

CERGE-EI

**Charles University Prague
Center for Economic Research and Graduate Education
and
the Economic Institute of the Academy of Sciences of the Czech Republic**



**Course Book for the Academic Year 2013-2014
Fall Semester**

MA/PhD Study Affairs Office

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I. THE STRUCTURE OF PH.D. STUDIES IN ECONOMICS AT CERGE

The Center for Economic Research and Graduate Education (CERGE) is a research and educational institute of Charles University. In close cooperation with the Economics Institute (EI) of the Academy of Sciences of the Czech Republic, CERGE offers a Ph.D. program in Economics, accredited by the Ministry of Education, Youth and Sport of the Czech Republic, to students from the Czech Republic and other Central and Eastern European (CEE) and former Soviet Union countries. Economic research is an integral part of CERGE activities.

A. Contents and Organization of Graduate Study at CERGE

The basic mission of CERGE is to perform graduate studies in Economics and to train future university faculty and researchers and public administration representatives. The main idea of establishing the doctoral program curriculum is to transfer the modern Western system of Ph.D. study in Economics, as it is applied in the United States and some Western European countries, to the local environment and incorporate it into the structure of Czech university education within Charles University. The program offers economic education at a level comparable with world standards directly at Charles University, without the necessity of more expensive study abroad. Besides this fact, the best students may be offered the opportunity to visit (for up to one academic year) an appropriate university in the United States or Western Europe. This experience may enlarge their scope of knowledge significantly.

During the first two years of study courses are taught by the local and visiting faculty. Studies are conducted entirely in English. The duration of the doctoral study is four years. The first two years offer primarily systematic knowledge of theory; for the latter two years the students work on their dissertation. The transfer from study to independent research work is gradual and begins during the second year of study.

Further details on the program can be found in the handbook for graduate students.

B. Core Study – The First Two Years

In the first year of study the students follow a common curriculum designed to provide a strong foundation in Microeconomic Theory, Macroeconomic Theory, Statistics and Econometrics, and Academic Writing. This curriculum is standard for the PhD study in Economics. The study is divided into three semesters: the fall semester (FS), the spring semester (SS), and the summer semester (SuS). In view of the fact that many newly recruited students do not have an extensive background in modern Economics equivalent to "western" standards, and also that their knowledge of Mathematics and English are frequently at different levels, a preparatory semester is organized for potential students. It allows CERGE to provide the students with some basic tools as an introduction to the program and to achieve a standard level of competence.

The second year of formal study at CERGE provides students with the opportunity to investigate more specific fields of interest. Several courses (usually five) are offered each of the two semesters, and the second year students must enroll for a minimum of three, plus a course in English. The students participate in a seminar series and are now expected to begin their own research.

Having completed both the first and second years, students must pass a General (comprehensive) examination. After the first year, the students must pass Microeconomic Theory, Macroeconomic Theory, and Econometrics; after the second year they must show proficiency in at least two specialized fields by passing General (field) exams in their chosen areas of interest.

During the first two years of study the students do not have a special supervisor; rather, they rely on the advice of the Deputy Director of Graduate Studies, who is also one of the CERGE faculty members. The program and organization of graduate study is regulated by a CERGE's Graduate Council (GC).

C. Specialized Study – Third and Fourth Years

During the spring semester of the second year and the fall semester of the third year, the students have to choose the topic of their dissertations. A tentative chair as a supervisor is then assigned. By the middle of the third year (at the latest), they formulate a thesis proposal and public defense is required together with state doctoral examination. For students who passed all General examinations with distinction, the main importance will be placed on the defense of the thesis proposal. Those with less than distinctive examination results can also expect additional detailed questions from respective fields. After having successfully defended the proposal, a three-member dissertation committee is appointed which guides and supervises the study and research work.

At least one member of the dissertation committee has to be an employee of CERGE or EI, and at least one of the members has to be a professor from some other university. Under the guidance of this committee the student works on his or her dissertation. In the fourth year the students present their third year work at the Dissertation workshop and prepare for the defense of the dissertation. The study is concluded by the public defense of the doctoral dissertation.

D. Study Program

Here we present the courses designed for the preparatory semester and the first and second year of study. (One lecture/exercise unit is 45 minutes long.)

Preparatory semester

Subject	(Lecture hours / exercise hours)
Macroeconomics 0	4/2, Exam
Microeconomics 0	4/2, Exam
Mathematics	4/2, Exam

Notes: Upon completion of the preparatory semester, the final selection of students is made to enter the doctoral program in the fall, based on final exam results.

First year

Subject	Fall	Spring	Summer
Microeconomics I, II, III	4/2, Exam	4/2, Exam	4/2, Exam
Macroeconomics I, II, III	4/2, Exam	4/2, Exam	4/2, Exam
Statistics / Econometrics I, II	4/2, Exam	4/2, Exam	4/2, Exam
Academic Writing I	---	4/0 Credit	---

Notes: After completing the first year, each student must pass the General examination in the fields of Microeconomics, Macroeconomics and Econometrics.

Second Year

Subject	Fall	Spring	Summer
Econometrics III, IV	4/2, Exam	4/2, Exam	---
Industrial Organization	4/2, Exam	---	---
Advanced Game Theory	---	4/2, Exam	---
Financial Markets I, II	4/2, Exam	4/2, Exam	---
Empirical Methods	4/2, Exam	---	---
Experimental Economics	---	4/2, Exam	---
International Trade	4/2, Exam	---	---
Labor Economics	---	4/2, Exam	---
Macro Topics I, II	4/2, Exam	4/2, Exam	---
Academic Writing II	4/0, Credit	---	---
Research Method Seminar	Mandatory	Mandatory	Mandatory
Combined Skills I	---	4/0, Credit	---
Research Seminars	0/2, Credit	0/2, Credit	---
Directed Research	---	---	0/2, Credit
Combined Skills II – M.A.	---	---	0/2, Credit

Notes:

* Second-year students choose at least three (exam-ended) courses per semester. The courses cannot be from the same field. Courses offered may differ slightly from year to year, depending on the faculty in residence.

* The credits for English courses, the Research Seminars and Directed Research are mandatory.

* The credit for Research Method Seminar will be awarded based on individual consultations with the instructors and based on individual written work.

* After completing the second year each student must pass General exam in two fields. Upon agreement of CERGE, a student may complete part of his/her study at another university - this is valid not only for individual courses, but also for a whole study year.

* Topic courses are one semester courses not forming two semester sequence and do not cover comprehensively all material needed for Field General Exam.

* Combined Skills II – M.A. is for M.A. students only, a paper or report appropriate for the MA-degree writing requirement.

Third year

Subject	Fall	Spring	Summer
Combined Skills II – Ph.D.	Credit	---	---

Notes: Normally, students must pass the 2-year MA program first as a pre-requisite for registering in CSII-Ph.D.

II. SYLLABI OF THE FALL SEMESTER COURSES

A. First year courses

MICROECONOMICS I

Lecturer:

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Office hours:

TBA

Course objectives

As a first course in the core microeconomics sequence, the objective is to provide a rigorous treatment of the foundations of preferences, consumer theory, decision-making under uncertainty, producer theory and market equilibrium.

Requirements and grading

There will be no graded problem sets. Instead, you will have practice problems posted on the course web page weekly or biweekly. The week after each set of practice problems, there will be a short in-class quiz in which you will be asked to answer one of the problems (or part of a problem) posted online the week before. There will be a total of 8 quizzes, each counting for 2.5% of your final grade for the course. You are strongly encouraged to solve the problem sets and do so in groups. Although quizzes do not receive a high weight in the overall grade, practice problems are crucial for grasping the material and preparing for the exams.

In addition to the quizzes, there will be a midterm (in the 6th or the 7th week of the semester) and a final exam. The final exam is comprehensive, i.e., it will cover all of the material covered in the course.

The weights are: quizzes (20%), midterm (30%), final (50%).

The course will be accompanied by exercise sessions in which the TAs will solve a selected number of the practice problems.

Readings

Principal textbooks:

Mas-Collel, Andrew, Michael Whinston, and Jerry Green (MWG): *Microeconomic Theory*, Oxford University Press, 1995.

Jehle, Geoffrey and Philip Reny (JR), *Advanced Microeconomic Theory*, 3rd edition, Addison-Wesley, 2011 (2nd edition is almost the same).

Varian, Hal, *Microeconomic Analysis*, W. W. Norton and Company, 3rd edition, 1992.

Other useful references and readings:

Chiang, Alpha, *Fundamental Methods of Mathematical Economics*, McGraw Hill, 1988.

Dixit, Avinash, *Optimization in Economic Theory*, 2nd edition, Oxford University Press, 1990.

Kreps, David, *A Course in Microeconomic Theory*, Princeton University Press, 1990.

Varian, Hal, *Intermediate Microeconomics: A Modern Approach*, 6th edition. Addison Wesley, 2003.

Becker, Gary, *The Economic Approach to Human Behavior*, in Becker, G: *The Economic Approach to Human Behavior*, U of C Press 1976, p. 3-14 (why economics is useful in studying seemingly non-economic phenomena).

Friedman, Milton, *The methodology of positive economics*, in Friedman, M.: *Essays in positive economics*, U of C Press 1966 (The classical statement of positivist methodology in economics. It's a normative article, though, on how economics should be done).

Course outline

(This is a tentative outline. An updated outline will be available on the course web page)

1. Introduction into microeconomic theory, plan of the micro sequence
2. Consumer theory
 - ✓ Preferences and choice (MWG 1A-D)
 - ✓ Commodities, consumption set, budget set/constraint, utility function, indifference curves (MWG 2A-D, 3A-C)
 - ✓ Utility maximization, Marshallian demand, indirect utility function (MWG 3D)
 - ✓ Expenditure minimization, Hicksian demand, expenditure function (MWG 3E)
 - ✓ Duality and its implications, integrability (MWG 3G-H)
 - ✓ Income and substitution effects, welfare analysis, compensating and equivalent variation (MWG 3I)
 - ✓ Revealed preference theory (MWG 2F, 3J)
3. Choice under uncertainty
 - ✓ Simple and compound lotteries, preferences over lotteries, independence axiom, expected utility theorem (MWG 6A-B)
 - ✓ Allais paradox, risk aversion, stochastic orders (MWG 6B-D)
 - ✓ State-dependent utility, extended expected utility theorem, subjective probability theory (MWG 6E-F)
4. Producer theory
 - ✓ Production sets, technology, returns to scale (MWG 5A-B, Varian 1)
 - ✓ Profit maximization, input demand, supply, profit function and their properties (MWG 5C, Varian 2.1-2.5, 3)
 - ✓ Cost minimization, conditional input demand, properties of the cost function (MWG 5C, Varian 4, 5.4-5.6)
 - ✓ The geometry of costs (MWG 5D, Varian 5.1-5.3)
 - ✓ Duality and its implications (JR 3.4, Varian 6)

5. Markets, equilibrium and welfare
- ✓ Aggregate demand, inverse demand and consumer surplus (Varian 9.4, 9.5, 10.6)
 - ✓ Aggregate supply (MWG 5.E, Varian 13.3)
 - ✓ Competitive markets: short run equilibrium, free entry, long-run equilibrium, comparative statics, welfare properties (MWG 10A-G, Varian 13.4-13.12)
 - ✓ Market failure: Externalities and public goods (MWG 11A-D)
 - ✓ Market power: Monopoly and oligopoly (MWG 12A-C)

MACROECONOMICS I / Part I

Lecturer:

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Teaching assistants:

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Office hours:

TBA

Course information

The first part of the first course in the macroeconomic theory sequence will concentrate on developing the tools and concepts necessary to understand the modern macroeconomic theory — discrete time dynamic programming and continuous time optimal control. The study of specific models will take a back seat to mastering the techniques. We will make use of MATLAB to utilize basic numerical methods of solving the problems.

