Scientific Research Fund project, Institute of Economics of Hungarian Academy of Sciences, lead researcher: Álmos Telegdy)

2011

Estimation of price elasticities of telecommunication demand based on micro-level data  
(Magyar Telekom)

2011

Ex post quantitative evaluation of health care measures between 2006 and 2008 in Hungary  
(GYEMSZI National Institute for Quality- and Organizational Development in Healthcare and Medicines)

2009

“Analysis of the effects of the black and grey economy on wage statistics”  
(National Employment Fund [OFA] project, Institute of Economics of Hungarian Academy of Sciences, lead researcher: János Köllő)

**Teaching experience**

2009 –

Introductory Econometrics (BA in Economics, ELTE)

2010 –

Time Series Analysis seminar (MSc in Actuarial and Financial Mathematics, ELTE)

2012 –

Cross Section and Panel Data Econometrics (MA in Economics, ELTE)

2012 –

Time Series Econometrics (MA in Economics, ELTE)

2013 – 2014

Mathematical Statistics (in English) (MA in Economics, Central European University [CEU])

2012 – 2013

Statistical methods of impact assessment (Institute for Education Research and Development; Ecostat Government Centre for Impact Assessment)

2004 – 2008

Financial Econometrics (part of the course, Corvinus University)

**Grants**

2014 – 2017

**János Bolyai Research Scholarship of Hungarian Academy of Sciences**

## **Professional service**

Professional organisation	Secretary of the Hungarian Society of Economists (2015-)
Research evaluation	Opponent for Ph.D. theses at Corvinus University and University of Szeged
Referee service	Journal of Statistical Planning and Inference, Acta Oeconomica, Hungarian Statistical Review, Statisztikai Szemle
Book translation	O. Blanchard: „Economics of Post-Communist Transition” (to Hungarian)

## **Personal skills**

Mother tongue	Hungarian
Other languages	English (proficient); German (intermediate)
Computer skills and competences	Stata, R, Matlab, Eviews, SPSS, MS Office

## List of publications

### Journal articles in English

- Elek, P., Váradi, B., Varga, M. (2015): Effects of geographical accessibility on the use of outpatient care services: quasi-experimental evidence from panel count data. *Health Economics* 24, 1131-1146.
- Elek, P - Köllő, J - Reizer, B - Szabó, P. A (2012): Detecting wage under-reporting using a double hurdle model. *Research in Labor Economics* Volume 34, 135-166., Emerald.
- Elek, P - Márkus, L (2010): Tail behaviour of  $\beta$ -TARCH processes. *Statistics and Probability Letters* 80, 1758-1763.
- Elek, P - Zempléni, A (2009): Modelling extremes of time-dependent data by Markov-switching structures. *Journal of Statistical Planning and Inference* 139, 1953-1967.
- Bíró, A - Elek, P - Vincze, J (2008): Model-based sensitivity analysis of the Hungarian economy to macroeconomic shocks and uncertainties. *Acta Oeconomica* 58, 367-401.
- Arató, M. - Bozsó, D - Elek, P- Zempléni, A (2008): Forecasting and simulating mortality tables. *Mathematical and Computer Modelling* 49, 805-813.
- Elek, P. - Zempléni, A (2008): Tail behaviour and extremes of two-state Markov-switching autoregressive models. *Computers and Mathematics with Applications* 55, 2839-2855.
- Elek, P - Márkus, L (2008): A light-tailed conditionally heteroscedastic model with applications to the analysis of river flows. *Journal of Time Series Analysis* 29, 14-36.
- Vasas, K - Elek, P - Márkus, L (2005): A two-state autoregressive regime switching model with applications to river flow analysis. *Journal of Statistical Planning and Inference* 137, 3113-3126.
- Elek, P - Márkus, L (2004): A long range dependent model with nonlinear innovations for simulating daily river flows. *Natural Hazards and Earth Systems Sciences* 4, 277-283.

### Book chapters

- Elek, P - Szabó, P. A (2014): Labour outflow from the public sector in Hungary. In: *The Hungarian Labour Market, Review and Analysis 2014* (ed. Fazekas K., Neumann L.), p. 91-101. *Centre for Economic and Regional Studies, Hungarian Academy of Sciences*.
- Benedek D - Elek P - Köllő J (2013): Tax avoidance, tax evasion, black and grey employment. In: *The Hungarian Labour Market, Review and Analysis 2013* (ed. Fazekas K., Benczúr P., Telegdy Á.), p. 161-184. *Institute of Economics, Hungarian Academy of Sciences*.
- Elek P - Scharle Á (2011): Crisis measures in the labour market. In: *The Hungarian Labour Market, Review and Analysis 2011* (ed. Fazekas K - Molnár Gy.), p. 69-71. *Institute of Economics, Hungarian Academy of Sciences*.
- Elek, P - Scharle, Á - Szabó, B - Szabó, P. A (2009): Measuring undeclared employment in Hungary. In: *Hidden Economy – Undeclared Employment and Non-Reported Income* (ed.: Semjén A. and Tóth I. J.). KTI Könyvek 11., p. 84-102., *Institute of Economics, Hungarian Academy of Sciences* (in Hungarian).

