

Activities of the Departments of Statistics at the University of Economics in 2013

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This report was prepared in cooperation with members of the three statistical departments of the Faculty of Informatics and Statistics (FIS). It is based on similar fact sheets published in *Statistika* more or less regularly in the years 1985–2010. It could not, of course, exhaust all major activities of these departments; therefore we refer to the continuously updated information which will be available on the websites of individual departments.²

1. Department of Statistics and Probability (KSTP), Department of Economic Statistics (KEST) and Department of Demography (KDEM) were established at the beginning of the academic year 1990–1991 from the former Department of Statistics, founded already in 1952. Within the reorganisation of the University of Economics, a new Faculty of Informatics and Statistics was established on 1 August 1991 with the three statistical departments incorporated.

The position of Head of the Department of Statistics and Probability holds prof. Richard Hindls, his deputies are: prof. Hana Řezanková, doc. Dagmar Blatná and RNDr. Ivana Malá. Doc. Markéta Arltová is Secretary of the Department. The Department employs (at the beginning of the summer semester 2013/14) a total of 19 internal teachers, of which 3 professors, 5 associate professors, 8 assistant professors and three assistants. 3 teachers work part-time and the other two are occupied with their academic functions. The average age of employees is 46.8 years (in the average values weighted by the size of the load). In the teaching participate 12 PhD students and 9 external staff members (including external PhD students).

Head of the Department of Economic Statistics is doc. Jakub Fischer, the function of Secretary performs Ing. Kristýna Vltavská. The team consists of 6 internal staff members (one professor, one associate professor, three assistant professors and one researcher), three of whom hold academic positions and three more are working only part-time. The average age is 40.7 years. In the teaching also 2 PhD students and 2 external teachers take part.

Head of the Department of Demography is doc. Jitka Langhamrová, Secretary is RNDr. Tomáš Fiala. The total of demographers working in the department is 6 (one professor, two associate professors and three assistant professors), 4 of which only part-time. The average age is 55.6 years. Involved in the teaching are also 8 PhD students and one external teacher. Each of the three departments provides help to the others as needed.

Results of habilitation and professional appointment at the University management in the field of statistics include in the past year only one item – based on the habilitation paper *Analysis of the Development and Modelling of Wage and Income Distribution Using Lognormal Curves*,

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² <<http://kstp.vse.cz>>, <<http://kest.vse.cz>>, <<http://kdem.vse.cz>>.

Application of the Method of L-Moments was Ing. Diana Bílková with effect from 1 November 2013 appointed Associate Professor.

2. Last year, statisticians also held at the University a number of important academic functions. Prof. Ing. Richard Hindls, CSc., dr. h. c., was already the eighth year Rector of the University of Economics (till 31 January 2014). The function of Vice-Rector for Science and Research held prof. Ing. Stanislava Hronová, CSc., dr. h. c. Vice-Rector for Strategy was doc. Ing. Jakub Fischer, PhD. The Bursar is already since 2007 Ing. Libor Svoboda, in the 1980's and 1990's member of the Department of Statistics.

Dean of the Faculty of Informatics and Statistics is doc. RNDr. Luboš Marek, CSc. On 4 December 2013 he was unanimously elected by the Academic Senate for a further period ending 28 February 2018. Vice-Dean for Pedagogical Activities is prof. Ing. Josef Arlt, CSc., Vice-Dean for International Relationships and Development is Ing. Petr Mazouch, PhD.

Statistics is in the Academic Senate of the University of Economics represented by prof. Ing. Hana Řezanková, CSc., who is also in the chair of the Academic Senate of FIS, other faculty members of the Senate are doc. Ing. Dagmar Blatná, CSc., doc. Ing. Jitka Langhamrová, CSc., and Ing. Jaroslav Sixta, PhD.