Grading

About 30% of the total score for this part will be based on homeworks and class participation, with the rest determined at the midterm exam.

Reading List and Course Outline

Major Textbooks:

- B D. Bertsekas: *Dynamic Programming and Optimal Control*, Athena Scientific, 2005.
- LS Ljungquist, Lars, and Thomas J. Sargent: *Recursive Macroeconomic Theory*, 2nd ed., Cambridge: MIT Press, 2004.
- M George McCandles: *The ABCs of RBCs: An Introduction to Dynamic Macroeconomic Models*. Cambridge: Harvard University Press, 2008.

Additional Textbooks:

- AC Ada, Jerome and Russell Cooper. *Dynamic Economics*. MIT Press, 2003.
- BF Blanchard, O. and S. Fisher: *Lectures on Macroeconomics*. MIT Press, 1989.

- SL Stokey, Nancy L., Robert E. Lucas, Jr., and Edward C. Prescott: *Recursive Methods in Economic Dynamics*. Cambridge: Harvard University Press, 1989.
0. Overview of the Macroeconomics (for bedtime reading).
- Blanchard, O., "What Do We Know About Macroeconomics that Fisher and Wicksell Did Not?" QJE, November 2000, 115:4, 1375-1410.
 - Blanchard, O., "The State of Macro", NBER WP 14259.
 - Woodford, M., "Revolution and Evolution in Twentieth-Century Macroeconomics," Available at <http://www.columbia.edu/~mw2230/macro20C.pdf>
- I. Discrete Time Dynamic Programming: Finite and Infinite Horizon
- B Volume 1, Chapter 1.
 - SL Chapters 1-4, LS Chapters 3-4.
- II. Numerical Solution Methods
- IIa. Value Function Iteration
- LS Chapter 4.
- Applications:
Consumption and Savings – discrete time.
- M Chapter 3.
- One-Sector Model of Economic Growth
- SL Chapter 5.1, 5.4, 5.7, LS Chapter 11.
- IIb. Policy Function Iteration
- LS Chapter 4.
- Application:
Search Model.
- LS Chapter 6.3.
- IIc. Log-Linearization, Method of Undetermined Coefficients, Blanchard-Kahn
- Application:
RBC Model
- M Chapters 1, 6.
- IId. Linear-Quadratic Problem
- LS Chapter 5, M Chapter 7
- Application:
Monetary Policy
- III. Markov Chains
- LS Chapter 8, AC Chapter 3.
- IV. Continuous-Time Optimal Control
- Application:
Consumption and Savings – Continuous Time
- BF Chapter 2.

MACROECONOMICS I / Part II

Lecturer:

Michal Kejak

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Teaching assistants:

TBA

Office hours:

TBA

Course information

Recursive methods constitute a powerful approach to dynamic economics due to their described focus on a tradeoff between the current period's utility and a continuation value for utility in all future periods.

This part of the course will continue to revolve around additional main ideas: the competitive equilibrium model of a dynamic stochastic economy, complete markets and incomplete markets. This model is a foundation for asset pricing theory, growth theory, real business cycle theory, and normative public finance. In order to introduce fiat money in this model the model has to be modified. The shopping time model is then used to explain ten doctrines of monetary economics.

Course outline

- Equilibrium with Complete Markets -- [Ch. 6 in LS1, Ch.8 in LS2]
- Ricardian equivalence -- [Ch. 9 in LS1, Ch.10 in LS2]
- Fiscal Policies in Growth Model - [Ch. 11 in LS2]
- Recursive Competitive Equilibria - [Ch.12 in LS2]
- Asset Pricing - [Ch. 10 in LS1 and Ch.13 in LS2]
- Fiscal-Monetary Theories of Inflation - [Ch.17 in LS1, Ch. 24 in LS2]
- Self-Insurance – [Ch. 16 in LS2]
- Incomplete Markets Models – [Ch. 17 in LS2]
- Some heterogenous agents models – articles and texts will be provided later

Requirements and grading

There will be two exams in the course, a two hour midterm exam in the first half of the course and a two hour final exam in the second half of the course. There will also be weekly problem sets. Problem sets and class participation will count for 15% of the course grade, and the midterm exam will count for 35 % of the course grade. The total for the second half is 50% of the course grade.

Readings

We will use the books below together with journal articles which will be specified in a more detailed syllabus.

(LS1) Ljungquist, Lars and Thomas J. Sargent: Recursive Macroeconomic Theory. First Edition. MIT Press. 2000

(LS2) Ljungquist, Lars and Thomas J. Sargent: Recursive Macroeconomic Theory. Second Edition. MIT Press. 2004

STATISTICS

Lecturers:

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(patrickgaule@gmail.com, office 318, phone 191)

Teaching assistants:

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Office hours:

TBA

Course information

The goal of the course is to give students a deeper understanding of the statistical theory and practice and to build up a background for econometric analysis. The emphasis of this course is on the principles of probability theory, stochastic processes, and statistical inference.

Course outline

- ✓ probability:
- ✓ sample space, probability, probability space, conditional probability and independence, law of total probability, Bayes' theorem;
- ✓ random variables:
- ✓ probability distributions, density functions, characteristics of random variables, moment generating functions, Chebyshev's inequality, Jensen's inequality, parametric families of discrete and continuous distributions;
- ✓ systems of random variables:
- ✓ joint distributions, independence, marginal and conditional distributions, expectations, covariance, correlation, Cauchy-Schwarz inequality, bivariate normal distribution;
- ✓ functions of random variables, the distribution of transformations of random variables;
- ✓ central limit theorems, modes of convergence of random variables; elements of stochastic processes and Markov chains;
- ✓ statistical inference:

- ✓ sampling asymptotic theory, sampling, sampling distributions, sample moments, laws of large numbers, chi-square distribution, F-distribution, t-distribution, point and interval estimators, method of moments, likelihood functions, properties of estimators, sufficiency principle, minimum variance unbiased estimation, Cramer-Rao theorem, hypothesis testing, methods of finding tests, methods of evaluating tests, confidence regions, types of error;
- ✓ introduction to linear regression models.

Requirements and grading

Problem Sets and Written Assignments (20%), Midterm Exam (30%), Final Exam (50%).

Readings

Hogg, R.V., McKean J. and A. T. Craig (2012). *Introduction to Mathematical Statistics*, Prentice Hall, 7th edition.

Casella, G., and R.L.Berger (2002). *Statistical Inference*, Duxbury Press, Belmont, CA, 2nd edition.

B. SECOND YEAR STUDENTS

ECONOMETRICS III

Lecturer:

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Michal Franta

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Michal Pakoš

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Teaching assistant:

TBA

Office hours:

TBA

Course information

This course is a part of the sequence in econometrics. The course will focus mainly on the models that use time series and will review several topics from current state of theory and empirical work. The course is an applied econometrics course in nature and therefore it will stress application of the topics into applied research. The course will cover topics listed in the course outline below.

Course outlineF. Brázdík:

- 1) **Extracting and measuring cyclical information**
 - ✓ Seasonal adjustment
 - ✓ Removing trends
 - ✓ Isolating cycles
 - ✓ Hodrick-Prescott filter (derivation)
- 2) **State space representation**
 - ✓ Introduction ARMA models
 - ✓ Kalman Filter (derivation)
 - ✓ Kalman Filter with missing values
 - ✓ Using Filters to isolate cycles
- 3) **Spectral representation**
 - ✓ Frequency domain
 - ✓ Spectrum
 - ✓ Filters
- 4) **Factor models**
 - ✓ Principal Components
 - ✓ Factor models
 - ✓ Dynamic factor models

Readings

Canova, F. (2007): "Methods for Applied Macroeconomic Research", Princeton University Press.

Enders, W. (2004): "Applied Econometrics Time Series", Wiley Series in Probability and Statistics.

David N. DeJong, Chetan Dave: "Structural Macroeconometrics:"

M. Franta:

- 5) **Application on stationary time series models: Inflation persistence (1 class)**
 - ✓ Brief introduction to stationary time series models (Enders, Ch.2)
 - ✓ Inflation persistence measures based on AR(p), ARFIMA(p,q) and a semi-structural model of inflation (Marques, 2004, Dossche and Everaert, 2005)
- 6) **Vector Autoregressions (3 classes)**
 - ✓ Introduction (Canova, 2007, Ch. 4, Enders, Ch. 5)
 - ✓ Bayesian VARs (Canova, 2007, Ch. 10, Koop and Korobilis, 2009)
 - ✓ Application 1: Monetary VARs (VARs: Sims, 1992, BVARs: Koop and Korobilis, 2009, FAVARs: Bernanke et al., 2005)
 - ✓ Application 2: Fiscal VARs (Blanchard and Perotti, 2002, Franta, 2012)
- 7) **Cointegration and Vector Error Correction Models (1 class)**
 - ✓ Introduction to cointegration and time series models (Enders Ch. 6)
 - ✓ Application: Demand for money (Calza et al., 2001)
- 8) **Econometric Methods for Mixed-Frequency Data (1 class)**
 - ✓ Introduction (Forni and Marcellino, 2013)
 - ✓ Application: GDP nowcasting/forecasting (Mariano and Murasawa, 2010)
- 9) **Non-linear time-series models, estimation, forecasting + 2 applications (2 classes)**
 - ✓ Introduction to non-linear time series models and their estimation (Enders Ch. 11)
 - ✓ Application 1: Changes in monetary policy transmission (TVP-VARs: Primiceri, 2005, MS-VARs: Fujiwara, 2006)
 - ✓ Application 2: Modeling non-linearities between credit and economic activity (Balke, 2000)

Readings

Balke, N.S. (2000). Credit and Economic Activity: Credit Regimes and Nonlinear Propagation of Shocks, *Review of Economics and Statistics*, 82(2), 344-349.

Bernanke, B., Boivin, J. and P. Elias (2005): "Measuring the Effects of Monetary Policy: A Factor-Augmented Autoregressive (FAVAR) Approach", *Quarterly Journal of Economics*, 120, 387-422.

Blanchard, O., and R. Perotti (2002): "An Empirical Characterization of the Dynamics Effects of Changes in Government Spending and Taxes on Output", *Quarterly Journal of Economics* 111(4), 1329-1368.

Calza, A., Gerdesmeier, D., and J. Levy (2001): "Euro Area Money Demand: Measuring the Opportunity Costs Appropriately", IMF Working Paper 01/179.

Canova, F. (2007): "Methods for Applied Macroeconomic Research", Princeton University Press.

Dossche, M. and G. Everaert (2005): "Measuring Inflation Persistence: A structural Time Series Approach", ECB WP 495.

Enders, W. (2004): "Applied Econometrics Time Series", Wiley Series in Probability and Statistics.

Forni, C. and M. Marcellino (2013): "A Survey of Econometric Methods for Mixed-Frequency Data", Norges Bank Working Paper 06/2013.

Franta, M. (2012): "Macroeconomic Effects of Fiscal Policy in the Czech Republic: Evidence Based on Various Identification Approaches in a VAR Framework", Czech National Bank Working Paper 13/2012.

Koop, G. and D. Korobilis (2010): "Bayesian Multivariate Time Series Methods for Empirical Macroeconomics", mimeo, University of Strathclyde.