### Journal articles in Hungarian

- Elek, P., Kiss, N., Váradi, B. (2015): A kistérségi járóbeteg-szakellátási kapacitások fejlesztésének hatásai. (Effects of development of outpatient care services in Hungarian micro-regions.) *Egészségügyi Gazdasági Szemle* 53(1), 28-38.
- Elek, P. - Lőrincz, L. (2015): Az effektív társasági adókulcs rugalmassága Magyarországon a 2009-2011 közötti adókulcs csökkentés alapján. (The elasticity of the effective corporate tax rate in Hungary: evidence from the tax cut between 2009 and 2011.) *Közgazdasági Szemle*, January, 27-47.
- Elek, P - Szabó, P. A (2013): A közférából történő munkaerő-kiáramlás elemzése Magyarországon. (Labour outflow from the public sector in Hungary). *Közgazdasági Szemle*, May, 601-628.
- Mihalicza, P - Elek, P et al. (2012): Az egészségügyi reformok hatása az ellátás eredményességére, megfelelőségére, időszerűségére és a hozzáférésre. (Effects of public health reforms on the effectiveness, appropriateness, timeliness and accessibility of health care.) *Egészségügyi Gazdasági Szemle* 50(3), 13-20.
- Elek, P - Kiss Á (2010): Az ingatlanadó a magyar adórendszerben. Elméleti megfontolások és mikroszimulációs elemzés. (The property tax in the Hungarian taxation system. Theoretical considerations and microsimulation analysis.) *Közgazdasági Szemle*, May, 389–411.

Elek, P - Scharle, Á (2008): Optimális adózás elméletek és az empirikus mérés lehetőségei. (Theories of optimal taxation and alternatives for empirical measurement.) *Pénzügyi Szemle* 2008/3, 442-450.

Bíró, A - Elek, P - Vincze, J (2007): Szimulációk és érzékenységvizsgálatok a magyar gazdaság egy közép méretű makromodelljével. (Simulations and sensitivity analyses with a medium-sized macro model of the Hungarian economy.) *Közgazdasági Szemle*, September, 774-799.

Bíró, A - Elek, P - Vincze, J (2007): A magyar gazdaság külső sokkokra való érzékenysége és korrekciós mechanizmusok. (The sensitivity of the Hungarian economy to outside shocks and correction mechanisms.) *Külgazdaság* 2007/5-6, 4-20.

### *Some working papers and research reports*

Elek, P - Váradi, B - Varga, M (2013): Egészségügyi tárgyú NSRF-fejlesztések kvantitatív értékelése. (Quantitative evaluation of health care development projects in Hungary.) *Evaluation report, Budapest Institute of Policy Analysis*.

Elek, P. (2011): Egészségpolitikai intézkedések hatása egészségügyi indikátorokra Magyarországon. Módszertani útmutató egyéni szintű adatokon alapuló becslésekhez. (Evaluating the impact of healthcare policies in Hungary using individual-level data. A practical guide to estimation methods.) *Research report, Budapest Institute of Policy Analysis*.

Elek, P., Szabó, P. A. (2010): A szürkebérezés torzító hatása. (The biasing effect of wage underreporting.) In: Torzítanak-e a diplomások bérelőnyére vonatkozó adatok? (szerk. Köllő J.) *Research report, OFA*.

Mihalicza, P - Elek, P et al. (2011): Analysis of efficiency indicators in psychiatry and addictology. In: Analysis of the monitoring indicators of the health care measures between 2006-2008. Research Report in the framework of WHO-BCA 2008-2009 cooperation, *GYEMSZI National Institute for Quality- and Organizational Development in Healthcare and Medicines*.

Elek, P - Scharle, Á - Szabó, B - Szabó P. A (2009): A bérekhez kapcsolódó adóeltitkolás Magyarországon. (Wage-related tax evasion in Hungary.) *Közpénzügyi füzetek* No. 23, April 2009.

Bakos, P - Bíró, A - Elek, P - Scharle, Á (2008): Efficiency of the Hungarian taxation system. *Working Papers in Public Finance* No. 21, April 2008.

Bíró A - Elek, P - Vincze, J (2007): The PM-KTI macroeconomic model: relationships and simulations. *Working Papers in Public Finance* No. 19, May 2007.