The Scientific Board of the University consisted in the last year of prof. Hindls, prof. Hronová, doc. Fischer and doc. Marek. The Scientific Board of the Faculty consisted of prof. Arlt, prof. Hindls, prof. Hronová, prof. Řezanková, prof. Seger, doc. Fischer, doc. Langhamrová, doc. Marek and Ing. Mazouch.

3. On 19 February 2014 celebrated her 60th birthday prof. Ing. Stanislava Hronová, CSc., dr. h. c., developing since 1978 at the University primarily economic statistics and national accounts. She is author or co-author of many dozens of important monographs, textbooks, scientific articles etc. with a considerable acclaim abroad, where she received not only a honorary doctorate, but also *Palmes Académiques*, a high state prize in science and education, granted by the French Prime Minister.

24 September will mark the 70th birthday of doc. Ing. Dagmar Blatná, CSc., who has been working at the University since 1991; the last two decades as Deputy Head of Department. In the field of statistical methodology she focuses on nonparametric and robust methods.

On 28 October will reach the same age Ing. Prokop Závodský, CSc., who publishes papers particularly in the field of history of statistics and economic university education.

Let us recall also anniversaries of personalities who have made contributions to the development of statistics at the University. On 31 May there will be 100 years since the birth of prof. Ing. Benedikt Korda, DrSc. (†2010), a leading representative of statistics in the 1950's (Head of Department in the years 1955–1959, briefly dean of the former Faculty of Statistics). In 1959, he founded at the University a department and study field dealing with econometrics and operations research.

It is needless to introduce prof. Ing. Lubomír Cyhelský, DrSc., who will be 85 on 12 October, to our statistical community. He formed the Department of Statistics at the University, where he has been working full 50 years, of which 28 years as its head. For his outstanding contributions to statistics he became last year the first ever laureate of the Prize of the President of the Czech Statistical Office and of the Rector of the University of Economics.

On 15 November, Faculty of Informatics and Statistics commemorate the 85th anniversary of the birth of its first Dean, prof. Ing. Jiří Likeš, DrSc., and on 25 November, unfortunately, the 20th anniversary of his death. The name of this internationally recognized scientist bears, since 2008, one of the largest auditoriums of the University.

4. In the academic year 2013/14 at FIS newly recruited students began studying bachelor programmes: Statistics and Econometrics (22 students), Statistical Methods in Economics (33 students) and Social-economic Demography (52 students). The total amount for Bachelor Study these subjects enrolled 269

students (53 + 86 + 130). The master study field of Statistical and Insurance Engineering enrolls 67 students, the field of Economic Demography 49. Last 3 students are completing the previous five-year Master's degree in Statistical and Insurance Engineering.

For students of other disciplines provide statistical departments teaching of 4 minor specialisations: Analysis of Socio-economic Data, Demographic and Social Analysis, Quantitative Analysis and Insurance Engineering.

In 2013, 28 Statisticians, 4 with honours, received an engineering degree at the University.

5. The number of students of the Doctoral Study in statistics is currently (at the beginning of the summer semester of the academic year 2013/14) 47 (12 of which have interrupted studies) – 19 full-time and 28 in combined form. Trainers from Department of Statistics lead 29 PhD students, trainers from Department of Economical Statistics 9 and Department of Demography also 9. In 2013, two PhD students defended their dissertations and were awarded PhD in the field of statistics.

6. In 2013 ended the 24th specialized statistical four-semester course for university graduates. It was attended by 11 students, mostly from the Czech Statistical Office. In September, the 25th run was launched, with 12 students taking part. Lecturers are mostly professors and associate professors of the statistical departments of the University of Economics.

7. Grant projects dealt with in the past year:

Agency, the solvers and team members from statistical departments, *project name*, the period.

Ministry of Education (research plan), prof. Hindls (along with prof. Hronová and doc. Fischer), *Methods of extracting knowledge from data and their use in economic decision-making*, 2007–2013.

GA CR (Project Excellence), prof. Arlt (along with doc. Arltová and doc. Marek), *DYME – Dynamic Models in Economics*, 2012–2018.