Mariano, R.S. and Y. Murasawa (2010): "A Coincident Index, Common Factors, and Monthly Real GDP", *Oxford Bulletin of Economics and Statistics*, 72(1), 27-46.

Marques, C.R. (2004): "Inflation Persistence: Facts or Artefacts?", ECB WP No. 371.

Primiceri, G. (2005): "Time Varying Structural Vector Autoregressions and Monetary Policy", *Review of Economic Studies*, 72(3), 821-852.

Sims, C. (1992): "Interpreting the macroeconomic time series facts: The effects of monetary policy", *European Economic Review* 36, 975-1011.

M. Kejak:

Estimating DSGE Models by the use of DYNARE

- ✓ Basics of DYNARE
- ✓ Introduction to estimation of DSGE models by Bayesian methods
- ✓ Examples of the use of DYNARE for the estimation of DSGE models

Readings

Barillas, F., A. Bhandari, R. Colacito, S. Kitao, C. Matthes, T. J. Sargent, Y. Shin (2010): Practicing Dynare, mimeo.

DeJong, D. N., Dave, C. Structural Macroeconomics. Second edition. Princeton University Press. 2011 (Chap.10).

DYNARE – User's Guide.

Fernández-Villaverde, J. and J. Rubio-Ramírez (2004). .Comparing Dynamic Equilibrium Models to Data: a Bayesian Approach..*Journal of Econometrics*, 123, 153-187.

Fernández-Villaverde, J. and J. Rubio-Ramírez (2005). .Estimating Dynamic Equilibrium Economies: Linear versus Nonlinear Likelihood..*Journal of Applied Econometrics*, 20, 891-910.

Fernández-Villaverde, J. and J. Rubio-Ramírez (2007). .Estimating Macroeconomic Models: A Likelihood Approach..*Review of Economic Studies* 74, 1059-1087.

Schorfheide, F. (2000): "Loss function-based evaluation of DSGE models," *Journal of Applied Econometrics*, 15(6), 645–670.

M. Pakoš:

Classical and Gibbs-Sampling Approach (Kim and Nelson book)

- ✓ Markov-Switching Models
- ✓ State-Space Models with Markov Switching

Readings

Casella, George; George, Edward I. (1992), Explaining the Gibbs sampler. *The American Statistician* 46 (3): 167–174.

Chang-Jin Kim and Charles R. Nelson, *State-Space Models with Regime Switching: Classical and Gibbs-Sampling Approaches with Applications*, MIT Press 1999.

James H. Albert and Siddhartha Chib, Bayes Inference via Gibbs Sampling of Autoregressive Time Series Subject to Markov Mean and Variance Shifts, *Journal of Business & Economic Statistics*, Vol. 11, No. 1 (Jan., 1993), pp. 1-15.

Diebold, X. Francis and Glenn D. Rudebusch, *Business Cycles*, Princeton University Press 1999.

Gelfand, Alan E. , Gibbs Sampling, *Journal of the American Statistical Association*, Vol. 95, No. 452. (Dec., 2000), pp. 1300-1304.

Hamilton, James D, 1989. A New Approach to the Economic Analysis of Nonstationary Time Series and the Business Cycle, *Econometrica*, Econometric Society, vol. 57(2), pages 357-84, March.

Hamilton, James D., 1990. Analysis of time series subject to changes in regime, *Journal of Econometrics*, Elsevier, vol. 45(1-2), pages 39-70.

Engel, Charles & Hamilton, James D, 1990. Long Swings in the Dollar: Are They in the Data and Do Markets Know It?, *American Economic Review*, American Economic Association, vol. 80(4), pages 689-713, September.

Hamilton, James D., *Time Series*, Princeton University Press 1994.

Hamilton, James D & Gang, Lin, 1996. Stock Market Volatility and the Business Cycle, *Journal of Applied Econometrics*, John Wiley & Sons, Ltd., vol. 11(5), pages 573-93, Sept.-Oct.

Requirements and grading

Grades will be based on student's performance in midterm exam, final exam and home assignments. Course will consist of two grading periods with cut-off point at midterm exam.

1. Midterm exam+home assignments : 40%+10%.

2. Final exam+home assignments: 40%+10%.

The exercise session will be scheduled according to amount of topics covered and sessions will be announced in advance.

INDUSTRIAL ORGANIZATION

Lecturer:

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Teaching assistant:

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TBA

Course information

Steiner: This part of the course focuses on the role of information in economic modeling. We will read and discuss papers featuring informational asymmetries, and study their consequences on macroeconomic behavior. On the theoretical level, the course will introduce you to the modeling framework of global games, and beauty contest games. On the level of applications, we will see bank runs, debt pricing, financial bubbles, issues of central banking, and others.

Çelik: This part of the course focuses on market solutions to alleviating information asymmetries. The main focus will be on verifiable information disclosure, cheap talk, consumer search, advertising, verifiable information disclosure and cheap talk. We will follow various field articles.

Requirements and grading

Steiner (50% of the total grade): We will read and discuss one article per lecture. The students are required to skim through the article in advance.

Grading: Each student will write a referee report on a paper of their choice. The grade for this part of the course will be based on the quality of the report.

Çelik (50% of the total grade): The grade for this part of the course will be based on an exam that will be given in the final exams week.

Readings

Steiner:

Global games

Morris, Stephen and Shin, Hyun S. "Global Games: Theory and Applications." In: Dewatripont, M., Hansen, M., Turnovsky, S. (Eds), *Advances in Economics and Econometrics* (Proceedings of the Eighth World Congress of the Econometric Society), Cambridge University Press, 2003.

Morris, Stephen and Shin, Hyun S. "Unique Equilibrium in a Model of Self-Fulfilling Currency Attacks." *American Economic Review*, 1998, 88 (3), 587–597.

Stephen Morris, and Hyun Song Shin, Contagious Adverse Selection, *American Economic Journal: Macroeconomics* 2012, 4(1): 1–21.

Goldstein, Itay and Pauzner, Ady. "Demand Deposit Contracts and the Probability of Bank Runs." *Journal of Finance*, 2005, 60 (3), 1293–1327.

Sakovics J. and J. Steiner, Who Matters in Coordination Problems?, *The American Economic Review*, forthcoming.

F. Heinemann, R. Nagel, and P Ockenfels, The theory of global games on test: experimental analysis of coordination games with public and private information, 2004, *Econometrica* 72, 1583–1599.

Beauty Contests

Morris S.; Shin H.S. 2002, Social Value of Public Information, *The American Economic Review* 92, 1521-1534.

A. Bosch-Domènech, J. G. Montalvo, R. Nagel and A. Satorra, One, Two, (Three), Infinity, ... : Newspaper and Lab Beauty-Contest Experiments, *The American Economic Review* 92, 1687-1701.

Coarse thinking

Philippe Jehiel, Analogy-Based Expectation Equilibrium.

Philippe Jehiel, Milo Bianchi, "Financial reporting and market efficiency with extrapolative investors" (with) - July 2012.

Eyster, E. and M. Piccione (2011). An approach to asset pricing under limited understanding.

Çelik:

Verifiable information disclosure and persuasion

Board, O. (2009), "Competition and Disclosure," *Journal of Industrial Economics*, 57, 197-213.

Celik, L. (2012), "Information Unraveling Revisited: Disclosure of Horizontal Attributes," mimeo, CERGE-EI. Forthcoming in *Journal of Industrial Economics*.

Celik, L. (2012), "Is Voluntary Disclosure Always Excessive," mimeo, CERGE-EI.

Daughety, A. F. and J. F. Reinganum (2008), "Communicating Quality: A Unified Model of Disclosure and Signalling," *Rand Journal of Economics*, 39, 973-989.

Dranove, D. and G. Z. Jin (2010), "Quality Disclosure and Certification: Theory and Practice," *Journal of Economic Literature*, 48, 935-963.

Dye, R. A. (1985), "Disclosure of Nonproprietary Information," *Journal of Accounting Research*, 23, 123-45.

Fishman, M. J. and K. M. Hagerty (1990), "The Optimal Amount of Discretion to Allow in Disclosure," *Quarterly Journal of Economics*, 105, 427-444.

Grossman, S. (1981), "The Informational Role of Warranties and Private Disclosure about Product Quality," *Journal of Law and Economics*, 24, 461-483.

Jovanovic, B. (1982), "Truthful Disclosure of Information," *Bell Journal of Economics*, 13, 36-44.

Jung, W. O., and Y. K. Kwon (1988), "Disclosure when the market is unsure of information endowment of managers." *Journal of Accounting Research*, 26, 146-153.

Koessler, F. and R. Renault (2011), "When Does a Firm Disclose Product Information," mimeo, Université de Cergy Pontoise. Forthcoming in *Rand Journal of Economics*.

Levin, D., J. Peck and L. Ye (2009), "Quality Disclosure and Competition," *Journal of Industrial Economics*, 57, 167-196.

Lizzeri, A. (1999), "Information Revelation and Certification Intermediaries," *Rand Journal of Economics*, 30, 214-231.

Matthew, S. and A. Postlewaite (1985), "Quality Testing and Disclosure," *Rand Journal of Economics*, 16, 328-340.

Milgrom, P. (1981), "Good News and Bad News: Representation Theorems and Applications," *Bell Journal of Economics*, 12, 380-391.

Milgrom, P. and J. Roberts (1986), "Relying on the Information of Interested Parties," *Rand Journal of Economics*, 17, 18-32.

Shin, H. S. (1994), "News Management and the Value of Firms," *Rand Journal of Economics*, 25, 58-71.

Sun, M. J., (2011), "Disclosing Multiple Product Attributes," *Journal of Economics Management and Strategy*, 20, 195-224.

Cheap Talk

Aumann, R. and S. Hart (2003), "Long Cheap Talk," *Econometrica*, 71, 1619-1660.

Austin-Smith, D. (1994), "Strategic Transmission of Costly Information," *Econometrica*, 62, 955-963.

Austin-Smith, D. and J. Banks (2000), "Cheap Talk and Burned Money," *Journal of Economic Theory*, 91, 1-16.

Battaglini, M. (2002), "Multiple Referrals and Multidimensional Cheap Talk," *Econometrica*, 70, 1379-1401.

Chakraborty, A. and R. Harbaugh (2007), "Comparative Cheap Talk," *Journal of Economic Theory*, 132, 70-94.

Chakraborty, A. and R. Harbaugh (2010), "Persuasion by Cheap Talk," *American Economic Review*, 100, 2361-2382.

Chen, Y., N. Kartik and J. Sobel (2008), "Selecting Cheap-Talk Equilibria," *Econometrica*, 76, 117-136.

Crawford, V. P. and J. Sobel (1982), "Strategic Information Transmission," *Econometrica*, 50, 1431-1451.

Dessein, W. (2002), "Authority and Communication in Organizations," *Review of Economic Studies*, 69, 811-838.

Kartik, N. (2007), "A Note on Cheap Talk and Burned Money," *Journal of Economic Theory*, 136, 749-758.

Kartik, N. (2009), "Strategic Communication with Lying Costs," *Review of Economic Studies*, 76, 1359-1395.

Krishna, V. and J. Morgan (2001), "A Model of Expertise," *Quarterly Journal of Economics*, 116, 747-775.

Levy, G. and R. Razin (2007), "On the Limits of Communication in Multidimensional Cheap Talk: A Comment," *Econometrica*, 55, 247-273.

Matthews, S., M. Okuno-Fujiwara and A. Postlewaite (1991), "Refining Cheap-Talk Equilibria," *Journal of Economic Theory*, 3, 156-168.

Wolinsky, A. (2002), "Eliciting Information from Multiple Experts," *Games and Economic Behavior*, 41, 141-160.

Consumer search and price dispersion

Anderson, S. P. and R. Renault (1999), "Pricing, Product Diversity and Search Costs: A Bertrand-Chamberlin-Diamond Model," *Rand Journal of Economics*, 30, 719-735.

Armstrong, M., Vickers, J. and J. Zhou (2009), "Prominence and Consumer Search," *Rand Journal of Economics*, 40, 209-233.

Bar-Isaac, H., Caruana, G. and V. Cunat (2012) "Search, Design, and Market Structure," *American Economic Review*, 102, 1140-1160.

Burdett, K. and K. Judd (1983), "Equilibrium Price Dispersion," *Econometrica*, 51, 955-970.

Diamond, P. (1971), "A Model of Price Adjustment," *Journal of Economic Theory*, 3, 156-168.

Ellison, G. and A. Wolitzky (2012), "A Search Cost Model of Obfuscation," mimeo, MIT. Forthcoming in *Rand Journal of Economics*.

Janssen, M.C.W., Moraga-Gonzalez, J.L. and M.R. Wildenbeest (2005), "Truly Costly Sequential Search and Oligopolistic Pricing." *International Journal of Industrial Organization*, 23, 451-466.

Janssen, M.C.W., Pichler, P. and S. Weidenholzer (2011), "Oligopolistic Markets with Sequential Search and Production Cost Uncertainty," *Rand Journal of Economics*, 42, 444-470.

McAfee, P. (1995), "Multiproduct Equilibrium Price Dispersion," *Journal of Economic Theory*, 67, 83-105.

Reinganum, J. (1979), "A Simple Model of Equilibrium Price Dispersion," *Journal of Political Economy*, 87, 851-858.

Salop, S. and S. Stiglitz (1977), "Bargains and Ripoffs: A Model of Monopolistically Competitive Price Dispersion," *Review of Econ Studies*, 44, 493-510.

Stahl, D. O. (1989), "Oligopolistic Pricing with Sequential Consumer Search," *American Economic Review*, 79, 700-712.

Stigler, G. J. (1961), "The Economics of Information," *Journal of Political Economy*, 69, 213-225.

Varian, H. (1980), "A Model of Sales," *American Economic Review*, 70, 651-659.

Advertising

Anderson, S. P. and R. Renault (2006), "Advertising Content," *American Economic Review*, 96, 93-113.

Bagwell, K. (2007), "The Economic Analysis of Advertising," in: *Handbook of Industrial Organization Vol. III*, eds. M. Armstrong and R. Porter, North-Holland, Amsterdam.

Bain, Joe S. (1949), "A Note on Pricing in Monopoly and Oligopoly," *American Economic Review*, 39, 448-464.

Becker, G. and K. Murphy (1993), "A Simple Theory of Advertising as a Good or Bad," *Quarterly Journal of Economics*, 942-964.

Butters, G. (1977), "Equilibrium Distributions of Sales and Advertising Prices," *Review of Economic Studies*, 44, 465-491.

- Dixit, A. K. and V. D. Norman (1978), "Advertising and Welfare," *Bell Journal of Economics*, 9, 1-17.
- Grossman, G. and C. Shapiro (1984), "Informative Advertising with Differentiated Products," *Review of Economic Studies*, 51, 63-81.
- Janssen, M. and M. Non (2008), "Advertising and Consumer Search in a Duopoly Model," *International Journal of Industrial Organization*, 26, 354-71.
- Janssen, M. and M. Non (2009), "Going Where the Ad Leads You: On High Advertised Prices and Searching Where to Buy," *Marketing Science*, 28, 87-98.
- Johnson, J. and D. Myatt (2006), "On the Simple Economics of Advertising, Marketing, and Product Design," *American Economic Review*, 96, 756-784.
- Kaldor, Nicholas (1949), "The Economic Aspects of Advertising," *Review of Economic Studies*, 18, 1-27.
- Konishi, H. and M. T. Sandfort (2002), "Expanding Demand by Price Advertisement," *International Journal of Industrial Organization*, 20, 965-994.
- Meurer, M. and D. O. Stahl (1994), "Informative Advertising and Product Match," *International Journal of Industrial Organization*, 12, 1-19.
- Nelson, Phillip J. (1974), "Advertising as Information," *Journal of Political Economy*, 82, 729-754.
- Rhodes, A. (2012), "Multiproduct Retailing," mimeo, University of Oxford.
- Roberts, J. and D. O. Stahl (1993), "Informative Price Advertising in a Sequential Search Model," *Econometrica*, 61, 657-686.
- Stahl, D. O. (1994), "Oligopolistic Pricing and Advertising," *Journal of Economic Theory*, 64, 162-177.
- Stegeman, M. (1991), "Advertising in Competitive Markets," *American Economic Review*, 81, 210-223.

FINANCIAL MARKETS I / Part I

Lecturer:

Aleš Černý

(cerny@martingales.info; office 319 phone 231 or office 310, phone 137)

Teaching assistant:

Ivan Sutóris

(Ivan.Sutoris@cerge-ei.cz)

Office hours:

Thursday 14:00 – 15:00 and/or by appointment (only on Sept 20, Oct 3, 4, 17, 18 and 31)

Course information

The aim of the course is to introduce students to the mathematical tools used in asset pricing and optimal portfolio allocation and to promote active use of the theory through simple numerical examples, some of which will be implemented in Matlab and/or Excel.

After a review of the basic concepts of the financial theory in one-period models, the course shall cover no arbitrage asset pricing in discrete time, introducing financial and mathematical notions such as state price density, self-financing strategy, change of numeraire, information filtration, martingale and change of measure. Having built a sufficient amount of intuition we will then proceed to apply these concepts in continuous time with the aid of the Ito formula and the Girsanov theorem. Several examples will be given, among them derivation of the Black-Scholes formula, pricing of Asian options and Margrabe's option to exchange.

Pointers to the literature will be provided throughout the course.

Course outline

- ✓ One-period model of financial markets, arbitrage, state prices and risk-neutral probabilities
- ✓ Least squares hedging and CAPM
- ✓ Arbitrage and state prices in multiperiod models, martingale principle
- ✓ Information filtration, recombining trees, state variables, Markov property
- ✓ Change of measure, change of numeraire, self-financing strategies
- ✓ Optimal portfolio allocation in a dynamically complete market
- ✓ Towards continuous time
- ✓ Stochastic integral, Ito formula, drift and volatility, Gaussian processes
- ✓ Black-Scholes formula and pricing of more exotic derivatives
- ✓ Black-Scholes PDE and the general martingale principle, Feynman-Kac formula, HJB equations

Requirements and Grading

Homeworks - 25%.

Midterm exam on Fri 1.11.2013, closed book, duration 3 hrs – 75%.

Readings

Cerny, A. (2009) *Mathematical Techniques in Finance: Tools for Incomplete Markets*. 2nd ed. Princeton University Press.

Huang, Chi-fu and Robert H. Litzenberger, *Foundations for Financial Economics*, North-Holland, 1988.

Duffie, Darrell, *Dynamic Asset Pricing Theory*, Princeton University, 1992.

FINANCIAL MARKETS I / Part II

Lecturer:

Fabio Michelucci

(Fabio.Michelucci@cerge-ei.cz; office 324, phone 117)

Teaching assistant:

Myroslav Pidkuyko

(Myroslav.Pidkuyko@cerge-ei.cz)

Office hours:

TBA

Course information

The course will be based on Jean Tirole's Theory of Corporate Finance, chapters 1-12. The objective of the course is to provide a thorough coverage of some of the core problems in Corporate Finance and Corporate Governance and to illustrate the modeling tools that are typically used in the literature. Even though the textbook will guide us through the literature, the course will be substantially based on papers. Each student is expected to read the material that will be proposed before each class and to contribute to the discussion. Students will receive homework that will be solved during TA class, but will not be marked.

They will also be required to present a paper and to write a term paper that could take the form of a literature review, a referee report or a research proposal.

Course outline

The plan is to cover roughly one chapter of Tirole's book per week and integrate the material in the book with some key related researcher papers.

Requirements and Grading

Final Exam: 75%

Referee Report or Presentation 25%

Problem sets will not be marked but students are strongly encouraged to solve them seriously.

Readings

Main Textbook:

Tirole, The Theory of Corporate Finance.

Useful books:

Ross, Westerfield, and Jordan, Fundamentals of Corporate Finance (undergraduate level book to familiarize with the main concepts in Corporate Finance).

De Matos, Theoretical Foundations of Corporate Finance (Only covers some selected topics).

Bolton and Dewatripont, Contract Theory; Laffont and Martimort, The Theory of Incentives; Salanie, The Economics of Contracts; (these three books are useful for a better understanding of principal-agent problems. The third one is more introductory).

Freixas and Rochet, Microeconomics of Banking (for a more detailed expositions of the literature on banking).

Hart, Firms, Contracts and Financial Structure (very good for the Property Right Approach to Corporate Finance).

Laffont and Martimort, The Theory of Incentives: The Principal-Agent Model (Good Extensive treatment of the The Principal-Agent Model).

EMPIRICAL METHODS

Lecturer:

Patrick Gaulé

(patrickgaule@gmail.com; office 318, phone 191)

Teaching assistant:

Oleksandra Pokhylko

(Oleksandra.Pokhylko@cerge-ei.cz)

Office hours:

TBA

Course information

This course seeks to familiarize second year PhD students to reduced-form empirical research with an emphasis on identification techniques and practical examples. At the end of the course, students should be able to recognize threats to identification and to formulate identification strategies. Various other issues arising in empirical research will also be discussed. The course is based on actual recent papers. Students are expected to complete assignments and to participate actively in classroom discussions.

Requirements and grading

Final Exam 30%, Assignments 30%, Research idea 20%, Class Participation 20%.

Course outline and readings

✓ Background readings (optional)

Angrist J.D. and J.S. Pischke (2008) "Mostly Harmless Econometrics: An Empiricist Companion"
Princeton University Press.

Angrist J.D. and J.S. Pischke (2010) "The Credibility Revolution in Empirical Economics: How Better Research Design Is Taking the Con out of Econometrics." *Journal of Economic Perspectives*, 24(2): 3–30.

✓ Introduction and logistics

- ✓ Finding data
- ✓ The identification revolution

LaLonde, R. J. (1986). Evaluating the econometric evaluations of training programs with experimental data. *American Economic Review*, 604-620.

Angrist, J. D. (1990). Lifetime earnings and the Vietnam era draft lottery: evidence from social security administrative records. *American Economic Review*, 313-336.

Part A: The core tool set

- ✓ Differences in Differences

Card, D., & Krueger, A. B. (1994) "Minimum Wages and Employment: A Case Study of the Fast-Food Industry in New Jersey and Pennsylvania". *American Economic Review*, 84(4).

Friedberg, L. (1998). Did Unilateral Divorce Raise Divorce Rates? Evidence from Panel Data. *American Economic Review*, 88(3), 608-627.

Agrawal A, Goldfarb A (2008) "Restructuring Research: Communication Costs and the Democratization of University Innovation" *American Economic Review* 98(4):1578–1590

- ✓ Matching

Azoulay P, Manso G, Graff Zivin J (2011) "Incentives and Creativity: Evidence from the Academic Life Sciences" *RAND Journal of Economics* 42(3):527-554.