GA CR (postdoctoral grant), Mgr. Bašta, *Modelling financial and economic time series – Application and comparison of wavelet and traditional methods*, 2012–2014.

GA CR, Doc. Fischer (along with prof. Hindls, prof. Hronová, Ing. Sixta, Ing. Vltavská, Ing. Musil and Ing. Zeman), *Regionalisation of estimated GDP using expenditure approach*, 2013–2015.

GA CR, co-researcher Ing. Mazouch (along with Ing. Zimmermann) *Generational mortality tables Czech Republic: data, biometric features, trends*, 2012–2016.

GA CR (postdoctoral grant), RNDr. Pechholdová, *Analysis of co morbidity in the Czech Republic using multiple causes of death*, 2013–2015.

TA CR co-researcher doc. Fischer (along with Ing. Duspivová, Ing. Mazouch, Ing. Vltavská, Ing. Zelený), *Effect of the Institute of minimum wages on socio-economic development of the Czech Republic*, 2012–2013.

FRVŠ, Mgr. Pastorek, *Introduction to the theory of descriptive statistics using the programming language Visual Basic for Application – Innovation of the exercise in the field Statistics 1*, 2013.

IGS University of Economics, Ing. Löster, *Evaluating the results of cluster analysis in economic tasks*, 2013.

IGS University of Economics, Mgr. Pastorek, *Data driven Bayesian and self-organizing algorithms for in-depth data analysis*, 2013.

IGS University of Economics, Ing. Vltavská, *Use of DSGE models in the national accounts*, 2013–2014.

IGS University of Economics, Ing. Mazouch (along with Ing. Švarcová), *Quantification of the impact of educational policy of the last decade in the light of the results of the 2011 census*, 2013–2014.

IGS University of Economics, doc. Fischer (along with Ing. Helman, Ing. Hudrlíková, Ing. Mazouch, Ing. Petkovicová and Ing. Zeman) *Design and Verification of Indicators of Sustainable Development of the CR and its regions*, 2012–2013.

IGS University of Economics, Ing. Čabla, *Surveyed length of unemployment before and during the crisis*, 2012–2013.

IGS University of Economics, Ing. Dotlačilová, *Mortality and aging of the Czech population*, 2013–2014.

IGS University of Economics, members of the research team of FIS Ing. Závodský and Ing. Šimpach, *Economic, political and social circumstances of the establishment of the University of Economics in Prague*, 2012–2013.

8. Statisticians from the University worked in the past year in the program committees of international conferences:

Application of Mathematics and Statistics in Economy (AMSE), Gerlachov (Slovakia) – prof. Hindls and Prof. Hronová;

International Days of Statistics and Economics (MSED), Prague – prof. Řezanková, doc. Langhamrová, Ing. Löster;

Reproduction of Human Capital (RELIK), Prague – doc. Langhamrová, prof. Pavlík, doc. Průša, Ing. Löster;

Applied Informatics Econometrics Statistics Accounting (AIESA), Bratislava – doc. Marek;

In five other program committees of international conferences worked prof. Řezanková, in three others doc. Fischer and in one doc. Langhamrová.

9. In the past year, statisticians of the University published following book monographs and textbooks:

HEBÁK, P., JAROŠOVÁ, E., PECÁKOVÁ, I., PLAŠIL, M., ŘEZANKOVÁ, H., VILIKUS, O., VLACH, P. *Statistické myšlení a nástroje analýzy dat* (Statistical thinking and data analysis tools). Prague: Informatorium, 877 p.³

MALÁ, I. *Statistické úsudky* (Statistical judgments). Prague: Professional Publishing, 260 p.

MAREK, L., PECÁKOVÁ, I., VRABEC, M., LÖSTER, T., ČABLA, A. *Statistika v příkladech* (Statistics in examples). Prague: Professional Publishing, 403 p.

For students, also following University textbooks were brought out:

ŘEZANKOVÁ, H., LÖSTER, T. *Základy statistiky* (Fundamentals of statistics). Prague: Oeconomica, 96 p.