Azoulay P, Graff Zivin J and Wang J (2010) "Superstar Extinction". *Quarterly Journal of Economics* 125(2):549-589.

Azoulay P, Graff Zivin J, Sampat B (2011) "The Diffusion of Scientific Knowledge Across Time and Space: Evidence from Professional Transitions for the Superstars of Medicine" NBER Working Paper No.16683.

- ✓ Instruments

Ginsburgh V and Van Ours J (2003) "Expert opinion and compensation: evidence from a musical competition" *American Economic Review* 93(1):289-298.

Waldinger F (2010) "Quality Matters: The Expulsion of Professors and the Consequences for PhD Students Outcomes in Nazi Germany" *Journal of Political Economy* 118(4):787-837.

Waldinger F (2012) "Peer Effects in Science - Evidence from the Dismissal of Scientists in Nazi Germany" *Review of Economic Studies* 79(2):838-861.

- ✓ Regression Discontinuity

Lee, D. (2008). "Randomized experiments from non-random selection in US House elections". *Journal of Econometrics*, 142(2), 675-697.

Luca, M (2011) "Reviews, Reputation, and Revenue: The Case of Yelp.com." Harvard Business School Working Paper, No. 12-016.

Black S “Do Better Schools Matter? Parental Valuation of Elementary Education,” *Quarterly Journal of Economics*, May 1999, 114 (2), 577–599.

Ganguli I (2013) “Saving Soviet Science: The Impact of Grants When Government R&D Funding Disappears” forthcoming, *American Economic Journal: Applied Economics*.

✓ Addressing threats to identification

Marx M, Singh J, Fleming L (2011) “Regional Disadvantage? Does Non-compete Enforcement Create a Brain Drain?” mimeo, MIT Sloan School of Management.

Agarwal R, Kolev J (2012) “Strategic Corporate Layoffs” mimeo, Harvard University.

✓ Event studies

Malmendier, U., & Tate, G. (2008). Who makes acquisitions? CEO overconfidence and the market's reaction. *Journal of Financial Economics*, 89(1), 20-43.

✓ Presenting interesting data

DellaVigna, S., & Malmendier, U. (2006). Paying not to go to the gym. *The American Economic Review*, 694-719.

Djankov, S., La Porta, R., Lopez-de-Silanes, F., & Shleifer, A. (2002). The regulation of entry. *The Quarterly Journal of Economics*, 117(1), 1-37.

Part B: Applications and extensions

✓ Peer effects and social networks

Sacerdote B (2001) “Peer Effects with Random Assignment: Results for Dartmouth Roommates” *Quarterly Journal of Economics* 116(2): 681-704.

Zinovyeva N, Bagues M (2012) “It's Not What You Know, but Who You Know? the Role of Connections in Academic Promotions” mimeo, Universidad Carlos III de Madrid.

Munshi K (2003) “Networks in the Modern Economy: Mexican Migrants in the U.S. Labor Market” *Quarterly Journal of Economics*.

✓ Reduced-form methods in Macroeconomics and trade

Giavazzi, F., & Tabellini, G. (2005). Economic and political liberalizations. *Journal of Monetary Economics*, 52(7), 1297-1330.

Acemoglu, D., Johnson, S., & Robinson, J. A. (2001). The Colonial Origins of Comparative Development: An Empirical Investigation. *American Economic Review*.

Miguel E, Satyanath S, Sergenti S (2004) “Economic Shocks and Civil Conflict: An Instrumental Variables Approach” *Journal of Political Economy*, 2004, 112(4), 725-753.

Feyrer, J. (2009). “Distance, trade, and income—The 1967 to 1975 closing of the Suez Canal as a natural experiment” (WP No 15557). National Bureau of Economic Research.

✓ Reduced-form methods in Industrial Organization

Goolsbee, A., & Syverson, C. (2008). How do incumbents respond to the threat of entry? Evidence from the major airlines. *The Quarterly Journal of Economics*, 123(4), 1611-1633.

Seamans R, Zhu F (2012) "Technology Shocks in Multi-Sided Markets: The Impact of Craigslist on Local Newspapers" NET Institute Working Paper No. 10-11. Available at SSRN: <http://ssrn.com/abstract=1694622> or <http://dx.doi.org/10.2139/ssrn.1694622>.

Hastings, J. S. (2004). Vertical Relationships and Competition in Retail Gasoline Markets: Empirical Evidence from Contract Changes in Southern California. *The American Economic Review*, 94(1), 317-328.

✓ Kinks in the payoff functions

Duggan, M., & Levitt, S. D. (2002). Winning Isn't Everything: Corruption in Sumo Wrestling. *The American Economic Review*, 92(5), 1594-1605.

Oyer, P. (1998). Fiscal year ends and nonlinear incentive contracts: The effect on business seasonality. *Quarterly Journal of Economics*, 113(1), 149-185.

✓ Advanced Regression Discontinuity and differences in differences topics

Briggs, D (2013) "Expanded dependent health insurance coverage and the labor supply of young adults: Outcomes from state policies and the Affordable Care Act", mimeo, University of Arizona.

Dell, M. (2010). "The persistent effects of Peru's mining Mita" *Econometrica*, 78(6), 1863-1903.

Fujiwara T (2011) "Voting Technology, Political Responsiveness, and Infant Health: Evidence from Brazil". Mimeo, Princeton University.

INTERNATIONAL TRADE

Lecturer:

Levent Çelik

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Krešimir Žigić

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Teaching assistant:

TBA

Office hours:

TBA

Course objectives

This is a graduate introduction to the economics of International Trade. The course will introduce a number of the classic themes of the field and attempt to point the direction to promising frontiers of research. Feenstra (2004) is the state-of-the-art graduate text. Bhagwati volume draws together many essential papers in the field through the 1980's, and the Grossman volume collects most of the essential papers on imperfect competition in trade, which was arguably the dominant theme of the field through the end of the 1980's and early 1990's. Dixit and Norman is the clearest exposition there is of certain topics.

Grading

85% of the course grade will be based on a midterm and a final exam (42.5% each) and 15% on the presentation of a referee report on a selected article (either one of the articles on the regular syllabus that we haven't covered in class, or of your choice – permission required). The presentation shall include a brief overview of the article, and a **critical** analysis of the model, its assumptions, methodology, the findings and possible improvements/extensions. This requires an extensive knowledge of the literature the selected article relates to.

Readings

Principal textbooks:

Feenstra, R.: *Advanced International Trade*, Princeton Univ. Press, 2004.

Grossman, G. M. (ed.): *Imperfect Competition and International Trade*, MIT Press, 1992.

Helpman, E. and P.R. Krugman: *Trade Policy and Market Structure*, MIT Press, 1989.

Recommended and supplementary textbooks:

Bhagwati, J. (ed.): *International Trade: Selected Readings* (2nd ed.), MIT Press, 1987.

Dixit, A. K. and V. Norman: *Theory of International Trade*, Cambridge Univ. Press, 1980.

Bhagwati, J., A. Panagariya and T. N. Srinivasan (BPS): *Lectures in International Trade* (2nd ed.), MIT Press, 1998.

Topics & Readings: (this is a **tentative** outline of what we will cover in the Fall)

(1) Classical and Neo-classical Trade Models: Basics

(1.1) Ricardian:

Feenstra, pp. 1–4.

BPS, chp. 2–4.

Dornbusch, R., S. Fischer and P. Samuelson (1977), “Comparative Advantage, Trade, and Payments in a Ricardian Model with a Continuum of Goods,” *American Economic Review*, 67, 823–839.

(1.2) Specific Factors:

Feenstra, pp. 72–75.

BPS, chp.7.

Mussa, Michael (1974), “Tariffs and the Distribution of Income: The Importance of Factor Specificity, Substitutability, and Intensity in the Short and Long Run,” *Journal of Political Economy*, 82, 1191–1204.

(1.3) Heckscher-Ohlin and its Variants:

Feenstra, pp. 4–29, chps. 2, 3.

BPS, chp. 5, 6, 8.

Jones, R. I. (1965), “The Structure of Simple General Equilibrium Models.” *Journal of Political Economy*, 73, 557–572.

Deardorff, Alan (1979), “Weak Links in the Chain of Comparative Advantage,” in Bhagwati volume.

Ethier, Wilfred J. (1984), “Higher Dimensional Issues in Trade Theory,” in R.W. Jones and P.B. Kenen (ed.), *Handbook of International Economics*, Elsevier.

(1.4) Some Key Empirical Approaches:

Feenstra, pp. 41–61.

Choi Y.-S. and P. Krishna (2004), “The Factor Content of Bilateral Trade: An Empirical Test,” *Journal of Political Economy*, 112, 887–914.

Bernhofen D. and J. Brown (2005), “An Empirical Assessment of the Comparative Advantage Gains from Trade: Evidence from Japan,” *American Economic Review*, 95, 208–225.

Bowen, Harry P., Edward E. Leamer and Leo Sveikauskas (1987), “Multicountry, Multifactor Tests of the Factor Abundance Theory,” *American Economic Review*, 77, 791–809.

Davis, Donald R. and David E. Weinstein (2001), “An Account of Global Factor Trade,” *American Economic Review*, 91, 1423–1453.

Helpman, Elhanan (1998), “Explaining the Structure of Foreign Trade: Where Do We Stand?” *Weltwirtschaftliches Archiv/Review of World Economics*, 134, 573-89.

Leontief, W. (1953), “Domestic Production and Foreign Trade: The American Capital Position Re-examined,” *Proceedings of the American Philosophical Society*, 97, 332–349.

Leamer, Edward E. (1980), “The Leontief Paradox, Reconsidered,” *Journal of Political Economy*, 88, 495–503.

Leamer, Edward E. (1984), *Source of International Comparative Advantage: Theory and Evidence*, MIT Press.

Trefler, Daniel (1993), "International Factor Price Differences: Leontief was Right!," *Journal of Political Economy*, 101, 961–987.

Trefler, Daniel (1995), "The Case of the Missing Trade and Other Mysteries," *American Economic Review* 85, 1029–46.

(2) Dynamics in Neoclassical Models

Chaudhuri, S., S. Cameron and J. McLaren (2002), "Mobility Costs and the Dynamics of Labor Market Adjustments to External Shocks: Theory," mimeo, University of Virginia.

Chaudhuri, S. and J. McLaren (2002), "The Simple Analytics of Trade and Labor Mobility II: Two Types of Labor," mimeo, University of Virginia.

Findlay, Ronald (1995): *Factor Proportions, Trade, and Growth*, MIT Press, pp. 35–45.

Mussa, Michael (1974), "Tariffs and the Distribution of Income: The Importance of Factor Specificity, Substitutability, and Intensity in the Short and Long Run," *Journal of Political Economy*, 82, pp. 1191–1204.

Mussa, Michael (1978), "Dynamic Adjustment in the H-O-S Model," *Journal of Political Economy*, 86, pp. 775–791.

Neary, J. Peter (1978), "Short-Run Capital Specificity and the Pure Theory of International Trade," in Bhagwati volume.

(3) Trade Policy in Perfectly Competitive and in Oligopolistic Markets

Feenstra, pp. 221–33, 286–96.

Helpman & Krugman, pp.11–131.

(3.1) Strategic Trade Policy

Bhattacharjea, A. (1995), "Strategic tariffs and endogenous market structures: Trade and industrial policies under imperfect competition," *Journal of Development Economics*, 47, 287–312.

Brander, J. (1986), "Rationales for Strategic Trade and Industrial Policy." in *Strategic Trade Policy and the New International Economics*, P. R. Krugman, (ed.), MIT Press.

Brander, J. A. (1995), "Strategic Trade Policy," in *The Handbook of International Economics*, vol. 3., G.M. Grossman and K. Rogoff (eds), North-Holland.

Brander, J. and P. Krugman (1983), "A 'Reciprocal Dumping' Model of International Trade," *Journal of International Economics*, 15, 313–323 (or in Grossman volume).

Brander, J. and B. Spencer (1984), "Tariff Protection and Imperfect Competition," in *Monopolistic Competition and International Trade*, H. Kierzkowski (ed.), 194–206. Oxford: Clarendon Press.

Eaton, Jonathan and Gene M. Grossman (1986), "Optimal Trade and Industrial Policy under Oligopoly," in Grossman volume.

Etro, F. (2011), "Endogenous Market Structures and Strategic Trade Policy," *International Economic Review*, 52 (1), 63-84.

Ionascu, D. and K. Žigić (2005), "Free Trade versus Strategic Trade as a Choice between Two "Second-Best" Policies: A Symmetric versus Asymmetric Information Analysis," *International Economic Journal*, 19:3, 417–446.

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- Levy, S. and S. Nolan (1992), "Trade and Foreign Investment Policies under Imperfect Competition," *Journal of Development Economics*, 37, 31–62.
- Maggi, G. (1996), "Strategic Trade Policies with Endogenous Mode of Competition," *The American Economic Review*, 86:1, 237–258.
- Moraga-González, J. L. and J. M. Viaene (2005), "Trade Policy and Quality Leadership in Transition Economies," *European Economic Review*, 49(2), 359–385.
- Neary, J. P. and D. Leahy (2000), "Strategic Trade and Industrial Policy Towards Dynamic Oligopolies," *Economic Journal*, 100, 484-508.
- Neary, Peter (2002), "Globalization and market structure," Presidential Address to the European Economic Association Annual Conference, Venice, 22–24 (<http://www.ucd.ie/~economic/staff/pneary/papers/eea2002.htm>).
- Qiu, L. (1994) "Optimal Strategic Trade Policy under Asymmetric Information," *Journal of International Economics*, 36 (3–4), 333-354.
- Qiu, L. and E.L.-C. Lai (2004), "Protection of Trade for Innovation: The Roles of Northern and Southern Tariffs," *Journal of Japan and World Economy*, 16, 449–470.
- Žigić, K. (2000), "Strategic Trade Policy, Intellectual Property Rights Protection, and North-South Trade," *Journal of Development Economics*, 61/1, 27–60.
- Žigić, K. (2011), "Does 'Non-Committed' Government Always Generate Lower Social Welfare than its 'Committed' Counter-Part? Strategic Trade Policy When Consumer Surplus Matters," *Journal of Comparative Economics*, 2011, Vol.39, pp. 533–556.

(3.2) Monopolistic Competition in Trade

Feenstra, chp. 5.

Dixit & Norman, pp. 281–94.

Bertoletti, P. and F. Etro (2013), Monopolistic Competition: A Dual Approach with an Application to Trade, mimeo <http://www.intertec.org/Theory%20Papers/Bertoletti-Etro.pdf>

Helpman & Krugman, pp. 133–153

Krugman, Paul R. (1980), "Scale Economies, Product Differentiation, and the Pattern of Trade," in Grossman volume.

Helpman, Elhanan (1981), "International Trade in the Presence of Product Differentiation, Economies of Scale, and Monopolistic Competition: A Chamberlin-Heckscher-Ohlin Approach," in Grossman volume.

Zhelobodko, E. S., Kokovin, M., Parenti and J. Thisse, (2012), Monopolistic Competition in General Equilibrium: Beyond the CES, *Econometrica*, 80, 6, 2765–2784.

MACRO TOPICS I / Part I

Lecturer:

Byeongju Jeong

(Byeongju.Jeong@cerge-ei.cz; office 321, phone 233)

Teaching assistant:

Office hours:

TBA

Course information

We will study some macro topics. Listed below are the main references in the order of discussion.

Requirements and grading

The grade is based on an exam (two thirds) and occasional home problems (one third).

Readings

Acemoglu, D., Johnson, S., and Robinson, J. (2005), "Institutions as a Fundamental Cause of Long-Run Growth," Chapter 6, *Handbook of Economic Growth*, edited by Aghion, F. and Durlauf, S., Elsevier.

Doepke, M. (2005), "Child Mortality and Fertility Decline: Does the Barro-Becker Model Fit the Facts?," *Journal of Population Economics* 18: 337-366.

Moav, O. (2005), "Cheap Children and the Persistence of Poverty," *The Economic Journal* 115: 88-110.

Bartelsman, E., Haltiwanger, J., and Scarpetta, S. (2013), "Cross-Country Differences in Productivity: The Role of Allocation and Selection," *American Economic Review* 103: 305-334.

Buera, F. and Shin, Y. (2013), "Financial Frictions and the Persistence of History: A Quantitative Exploration," *Journal of Political Economy* 121: 221-272.

Acemoglu, D., Akcigit, U., Bloom, N., and Kerr, W. (2013), "Innovation, Reallocation, and Growth," National Bureau of Economic Research Working Paper 18993.

MACRO TOPICS I / Part II

Lecturer:

Michal Kejak

(Michal.Kejak@cerge-ei.cz; office 329, phone 186)

Teaching assistant:

Office hours:

After class

Course information

The increasing complexity of the analysis of theoretical and applied dynamic macroeconomic models, mainly the fact that there are no analytic solutions available for most of them and if they exist they are often trivial simplifications of the original problem, calls for using **efficient numerical methods** in macroeconomics. Thus an important part of the course is devoted to numerical methods for the solution of the dynamic macromodels.

Further it introduces several representative methods each of which is applied to an example of dynamic macroeconomic model. In this course we cover several classes of the dynamic stochastic general equilibrium (DSGE) growth models: 1) standard DSGE exogenous growth – RBC models and DSGE models with endogenous growth; 2) monetary DSGE models with perfectly (and possibly with imperfectly) flexible prices and/or with credit; 3) DSGE models of an open economy. The students will be provided with a MATLAB (or GAUSS) program which will demonstrate the application of the numerical method on the model and she/he will have chance to run the simple program on the computer for different model and method configurations. We will also analyze several papers on advanced macro models of growth and business cycles.

During the course students will be supposed to write own simple programs and to run the application programs, in MATLAB., and using toolboxes as Uhlig, DYNARE, or NUMLIN. However, any former experience with programming, albeit is welcome, is not necessary for the course work.

Course outline

- ✓ Elementary Concepts in Numerical Analysis
- ✓ Basic Classes of Numerical Methods (Linear Equations, Static Optimization, Nonlinear Equations, Approximation Methods, Numerical Integration and Differentiation)
- ✓ Numerical Dynamic Programming (Value Function Iteration - Deterministic Discrete Ramsey Growth Model)
- ✓ Perturbation Methods ((Log)-Linearization - Deterministic Continuous Ramsey Growth Model, Stochastic Discrete RBC Growth Model)
- ✓ Finite-Difference Methods (Reverse Shooting Method - Time Elimination Method - Deterministic Continuous Ramsey Growth Model, Deterministic Continuous Lucas Endogenous Growth Model)
- ✓ Projection Methods (Orthogonal Collocation Method - Deterministic Continuous Ramsey Growth Model, Deterministic Continuous Lucas Endogenous Growth Model, Stochastic Discrete Ramsey Growth Model, Stochastic Discrete RBC Growth Model)

Requirements and grading

There will be regular homeworks assigned every week and one individual project which will be assigned to the end of the course. Students can either choose a project from the set of given projects or he/she can work on her/his own proposed project if it relates to the dynamic macroeconomic model issues covered in the class and is approved by the lecturer. Students will have 4 weeks to accomplish

the project. There will also be a one-hour exam. The contributions to the total grade from this part of the course are following: homeworks (15%), project (25%), and exam (10%).

Readings

Judd Kenneth L. (1998) *Numerical Methods in Economics*. MIT Press.

McCandless, G. (2008) *ABCs of RBCs: An Introduction to Dynamic Macroeconomic Models*. Harvard University Press.

Marimon Ramon and Andrew Scott (Eds.) (1999) *Computational Methods for the Study of Dynamic Economies*. Oxford University Press.

Ljungquist Lars and Thomas J. Sargent (1999) *Recursive Macroeconomic Theory*. MIT Press.

Cooley, Thomas Ed. (1995) *Frontiers of Business Cycle Research*. Princeton University Press.

Walsh, Carl. E. (2003) *Monetary Theory and Policy*. MIT Press.

Gali, J. (2008) *Monetary Policy, Inflation, and the Business Cycle: An Introduction to the New Keynesian Framework*, Princeton University Press.

ACADEMIC WRITING II

Lecturer – Section 1:

Robin-Eliece Mercury

(Robin-Eliece.Mercury@cerge-ei.cz; office 311, phone 189)

Lecturer – Section 2:

Andrea Downing

(Andrea.Downing@cerge-ei.cz; office 317, phone 254)

Lecturer – Section 3:

Dunstan Clarke

(Dunstan.Clarke@cerge-ei.cz; office 309, phone 197)

Course coordinator:

Deborah Nováková

(Deborah.Novakova@cerge-ei.cz; office 309, phone 197)

Office hours:

TBA

Course information

The purpose of this course is to support further development of academic writing skills and practice in the specific types of writing required at the PhD level in the field of Economics.

Building upon the analytical summarizing work in Academic Writing 1, students will research, plan, and write a Position Paper on a topic chosen by the student. The paper should analyze the work of others and offer the students' own distinct position on the topic. The Annotated Bibliography and Comparative Critique assignments build required skills and lead to the Position Paper.

Requirements and grading

0% Survey	10% Summary of a Position Paper
10% AB	20% Comparative Critique
10% Analysis of Peer Draft	50% Position Paper

Students are evaluated according to their ability to produce graduate-level written academic texts in English. Attendance is mandatory, and completing all assigned tasks is a minimum requirement for passing the course.

Readings

Sources and materials will be provided. Students will also participate in choosing readings

COMBINED SKILLS II - PhD Seminar

Lecturer:

Andrea Downing

(Andrea.Downing@cerge-ei.cz; office 317, phone 254)

Robin-Eliece Mercury

(Robin-Eliece.Mercury@cerge-ei.cz; office 311, phone 189)

Office hours:

TBA

Seminar Information

This is a required, credit course for third year students participating in the DPW series 2013/14. The seminar is designed to assist dissertation proposal workshop participants with their written proposals and presentations in consultation with Academic Skills Center faculty. The course provides the opportunity to deliver a practice presentation to their tentative dissertation chair, an ASC member, and interested peers. The seminar will work towards the first official DPW draft due November 1st. Consultations will continue through November until defense week.

Workshops, individual conferences, and the practice presentation schedule will be determined by ASC seminar tutors and will be announced in advance.

Evaluation

This is an Academic Skills Center graded course, which includes evaluation of the written proposal and presentation.

NOTE: Full participation in the seminar and completion of all required tasks are the minimum requirements for passing the course.

When relevant, updates that supersede this hardcopy can be found on the internal pages of the website at: https://iweb.cerge-ei.cz/phd/prog_details/coursebook/

III. PROFESSORS TEACHING IN THE FALL SEMESTER 2013

František Brázdik, Ph.D.