LANGHAMROVÁ, J., ŠIMPACH, O. *Základy demografie* (Fundamentals of demography). Prague: Oeconomica, 121 p.

Furthermore, members of the three statistical departments (including PhD students) published 76 peer-reviewed articles (21 in journals registered in the database Web of Science and Scopus), 92 articles in proceedings of international conferences (including 7 from conferences monitored CPCI) and 49 other publications.

10. Prof. Hindls, prof. Hronová, prof. Řezanková, prof. Pavlík, doc. Marek and doc. Průša are (often many years) members of scientific boards of a total of 15 leading Czech and Slovak universities, respectively their faculties.

Among other important functions of the University statisticians let us mention at least the following: Vice-Chairman of the Czech Statistical Council is prof. Hindls. Doc. Fischer is the Chairman of the Council of Universities, where doc. Langhamrová represents the Faculty, prof. Arlt is member of the Accreditation Commission of the Czech Republic, prof. Hronová is member of the Council for Research, Development and Innovation (advisory body of the Government of the Czech Republic) and member of the Council for Development Strategy and of the National Technical Library.

³ During the preparations of this so far largest publication in the history of statistics at the University, prof. Hebák and further authors belonged to the University staff.

Statisticians from the University are also members of the editorial boards of major scientific and professional journals. These are *Statistika: Statistics and Economy Journal* (prof. Hronová – Editor in chief, prof. Hindls, prof. Řezanková, doc. Fischer and doc. Marek), *Politická ekonomie* (prof. Hindls – Chairman of the Editorial Board, prof. Hronová and doc. Marek), *Prague Economic Papers* (prof. Hindls – Chairman of the Editorial Board, prof. Arlt – Chairman of the Executive Board and Ing. Sixta), *Acta Oeconomica Pragensia* (doc. Arltová – Editor, prof. Hronová, doc. Pecáková, doc. Průša and RNDr. Malá), *Demografie* (prof. Pavlík, doc. Arltová, doc. Langhamrová, RNDr. Fiala and Ing. Miskolczi), *Fórum sociální politiky* (doc. Průša – Chairman of the Editorial Board, doc. Langhamrová), *Forum Statisticum Slovacum* (prof. Řezanková), *Journal of Economic and Social Research* (Slovakia – doc. Fischer), *Silesian Statistical Review* (Poland – prof. Hronová) and 5 other titles.

11. Finally, let us at least selectively mention activities of University statisticians in Czech and international scientific societies. Prof. Arlt and doc. Fischer are members of the International Statistical Institute (ISI), others work in its sections – especially in the International Association for Statistical Education (IASE – prof. Hindls, prof. Hronová, doc. Fischer) and the International Association for Statistical Computing (IASC – prof. Řezanková and doc. Marek).

Prof. Hronová is member of the Steering Committee of the Association de Comptabilité Nationale in Paris, Ing. Sixta for the International Input-Output Association (IIOA) in Vienna, prof. Pavlík in the European Association for Population Studies (EAPS) in The Hague, doc. Langhamrová, RNDr. Pechholdová, RNDr. Fiala, Ing. Miskolczi, Ing. Dotlačilová and Ing. Šimpach in the International Union for the Scientific Study of Population (IUSSP) in Paris etc.

Most members of the statistical departments are active in the Czech Statistical Society (prof. Řezanková – President, Ing. Löster – Bursar, doc. Blatná – Committee Members), many also in the Czech Demographic Society (doc. Langhamrová – Vice-Chairman). A lot of statisticians from the University operate also in other scientific societies: in the Czech Economic Society (doc. Fischer member of the Board and Executive Committee), in the Czech Econometric Society, in the Society for the History of Science and Technology, in the Association of Czech Mathematicians and Physicists, in the Czech Geographical Society, in the Czech Political Science Society, the Slovak Statistical and Demographic Society and in other societies.