Email: Frantisek.Brazdik@cerge-ei.cz

František Brázdik is a Senior Economist at Czech National Bank's Macroeconomic Forecasting Division since September 2006. He also worked for the Directorate General Economics at European Central Bank over the year 2012. He earned his master's degree in Mathematics from the Faculty of Mathematics, Physics and Informatics at Comenius University, Bratislava, M.A. degree in Economics (2006) from CERGE, Charles University, and Ph.D. in Economics (2009) from CERGE.

Research orientation:

His research interests are in the areas of macroeconomics, modeling and forecasting methods, operations research and numerical methods with applications in economics. His recent work focuses on forecast updating and exchange rate behavior. He has provided technical assistance missions for central banks in Republic of South Africa, Slovakia and Serbia. He also serves as referee in journals with focus on operations research.

Levent Çelik, Ph.D.

Assistant Professor

Email: Levent.Celik@cerge-ei.cz

Webpage: <http://home.cerge-ei.cz/celik/>

Levent Çelik is an Assistant Professor at CERGE-EI (under US permanent charter), he is also an Assistant Professor at CERGE, Charles University and a Researcher at the Economics Institute of the Academy of Sciences of the Czech Republic since September 2006. He received his B.A. in Economics, Boğaziçi University (June, 2000), M.A. in Economics, University of Virginia (January, 2002) and Ph.D. in Economics, University of Virginia (January, 2007).

Research orientation:

Industrial organization (with a focus on information disclosure, advertising, product differentiation and consumer search), international trade, political economy, prediction markets.

Aleš Černý, Ph.D.

Email: cerny@martingales.info

Web: www.martingales.info

Aleš Černý is a Professor of Finance at the Cass Business School in London. He holds a degree in Mathematical Engineering from the Czech Technical University and a PhD in Economics from Warwick University. Before joining Cass in 2005 he taught at the Imperial College Business School. He is the author of the masters level textbook *Mathematical Techniques in Finance: Tools for Incomplete Markets*, published by Princeton University Press in 2004 and 2009. His research focuses on the finance of incomplete markets. Prof. Černý's research has appeared, among others, in *Annals of Probability*, *ASTIN Bulletin*, *Economic Journal*, *Journal of Futures Markets*, *Journal of Mathematical Economics*, *Mathematical Finance*, *Review of Derivatives Research* and *SIAM Journal on Control and Optimization*. He has given over 60 talks in Europe, Canada, Japan and U.S.

Research interests: Mathematical finance, asset pricing, risk measures and optimal portfolio allocation, performance measurement.

Dunston Clarke, BA

Email: Dunston.Clarke@cerge.ei.cz

Dunston Clarke is a DELTA-qualified English teacher with 14 years' experience. Dunston is currently in the first year of a Master's in Applied Linguistics. He has been teaching academic English, writing and presentations to a doctoral level since 2004. Dunston currently works at ČVUT where he proof-reads academic texts as part of his job. He also has experience in management, teaching all the Cambridge exams, teaching business English and academic skills for MBA and BBA programmes.

Andrea Downing, Ph.D.

Email: Andrea.Downing@cerge-ei.cz

Andrea Downing is teaching at CERGE-EI since September 2012. Received her Ph.D. in Economic and Social History from the University of Liverpool, UK in 1998 and M.A. in Research Methods in the Social Sciences from the University of Liverpool, UK in 1993. She worked as a Lecturer at the Metropolitan University in Prague from 2010 to 2012. She was also working as a Teacher Trainer at the Metropolitan University in Prague from 2010 to 2011, where she designed and delivered pedagogic training to aspiring and in-service Czech teachers of English. From September 2004 to June 2005 she was an Associate Professor and a Chair of Foundation Studies at Sur University College in Oman.

Research orientation:

Multiple intelligences and learner autonomy and observing the observer in teaching development.

RNDr. Michal Franta, Ph.D.

Email: Michal.Franta@cerge-ei.cz

Michal Franta is an advisor to the bank board and research coordinator for the area of monetary policy at the Czech National Bank. He received his M.A. and Ph. D. degrees in Economics from CERGE-EI, Charles University in Prague in 2005 and 2010. He graduated from Charles University in Mathematics in 2002. He worked both in central banks (ECB, Bank of Japan) and academic institutions (La Trobe University, Melbourne).

Research orientation:

Bayesian econometrics, monetary economics

Patrick Gaulé, Ph.D.

Assistant Professor

Email: patrickgaule@gmail.com

Webpage: <http://sites.google.com/site/patrickgaule/>

Patrick Gaule is an Assistant Professor at CERGE-EI (under U.S. permanent charter) and at CERGE, Charles University, and a Researcher at the Economics Institute of the Academy of Sciences of the Czech Republic since September 2012.

He received his Ph.D. from the Ecole Polytechnique Federale de Lausanne, Switzerland, in May 2009. From September 2009 to August 2012, he held a succession of postdoctoral appointments at the MIT Sloan School of Management, the National Bureau of Economic Research, and Harvard University.

Research orientation:

Applied microeconomics; economics of innovation; high-skilled migration.

Byeongju Jeong, Ph.D.

Mellon Endowment Associate Professor with Tenure

Email: Byeongju.Jeong@cerge-ei.cz

Webpage: <http://home.cerge-ei.cz/bee>

Byeongju Jeong is the Mellon Endowment Associate Professor with tenure at CERGE-EI (under US permanent charter) and a member of the Executive and Supervisory Committee of CERGE-EI since 2003. He is also an Assistant Professor at CERGE, Charles University and a Researcher at the Economics Institute of the Academy of Sciences of the Czech Republic (EI) since 1997. He served as the Deputy Director for Graduate Studies at CERGE and EI from 2010 to 2012. Graduated from the University of Texas with a B.A. degree in Economics in 1991. Received a M.A. in Economics from the University of Minnesota in 1994, and a Ph.D. in Economics from the University of Minnesota in 1996. Lecturer at Pennsylvania State University from 1996 to 1997. Visiting professor at Universitat Pompeu Fabra in Barcelona from 2003 to 2004.

Research orientation:

Growth and development, macro labor, international macro.

Doc. Ing. Michal Kejak, M.A., CSc.

Associate Professor with Tenure

Email: Michal.Kejak@cerge-ei.cz

Webpage: <http://home.cerge-ei.cz/mkej/>

Michal Kejak is the Associate Professor with tenure at CERGE-EI (under US permanent charter) and a member of the Executive and Supervisory Committee of CERGE-EI (since 2007). He is a Docent (Associate Professor) at CERGE, Charles University and a Senior Researcher at the Economics Institute of the Academy of Sciences of the Czech Republic (EI) since 2008. Since September 2010 he serves as the Deputy Director for Research of CERGE and EI (also during 2003-2005).

Master of Science in Technical Cybernetics, Czech Technical University, Prague, Faculty of Electrical Engineering, Department of Control, 1982. M.A. in Economics, Central European University, Prague, awarded by the State University of New York, 1993. CSc. (Ph.D.) in Technical Cybernetics, Czech Technical University in Prague, Faculty of Machine Engineering, Department of Automatic Control, 1993. Diploma, Program in Applied Economics 1993-1994, Institute for Advanced Studies, Vienna, 1994.

Researcher, Institute for Application of Computing Technique in Control, Prague, 1982-1990. Researcher, Institute for Forecasting of the Czechoslovak Academy of Sciences, Prague, 1990-1993. Visiting Research Fellow, Economics Department, Institute for Advanced Studies, Vienna, 1993-1994. Visiting Scholar, Hoover Institute, Stanford University, 1995-1996. Temporary Consultant, World Bank, 1999. Visiting Faculty, PhD program, CEU Budapest, 2000-2004. Adjunct Faculty, PhD program, Cardiff Business School since 2005.

Research orientation:

Macroeconomic theory, monetary models, growth and business cycle models, heterogeneous agent models, numerical methods in macroeconomics.

Robin-Eliece Mercury, B.A. (Hons), M.Ed.

Email: Robin-Eliece.Mercury@cerge-ei.cz

Graduated in 1995 from the Faculty of Education at McGill University, Montréal, Canada. Her degree is in Education in Second Languages specializing in academic writing and rhetoric, and in Canada, she taught in Vancouver, at Capilano University in its Intensive ESL Programme (January 2002 – September 2003). In addition to her eight years at CERGE-EI (September 2004 – to the present), Robin-Eliece Mercury's experience includes teaching in the Far East—academic writing and critical thinking at International Christian University, Tokyo (April 1999 – March 2001) and academic writing and communications at Kanda University of International Studies, Chiba, Japan (April 1995 – March 1999). Linguistics research areas of interest include critical thinking: from theory to practice and the language learning effects of sustained content teaching. Robin-Eliece's amateur interests have also resulted in her attaining the final level of professional qualification at the Wine and Spirit Educational Trust, London, the UK. Having completed her Level-5 diploma requirements, she is qualified to research in the marketing, production, and policy-making/legal sectors of the alcoholic beverage industry.

Fabio Michelucci, Ph.D.

Assistant Professor

Email: Fabio.Michelucci@cerge-ei.cz

Webpage: <http://www.fabiomichelucci.com/>

Fabio Michelucci is an Assistant Professor at CERGE-EI (under US permanent charter) and at CERGE, Charles University and a Researcher at the Economics Institute of the Academy of Sciences of the Czech Republic since 2009. Earned his B.A. degree in Economics, summa cum laude (2000), from the University of Florence, Italy; M.Sc. degree in Economics (2001) from the Universitat Pompeu Fabra, Spain; Ph.D. degree in Economics (2007) from University College London, United Kingdom. From 2002 until 2006 he was working as a Teaching Assistant at the University College London, United Kingdom. In 2006 he was also working as a Researcher (Assegnista di Ricerca) at Bocconi University, Italy. From 2007 to March 2009 he was a Post-doctoral Scholar at the Division of the Humanities and Social Sciences, California Institute of Technology, USA. He is a holder of Mario Landi Award, Amici di Villa Favard, University of Florence (2001-2002), and also a holder of Instituto Valenciano de Investigaciones Economicas Award for the paper "Second Best Efficiency in Auctions" (2005). He obtained a Bank of Italy scholarship, Bonaldo Stringher (2001-2003), and an Ente Luigi Einaudi Scholarship (2003-2004).

Research orientation:

Economic theory, industrial organization, mechanism design, auction theory, and experimental economics.

Deborah Nováková, M.A.

Email: Deborah.Novakova@cerge-ei.cz

Deborah Nováková is teaching at CERGE-EI beginning in August 2012. She received her M.A. in TEFL/TESL from the University of Birmingham, UK in 2007. From October 2007 to October 2010 she was working as an Instructor, course coordinator, curriculum developer and a professional development facilitator at Maastricht University Language Centre in Netherlands. She was also at Maastricht University from 2001-2003. During the years 2003 to 2007 she was working as an Instructor, curriculum developer and an editor at the Southern Alberta Institute of Technology in Calgary, Canada, where she worked on both domestic and international projects.

Research orientation:

Curriculum design, teacher training and professional development, successful intercultural communication in international contexts, student-centred learning approaches and methods, successful team-building in classroom and teaching in team contexts.

Michal Pakoš, Ph.D.

Associate Professor

Email: Michal.Pakos@cerge-ei.cz

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Michal Pakoš is an Assistant Professor at CERGE-EI (under US permanent charter) and at CERGE, Charles University since September 2011 and a Researcher at the Economics Institute of the Academy of Sciences of the Czech Republic since August 2009. Earned his bachelor's degree in Management (1998) from the Comenius University, Slovakia; master's degree in Financial Management (2000) also from the Comenius University, Slovakia; MA. degree in Economics (2000/With Distinction) from the Central European University, Hungary; Ph.D. degree in Financial Economics (2005) from the Graduate School of Business of the University of Chicago, USA. From 2005 till 2009 he was working as an Assistant Professor of Finance at the Carnegie Mellon University, USA.

Research orientation:

Empirical macroeconomics, asset pricing, especially with asymmetric information, portfolio choice, quantitative financial economics.

Sergey Slobodyan, Ph.D.

Citigroup Endowment Associate Professor with Tenure

Email: Sergey.Slobodyan@cerge-ei.cz

Sergey Slobodyan is the Citigroup Endowment Associate Professor with tenure at CERGE-EI (under US permanent charter) since 2011 and a member of the Executive and Supervisory Committee of CERGE-EI since 2009. He is also an Assistant Professor at CERGE, Charles University and a Researcher at the Economics Institute of the Academy of Sciences of the Czech Republic since 2000. Since September 2012 he serves as the Deputy Director for Graduate Studies at CERGE and EI. He has received his M.Sc. in Physics from Novosibirsk State University in 1988, later M.A. in Economics from Washington University in 1996 and Ph.D. in Economics from Washington University in 2000. He has taught economics in St. Louis, Prague, Frankfurt, Kiev, and Novosibirsk and worked at the Institute of Inorganic Chemistry, Novosibirsk.

Research orientation:

Bayesian estimation of DSGE models, especially under adaptive learning; large deviations theory in models of monetary policy; adaptive learning; interaction of public pensions and public educational systems; dynamics of growth models with multiple steady states and indeterminacy; micro-simulations of various markets, such as education and electricity, using agent-based computational economics.

Mgr. Jakub Steiner, Ph.D.

Associate Professor with Tenure

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Jakub Steiner is an Associate Professor with tenure at CERGE-EI (under US permanent charter) and a member of the Executive and Supervisory Committee of CERGE-EI (since 2012). Since September 2012 he is an Assistant Professor at CERGE, Charles University, and since January 2012 a Senior Researcher at the Economics Institute of the Academy of Sciences of the Czech Republic. He has been awarded the J. E. Purkyně Fellowship by the Academy of Sciences of the Czech Republic. He is an Assistant Professor at Kellogg, MEDS at Northwestern University since September 2009. Prior to his appointment at Kellogg, he worked as an Assistant Professor at the University of Edinburgh. He completed his Ph.D. in Economics at CERGE-EI in 2006, and M.A. in Physics at Charles University in 2000. He has published in journals such as *American Economic Review*, the *Journal of Economic Theory*, *Theoretical Economics*, and *Games and Economic Behavior*. He worked as a social worker for a Roma community from 2000-2002, and since then he has been interested in the economics of social exclusion.

Research orientation:

Game theory and economic theory. He studies behavior in strategic situations with the possibility of self-fulfilling prophecies such as those that arise during currency attacks, bank runs, and revolutions.

Doc. Krešimir Žigić, Ph.D.

Citigroup Endowment Associate Professor with Tenure

Email: Kresimir.Zigic@cerge-ei.cz

Krešimir Žigić is the Citigroup Endowment Associate Professor with tenure at CERGE-EI (under US permanent charter) since 2007 and a member of the Executive and Supervisory Committee of CERGE-EI since 2004. He is a Docent (Associate Professor) at CERGE, Charles University since 2012 and a Researcher at the Economics Institute of the Academy of Sciences since 1993. Graduated from the Faculty of Economics, University of Zagreb, B.A. 1982, M.A. 1988. Ph.D. in Economics, CERGE-EI, 1996. Assistant Professor, CERGE, Charles University, 1996–2012. Deputy Director for Graduate Studies, CERGE and EI 1997–1999 and 2005–2008. At CERGE-EI (under US permanent charter) he was Philip Morris Associate Professor, Fall 2001 – Fall 2002, Altria Associate Professor, Spring 2003, and Associate Professor of European Economic Issues, Česká spořitelna Chair, Fall 2003 – Spring 2007. Financial Officer, Rade Koncar Corporation, Zagreb, 1982–1990. Lecturer, Central European University, 1994. Lecturer, World Bank and Joint Vienna Institute Comprehensive Course, 1993–2003.

Research orientation:

International trade, industrial organization, applied microeconomics.

IV. ACADEMIC CALENDAR 2013 - 2014

Academic Calendar for MA/PhD Program 2013/2014 (last update: 28 August 2013)

Month	September	October	November	December	January	February	March	April	May	June	July	August	
Week	2-6 9-13 16-20 23-27 30-4 7-11 14-18 21-25 28-1 4-8 11-15 18-22 25-29	25-29 18-22 11-15 4-8 28-1 21-25 14-18 7-11 30-4 23-27 16-20 9-13 2-6	25-29 18-22 11-15 4-8 28-1 21-25 14-18 7-11 30-4 23-27 16-20 9-13 2-6	25-29 18-22 11-15 4-8 28-1 21-25 14-18 7-11 30-4 23-27 16-20 9-13 2-6	25-29 18-22 11-15 4-8 28-1 21-25 14-18 7-11 30-4 23-27 16-20 9-13 2-6	25-29 18-22 11-15 4-8 28-1 21-25 14-18 7-11 30-4 23-27 16-20 9-13 2-6	25-29 18-22 11-15 4-8 28-1 21-25 14-18 7-11 30-4 23-27 16-20 9-13 2-6	25-29 18-22 11-15 4-8 28-1 21-25 14-18 7-11 30-4 23-27 16-20 9-13 2-6	25-29 18-22 11-15 4-8 28-1 21-25 14-18 7-11 30-4 23-27 16-20 9-13 2-6	25-29 18-22 11-15 4-8 28-1 21-25 14-18 7-11 30-4 23-27 16-20 9-13 2-6	25-29 18-22 11-15 4-8 28-1 21-25 14-18 7-11 30-4 23-27 16-20 9-13 2-6	25-29 18-22 11-15 4-8 28-1 21-25 14-18 7-11 30-4 23-27 16-20 9-13 2-6	25-29 18-22 11-15 4-8 28-1 21-25 14-18 7-11 30-4 23-27 16-20 9-13 2-6
1st year students	H	Fall Semester	Fall Semester	Holidays	Spring Semester	Spring Semester	Spring Semester	H	Summer Semester	Summer Semester		H	
2nd year students	H	Fall Semester	Fall Semester	Holidays	Spring Semester	Spring Semester	Spring Semester	H			RMS	H	
3rd and 4th year students	H	Research Seminar Series	Research Seminar Series	Holidays	Research Seminar Series	Research Seminar Series	Research Seminar Series	H	Research Seminar Series	Research Seminar Series		H	
Preparatory semester												Preparatory Semester	
	A/D	add / drop period											
	G	general-exams week											
	F	final-exams week											
	M	midterm-exams week											
	U	make-up general-exams week											
	P	graduation ceremony											
	H	official CERGE holiday											
	DPW	dissertation proposal workshops week											
	DW	dissertation workshops week											
	*	DW and P timing is provisional, will be confirmed by the end of November 2013											
	*	public holidays (all official public holidays in the Czech Republic) - classes supposed to take place in these days will be re-scheduled:											
		28 September - Czech Statehood Day (Saturday)											
		28 October - Establishment of the Czechoslovak Republic (Monday)											
		17 November - Freedom and Democracy Day (Sunday)											
		24 December - Christmas Eve (Tuesday)											
		25 December - Christmas Day (Wednesday)											
		26 December - Christmas Day (Thursday)											
		1 January - New Year's Day (Wednesday)											
		21 April (Easter Monday)											
		1 May - Labor Day (Thursday)											
		8 May - Liberation from Fascism (Thursday)											
		5 July - Cyril and Methodius (Saturday)											
		6 July - Burning at Stake of Jan Hus (Sunday)											

V. FALL SEMESTER TEACHING SCHEDULE 2013

The schedules are subject to change. Most recent versions are at https://iweb.cerge-ei.cz/phd/prog_details/coursebook/

A. FIRST YEAR STUDENTS						
	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	
08:30 – 10:00						
10:00 – 10:30	<i>Coffee Break</i>					
10:30 – 12:00		Statistics Gaulé 320				
12:00 – 13:30	<i>Lunch Break</i>					
13:30 – 15:00	Macro I Slobodyan/Kejak 320	Micro I Çelik 320	Macro I Slobodyan/Kejak 320	Micro I Çelik 320		
15:00 – 16:30				Statistics Gaulé 320		
16:30 – 18:00						

B. SECOND YEAR STUDENTS from Sept.16 to Nov 1, 2013

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
08:30 – 10:00		Econometrics III <i>Eriásová, Fianta, Kejak, Fekáč</i> 3	Econometrics III <i>Eriásová, Fianta, Kejak, Fekáč</i> 3	Financial Markets I*** Černý 3	Financial Markets I*** Černý 3
10:00 – 10:30	Coffee Break				
10:30 – 12:00		Academic Writing II* <i>S1-Mercury, S2-Downing, S3-Clarke</i> 12, 8, 117	Academic Writing II* <i>S1-Mercury, S2-Downing</i> 12, 117	Academic Writing II** <i>S1-Mercury, S2-Downing</i> 12, 8	Financial Markets I*** Černý 3
12:00 – 13:30	Lunch Break				
13:30 – 15:00	Industrial Org I <i>Čelík/Steiner</i> 3		Industrial Org I <i>Čelík/Steiner</i> 3	Empirical Methods <i>Gaulé</i> 3	Macro Topics <i>Jeong, Kejak</i> 3
15:00 – 16:30	International Trade <i>Čelík/Žigic</i> 3	Empirical Methods <i>Gaulé</i> 3	International Trade <i>Čelík/Žigic</i> 3	Academic Writing II <i>Section 3 - Clarke</i> 9	Research Seminar
16:30 – 18:00	Research Seminar	Macro Topics <i>Jeong, Kejak</i> 3		Research Seminar	

* on Oct 2, 16, 30

** on Sept 19, 26, Oct 10

*** on Sept 20, Oct 3, 4, 17, 18, 31 and Nov 1

B. SECOND YEAR STUDENTS from Nov 4 to Dec 6, 2013					
	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
08:30 – 10:00		Econometrics III <i>Brašoh, Franta, Kejak, Pakcoš</i> 3			
10:00 – 10:30	Coffee Break				
10:30 – 12:00	Financial Markets I <i>Michelucci</i> 3	Academic Writing II <i>S1-Mercury, S2-Downing, S7-Clarke</i> 12, 8, 117	Econometrics III <i>Brašoh, Franta, Kejak, Pakcoš</i> 117	Academic Writing II <i>S1-Mercury, S2-Downing</i> 12, 8	
12:00 – 13:30	Lunch Break				
13:30 – 15:00	Industrial Org I <i>Çelik/Steiner</i> 3	Financial Markets I <i>Michelucci</i> 3	Industrial Org I <i>Çelik/Steiner</i> 3	Empirical Methods <i>Gaulé</i> 3	Macro Topics <i>Jeong, Kejak</i> 3
15:00 – 16:30	International Trade <i>Çelik/Žigić</i> 3	Empirical Methods <i>Gaulé</i> 3	International Trade <i>Çelik/Žigić</i> 3	Academic Writing II <i>Section 3 - Clarke</i> 9	Research Seminar
16:30 – 18:00	Research Seminar	Macro Topics <i>Jeong, Kejak</i> 3		Research Seminar	

Notes: