CERGE-EI

Charles University
Center for Economic Research and Graduate Education
and the Economics Institute of the Czech Academy of Sciences

Academic Year 2018–2019 Course Book
Spring Semester

PhD Study Affairs Office
Prague, December 2018

The print version of this Course Book is subject to updates. Any updates will be available at
https://www.cerge-ei.cz/sao-internal/phd-students

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1 The structure of Ph.D. studies in economics at CERGE-EI

Study Program

These courses are included in the preparatory semester and the first and second years of study.

Preparatory semester

Subject	Lecture / exercise session hours
One lecture/ exercise unit is 45 minutes. 4/2 = 4 units of lecture and 2 units of exercise sessions per week.	
Macroeconomics 0	4/2, Exam
Microeconomics 0	4/2, Exam
Mathematics	4/2, Exam

Notes: The final selection of students to enter the doctoral program in the fall semester is made upon evaluation of preparatory semester results.

First year

Subject	Fall	Spring	Summer
One lecture/ exercise unit is 45 minutes. 4/2 = 4 units of lecture and 2 units of exercise sessions per week.			
Macroeconomics I, II, III	4/2, Exam	4/2, Exam	4/2, Exam
Microeconomics 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 successfully completing the first-year courses, students must pass General examinations in Macroeconomics, Microeconomics and Econometrics.

Second Year

Specific courses offer may differ slightly depending on faculty members in residence.

Subject	Fall	Spring	Summer
One lecture/ exercise unit is 45 minutes. 4/2 = 4 units of lecture and 2 units of exercise sessions per week.			
Economic Development and Institutions	4/2, Exam	---	---
Quantitative Economic History	---	4/2, Exam	---
Labor Economics I, II	4/2, Exam	4/2, Exam	---
Macro Topics I, II	4/2, Exam	4/2, Exam	---
Micro Topics I, II	4/2, Exam	4/2, Exam	---
Public Finance	4/2, Exam	---	---
Political Economy	---	4/2, Exam	---
Time Series Econometrics	4/2, Exam	---	---
Financial Econometrics	---	4/2, Exam	---
Academic Writing II	4/0, Credit	---	---
Research Methodology Seminar	Mandatory	Mandatory	0/2, Credit
Combined Skills I	---	4/0, Credit	---
Research Seminars	0/2, Credit	0/2, Credit	---
Combined Skills II – M.A.	---	---	0/2, Credit

Notes:
* Second-year students must choose at least three courses with final exams from different fields each semester, in addition to the mandatory/credit courses.
* Credits for Academic Skills Center courses, the Research Seminars and Directed Research are mandatory.
* Credit for the Research Methodology Seminar is awarded based on individual consultations with the instructors and individual written work.
* After completing the second year, each student must pass General exams in two fields.
* Combined Skills II – M.A. is for M.A. students only, who must produce a paper that fulfills the MA-degree writing requirement.

Third year

Subject	Fall	Spring	Summer

Combined Skills II – Ph.D.	Credit	---	---

Notes*: Students must pass the first- and second-year programs? as a pre-requisite to registration in CS II-Ph.D.*

2 Spring semester course syllabi

A. First year courses

MACROECONOMICS II

Lecturer:

Ctirad Slavík

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Teaching assistants:

Mikhail Mamonov

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Anna Pestova

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Office hours:

TBA

Course Description

This is the second part of the Advanced Macro sequence. It includes learning about technical tools and about applying them. In the first part of the course, we will set up a pretty general CE model with an infinite horizon, heterogenous firms and consumers. We will prove the First Welfare Theorem and discuss the Second Welfare Theorem for this environment. Then we will look at how to simplify the model to the deterministic one sector growth model (aggregation). We will discuss how to solve models of this kind (dynamic programming). In the next part of the course, we will extend the model to account for the 2 most important features of current economies: long run growth (briefly as it has been covered in macro 1) and business cycle fluctuations. In the next part of the course, we will consider the government's role in the economy and optimal fiscal policies. We will set up the classic Ramsey linear taxation problem and derive the celebrated Chamley-Judd result, which states that optimal taxes on capital are zero in the long run.

In the second part of the course (after the midterm) we will discuss issues related to inequality. We will start by characterizing the solution to a heterogeneous agents model with complex markets and conclude that the dynamics implied by the model are not consistent with real-world data. We will then analyze models in which markets are (exogenously) incomplete- either because not all assets are traded (there is only one risk-free asset) or there are borrowing constraints. First, we will characterize the solution to individual agent problems when the interest rate is fixed (partial equilibrium) with (first) deterministic and (second) stochastic income fluctuations. Next, we will study the general equilibrium version of these models with and without aggregate risk.

Prerequisites

Calculus, in particular differential calculus, basics of mathematical analysis and programming. It will be helpful if you have taken some advanced bachelor level macroeconomics and

microeconomics courses, but this is not a necessity. Of course, it is expected that you have taken parts 1 and 2 of the Macro 1 course.

Textbooks and Readings

Jones, Larry (2010): Lecture Notes, available on the course website and Larry Jones's website.

Perri, Fabrizio: Lecture Notes, available on the course website and Larry Jones's website.

I will base most of my lectures on these notes. It is a good idea to print them out in advance, skim through them and bring them to class. I am grateful to Larry and Fabrizio for letting me use them.

Books and Papers

Chari, Kehoe (1999): Optimal fiscal and monetary policy, in the Handbook of Macroeconomics

Judd, Kenneth L. (1998): Numerical Methods in Economics.

Ljungqvist, Lars and Thomas J. Sargent (2004): Recursive Macroeconomic Theory, MIT Press, Cambridge/London.

MasCollel, Whinston and Green (1995): Microeconomic Theory.

Stokey, Nancy L., Robert E. Lucas with Edward C. Prescott (1989): Recursive Methods in Economic Dynamics, Harvard University Press, Cambridge/London.

Additional readings are given for each topic.

Course Requirements and Grading

Grading will be based on problem sets (25% of the final grade) a midterm exam (25% of the final grade) and a final exam (50% of the final grade). The problem sets will be graded, returned to you and discussed in a TA session organized by the TA. You are allowed (and I strongly encourage you) to work on them in groups of up to 3 people. You will submit one solution for the whole group. Ideally, you should submit your problem sets typed in LaTex (e.g. WinEdt) or Scientific Word. This is a useful skill to learn in any case. Unreadable solutions will not be accepted.

Course Schedule

Below is a brief outline of the course. We will schedule extra tutorials to cover the problem sets.

1. Introduction (3 lectures)
   - ✓ What is macroeconomics? What is a macroeconomic model? HP filtering. A general infinite horizon economy with consumers and firms. Competitive equilibrium. What does the model omit? Slides. Readings: Jones, part 1.
   - ✓ Competitive equilibrium continued. (Skip as already covered: Firms' problem as a sequence of static problems. CRS and the zero profit result. Feasibility. Pareto efficiency.) First Welfare Theorem (with proof) and Second Welfare Theorem (without proof). Readings: Jones, part 1, MasCollel, Whinston and Green (1995).
   - ✓ Simplifying the model. Aggregation. CRS and simplifying the firms' side. Simplifying the consumers' side: (i) identical consumers, (ii) homothetic utility. The social planner's problem. The (stationary deterministic) one sector growth model. The stationary deterministic one sector growth mode. Readings: Jones, part 1, SLP, MasCollel, Whinston, and Green (1995).

2. Extending the stationary, deterministic one sector growth model (2 lectures).
- ✓ (Briefly) dynamics in the deterministic one sector growth model (SLP, chapter 6). Identifying two problems with the stationary one sector growth model: no growth and no fluctuations.
- ✓ (Skip (covered by Veronika and Marek), but feel free to go over the notes: Adding growth to the one sector growth model. Exogenous growth. One sector growth model with exogenous growth and dynamic programming (rewriting the problem into one with no growth, included in Jones, part 1.). Endogenous growth - the A*k* model, the A*(k, h)* model. Readings: Jones, part 3.
- ✓ Adding fluctuations to the one sector growth model, i.e. the stochastic one sector growth model. An example stochastic growth model with a closed form solution, i.e. the stochastic A*k* model. The role of uncertainty in growth. Relationship of this model to portfolio problems: homothetic utility and linear budget constraint and the Merton-Samuelson Theorem. Readings: Jones, part 4.

3. The Ramsey problem.(4-6 lectures) Readings: Jones, part 2.
- ✓ Adding government. Tax distortive competitive equilibrium. Ricardian equivalence. Welfare theorems revisited. Pareto optimality of lump sum taxes. Tax structures equivalent to lump sum taxes. Readings: LS, chapters 10 and11.
- ✓ Solving for the TDCE. The non-arbitrage condition revisited. The transversality condition.
- ✓ Steady state. Comparative statics of k and c wrt taxes in steady state. Equivalence between various tax structures. Redundancy of consumption and investment taxes.
- ✓ The Ramsey problem. Setting up the Ramsey problem. The primal vs. the dual approach. The implementability condition. Rewriting the Ramsey problem as a one sector growth model. Steady state. The Chamley-Judd result: $\tau_k \to 0$. Readings: LS, chapter 15.
- ✓ Long run behavior of the optimal tax on labor. Robustness of the Chamley-Judd result - government BC clearing period by period. When does the Chamley-Judd result break down? Briefly: commitment and time consistency. Readings: Chari-Kehoe Handbook Chapter, Jones, Manuelli, Rossi (JET 1997). Lansing (1999), Straub and Werning (AER, forthcoming), Chari, Nicolini and Teles (working paper)

Midterm about here…

Time permitting: commitment and time consistency. Time inconsistency of the Ramsey plan (Chari, Kehoe papers on sustainability. Readings: LS, chapter 15.

- ✓ Extra class or two? Going over Problem Set 5. Combining growth and fluctuations: the basic RBC model. The Solow residual as the technological shock. Constructing the Solow residual from the data, estimating the process for the Solow residual. Calibration. Solving the RBC model, numerical dynamic programming continued: policy function iteration with a discrete grid. PFI with exogenous grid. Checking

precision: Euler equation errors. (Application of the methods on (i) the optimal savings problem with income fluctuations, a fixed interest rate and a borrowing limit and (ii) the one sector growth model with uncertainty, i.e., the RBC model). Successes and shortcomings of the RBC model. Current developments. Readings: Cooley (editor): Frontiers of Business Cycle Research, Princeton University Press, 1995, SLP, chapter 6, Judd (1998), LS chapters 3 and 4. Barillas, Fernandez-Villaverde (2007), A generalization of the endogenous grid method JEDC.

4. Heterogeneity in macroeconomics (each bullet point approx. 1 lecture). Readings: Fabrizio Perri lecture notes (FLN), LS chapters 16 and 17, Huggett (JEDC), Aiyagari (QJE), Krusell-Smith (JPE).

- ✓ Characterizing the solution to a heterogeneous agents model with complete markets. Consumption and asset dynamics.

- ✓ Income fluctuation problems with quadratic utility, no borrowing constraints and beta(1+r) = 1. Certainty equivalence. The permanent income hypothesis.

- ✓ Precautionary savings with a general utility function, no borrowing constraints and prudence (u'''>0). Precautionary savings with a quadratic utility function and
- ✓ *relevant* borrowing constraints.

- ✓ Consumption and asset dynamics in \emph{deterministic} income fluctuation problems and beta(1+r) < 1, beta(1+r) = 1,beta(1+r) > 1.

- ✓ Consumption and asset dynamics in \emph{stochastic} income fluctuation problems. Almost sure convergence. Supermartingale convergence theorem.

- ✓ Consumption and asset dynamics in *stochastic* income fluctuation problems and beta(1+r) < 1, beta(1+r) = 1, beta(1+r) > 1 continued. Asset divergence with beta(1+r) = 1.

- ✓ Stationary equilibria in economies with idiosyncratic risk and incomplete markets. 2 lectures. FLN 7.

- ✓ Transitions and aggregate uncertainty in economies with idiosyncratic risk and incomplete markets. 2 lectures. FLN 8.

MICROECONOMICS II

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Office hours:

Will be posted on the office door

Course Information

This is the second course in the microeconomics sequence. The objective of the sequence in general and of the course in particular is to i) provide students with firm knowledge of basic microeconomic theory, ii) provide students with a grasp of relevant (micro)economic concepts on intuitive and formal levels and iii) equip students with tools and techniques allowing them to conduct their own independent research.

The course is based on 24 90-minute lectures and 12 90-minute classes (exercise sessions). Two lectures and one class take place in any given week.

11 weekly problem sets are an integral part of the course. Students are required to complete one problem set per week and hand it in before each class (details to be specified). The classes will be devoted to the discussion of problem set solutions. Team-work on the problem sets is encouraged. Free-riding on the effort of team-mates is not … work on the problem sets is essential for grasping the course material and for exam preparation.

Course Outline
1. General equilibrium under certainty
2. General equilibrium under uncertainty
3. Game theory

Requirements and Grading
Grades will be based on the final exam only. The final exam will take place in week 13 (details to be specified). There will be midterm exam in week 6 or 7 (details to be specified) with a similar structure to the final exam and hence indicative of students' standing in the course. In addition, students are required to hand in 11 weekly problem sets.

Readings
Principal textbooks:
- ✓ Mas-Colell, Andreu; Michael D. Whinston and Jerry R. Green. Microeconomic Theory. Oxford: Oxford University Press, 1995. (henceforth MWG)

✓ Fudenberg, Drew and Jean Tirole. Game Theory. London: MIT Press, 1991. (henceforth FT)

✓ Osborne, Martin J. and Ariel Rubinstein. A Course in Game Theory. London: MIT Press, 1994.   (henceforth OR)

Reference books (not required):

Microeconomic:

✓ Jehle, Geoffrey A. and Philip J. Reny. Advanced Microeconomic Theory. Essex: Pearson Education Limited, 2011.

✓ Varian, Hal R. Microeconomic Analysis. London: W. W. Norton & Company, 1992.

Mathematical:

✓ Aliprantis, Charalambos D. and Kim C. Border. Infinite Dimensional Analysis: A Hitchhiker's Guide. Berlin: Springer, 2007.

✓ Border, Kim C. Fixed Point Theorems with Applications to Economics and Game Theory. Cambridge: Cambridge University Press, 1989.

✓ Dixit, Avinash K. Optimization in Economic Theory. Oxford: Oxford University Press, 2002.

✓ Duggan, John. Basic Concepts in Mathematical Analysis. https://drive.google.com/open?id=1yQZbvXMqOkZKdtVaaz8vNIDGjsu_-028, 2013.

✓ Chiang, Alpha C. Fundamental Methods of Mathematical Economics. London: McGraw-Hill, 1984.

✓ McLennan, Andrew. Advanced Fixed Point Theory for Economics. http://cupid.economics.uq.edu.au/mclennan/Advanced/advanced_fp.pdf, 2014.

✓ Simon, Carl P. and Lawrence Blume. Mathematics for Economists. London: W. W. Norton & Company, 1994.

✓ Takayama, Akira. Mathematical Economics. Hinsdale, IL: Dryden Press, 1974.Huang, Chi-fu and Robert H. Litzenberger, Foundations for Financial Economics, North-Holland, 1988.

Game theory:

✓ Maschler, Michael; Eilon Solan and Shmuel Zamir. Game Theory. Cambridge: Cambridge University Press, 2013.

✓ Myerson, Roger B. Game Theory: Analysis of Conflict. London: Harvard University Press, 1991.

ECONOMETRICS I

Lecturer:

Stanislav Anatolyev

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Teaching assistants:

Michal Hakala

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Filip Staněk

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Office hours:

Monday 14:00-15:00

Course Information

The course presents technical aspects of modern econometric estimation and inference, applied in both cross-sectional and time-series settings. After reviewing important econometric notions and asymptotic inference tools, we concentrate on parametric regression models, including linear and nonlinear. Then we turn to methods applied to non-regression settings, including maximum likelihood and method of moments estimation. Finally, we will study the method of bootstrap inference. Home assignments serve as an important ingredient in the learning process.

Course Outline
1. Econometric concepts
   - ✓ Conditional distribution and conditional expectation. Notion of regression.
   - ✓ Conditional expectation function as a best predictor.
   - ✓ Random sampling. Analogy principle.
   - ✓ Parametric, nonparametric and semi-parametric estimation.
2. Asymptotic inference
   - ✓ Why asymptotics? Limitations of exact inference.
   - ✓ Asymptotic tools: convergence, LLN and CLT, continuous mapping theorems, delta-method.
   - ✓ Asymptotic confidence intervals and large sample hypothesis testing under random sampling.
   - ✓ Asymptotics with time series: stationarity, ergodicity, MDS, LLN and CLT, HAC estimation.
3. Linear parametric mean regression
   - ✓ OLS estimator. Asymptotic inference in linear mean regression model.
   - ✓ Variance estimation robust to conditional heteroscedasticity.
   - ✓ Time series linear regression.
4. Nonlinear parametric mean regression
   - ✓ NLLS estimator. Asymptotic inference in nonlinear mean regression model.

✓ Computation of NLLS estimates: concentration method.

5. Method of maximum likelihood
   - ✓ Likelihood function and likelihood principle.
   - ✓ Consistency and asymptotic normality of ML estimators.
   - ✓ Asymptotic efficiency of the ML estimator.
   - ✓ ML asymptotic tests: Wald, Likelihood Ratio, Lagrange Multiplier.
   - ✓ ML estimation for time series models and data.

6. Method of moments
   - ✓ Moment restrictions and moment functions. Exact identification and overidentification.
   - ✓ Classical and generalized methods of moments.
   - ✓ Asymptotic properties of GMM estimators. Efficient GMM.
   - ✓ Test for overidentifying restrictions.
   - ✓ Linear instrumental variables regression.
   - ✓ GMM and time series data. Rational expectations models and other applications.

7. Bootstrap inference
   - ✓ Empirical distribution. Approximation by bootstrapping.
   - ✓ Bootstrap confidence intervals and bootstrap hypothesis testing.
   - ✓ Bootstrap resampling in cross-sections and in time series.

Requirements and Grading
- ✓ There will be weekly home assignments that account for 20% of the final grade.
- ✓ Home assignments will contain analytical problems as well as computational exercises.
- ✓ You need to use MATLAB for computational exercises.
- ✓ Answer keys to analytical problems will be distributed.
- ✓ The *Problems and Solutions* manual has problems for independent work and discussion in ES.
- ✓ The midterm exam accounting for 30% of the final grade will have a two-sided A4 format.
- ✓ The final exam accounting for 50% of the final grade will have a two-sided A4 format.
- ✓ Lecture and ES attendance of at least 50% is a prerequisite for passing the course.

Readings
Main sources
Hansen, Bruce (2018). *Econometrics*. Available online on author's webpage at University of Wisconsin

Anatolyev, Stanislav (2009). *Intermediate and Advanced Econometrics: Problems and Solutions*. Available online at *is.gd/EconometricsPS*
Occasional chapters from other sources and handouts.

Optional textbooks for reference
Goldberger, Arthur (1991). A Course in Econometrics, Harvard University Press.

Greene, William H. (2003). Econometric Analysis, 5th edition, Prentice Hall.

Academic Integrity Policy

Cheating, plagiarism, and any other violations of academic ethics at CERGE-EI are not tolerated.

ACADEMIC WRITING I

Lecturers:

Deborah Novakova

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Gray Krueger

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Office hours:

TBA

Course Information

This course is the first step of PhD/professional level writing in Economics. We focus on ways that writing at this level differs from other types of writing. Students will practice their analytical writing skills in formal, post-graduate level English. There is an emphasis on accurate and effective citation and referencing, and the types of language used in professional texts in the field. The course includes lectures, peer review during the writing process, and individual consultations with the instructor. Extensive written feedback on the work is given with a view to supporting future writing.

The final task is a written analytical comparison of two related articles in the field of Economics. Students choose articles/topics that reflect their personal interests in the field. The skills practiced on this course are designed to support student writing throughout their first two years of study and beyond.

Requirements and Grading

Summary of an article	10%
Annotated bibliography	25%
Peer analysis	15%
Analytical comparison	50%

100% attendance is mandatory. Any necessary absences must be discussed with your instructor, preferably in advance, and any work missed must be made up. Missing more than three classes (unexcused) will result in a one-letter-grade penalty on the final course grade. The ASC forgives absences and late submissions of graded tasks in cases when the SAO informs us that the absence/s is/are officially excused. Any unexcused late submission will be automatically graded 0.

B. Second year courses

FINANCIAL ECONOMETRICS

Lecturer:
Veronika Selezneva
(veronika.selezneva@cerge-ei.cz,office 323, phone 188)
Teaching assistant:
TBA
Office hours:
TBA

Course information

This course is the second half of the two-semester sequence "Time Series and Financial Econometrics" and relies extensively on time series concepts and tools developed in the first half. The purpose of this course is to introduce classic topics in the empirical asset pricing literature and provide related econometric methods. Students will acquire a set of tools that are useful for modeling financial data and testing beliefs about how financial markets operate.

Course Outline (tentative and subject to change)
- ✓ Building and testing asset pricing models
    - o Arbitrage pricing theory
    - o Mean variance efficient frontier
    - o CAMP/Single factor models
    - o Multi factor models
    - o Cross-sectional regressions, Fama-MacBeth
    - o Conditional vs. unconditional asset pricing models
- ✓ Term structure models
    - o Affine models
    - o Factor analysis and principal component methods
    - o State space models and filtering
    - o Shadow rates, ZLB
- ✓ Event-study methodology
- ✓ Testing market interdependence
- ✓ Topics in macro-finance
- ✓ Estimation methods
    - o Simulated method of moments
    - o Indirect inference and efficient method of moments

Requirements and Grading

The course grade will depend on problem sets (30%), a short presentation (30%) and a final exam (40%). The students are allowed to work on the homework problems in groups of up to 3 people. One assignment per group should be submitted. Some home assignments will include computer exercises with financial data. Any programming language can be used, but statistical packages are not allowed.

Readings

Cambell, J.Y., A.W. Lo, and A.C. MacKinlay, 1997, "The Econometrics of Financial Markets", Princeton University Press.

Cochrane, J.H., 2001, "Asset Pricing", Princeton University Press.

Hamilton, J.D., 1994, "Time Series Analysis", Princeton University Press.

A collection of readings will complete the course material (TBA).

LABOR ECONOMICS II

Lecturers:

Mariola Pytliková

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Daniel Münich

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Teaching assistant:

Ekaterina Travova

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Office hours:

MP – upon appointment

DM – Tuesday 14:00-16:00 + anytime the door is open

Course Information

This course is the second in a two-semester sequence in labor economics. The aim is to guide students through economic analyses of the labor market and provide them with

fundamentals of labor economics. We will study important contemporary economic issues, including determinants and selectivity in migration, consequences of international migration and ethnic diversity, sources of wage inequality, the labor market impacts of taxation, minimum wage legislation and unemployment benefits, the impact of different forms of human capital on labor market outcomes, and workers' discrimination. The course will combine theoretical concepts, empirical evidence and empirical approaches including use of econometrics tools in labor market economics. Critical discussions about implications for public policy designs and policy experience will be encouraged.

The course has three major goals (i) to guide students through current theoretical and empirical understanding of major issues in the broad field of labor economics, (ii) to guide students in their own empirical research, (iii) to familiarize students with common research resources, standards of practice and approaches in the field. Throughout the topics, references will be made to empirical approaches (data and techniques econometric / identification strategies) and actual policies.

As for learning outcomes, first, the students will gain methodological skills. By studying the links between the economic theory and empirical testing, and by applying empirical research, students will gain critical understanding of how economic facts become established and how policy recommendations are formed. This will teach them about the use of empirical testing and evidence in discussions of different economic issues. Second, the students will learn how to work with data and how to conduct empirical research. Thirdly, by writing a term paper with a critical literature review, students will learn to write in a way that integrates the economic theory, the findings in the empirical literature and discussion of important economic policy and social issues. Finally, the course will train the students further in their oral presentation skills, through their own presentations.

The necessary prerequisite for the course is familiarity with principles of microeconomic theory and econometrics from the 1st year.

Course Outline

LABOR SUPPLY
- ✓ Labor supply over business and life-cycle (DM)
- ✓ Retirement and aging; Early retirement plans (MP)
- ✓ Duration analyses (DM)
- ✓ Active labour market policies; Unemployment benefits (MP, DM)
- ✓ Family and work; Family policies (MP)

MODELS OF WAGE STRUCTURES
- ✓ Pay & productivity-wage determination within firms, incentive pay, efficiency wages (MP)
- ✓ Changes in wage structures, income inequality (MP)
- ✓ Social mobility (MP)
- ✓ Job turnover, matching and search, unemployment duration (DM)

ECONOMICS OF MIGRATION

- ✓ Economics of migration, introduction, trends and concepts (MP)
- ✓ Determinants of migration (MP)

- ✓ Selectivity in migration (MP)
- ✓ Immigrant performance and integration; The second generation (MP)
- ✓ Impacts of immigration (MP)
- ✓ Wider effects of immigration; International migration and globalization (MP)
- ✓ Immigration policy (MP)
- ✓ Diversity; Impacts of workforce diversity on firms and economies (MP)
- ✓ Emigration and source countries; Brain drain and brain gain; Remittances (MP)

OTHER SPECIFIC ISSUES

- ✓ Labor market effects of international trade and FDI; Production sharing (MP)
- ✓ Peer Effects (MP)

Requirements and Grading

Grades will be based on student performance on the final exam (55%), a term paper, i.e. a written assignment combining a critical literature review, descriptive evidence and empirical analyses (40%) and presentation of the term paper at a mini-conference (5%).

The aim of the term paper is to familiarize students with writing reports based on a carefully conducted academic literature review, descriptive statistical analyses and empirical analyses on a topic of their own choice. The task will also familiarize students with real empirical econometric analysis (using the Stata statistical package), using real empirical data and estimating selected models. The term paper is expected to be written by a team of two (max three) students. Thus, the aim of the term paper is also to strengthen students' experience working in (internationally diverse) teams. Students will present their essays at a "mini-conference", during which they will collect comments from teachers and other fellow students and discussants assigned to each term paper. The comments are aimed to improve the students' final term paper, upon which they will be graded.

Exercise sessions will be scheduled irregularly and will focus mainly on empirical research practices (data work, statistics, and econometrics) related to the syllabus. Detailed information, announcements, lecture materials (readings, links, lecture handouts, etc.) and details about assignments and exercise sessions will be made available in advance via the course web page.

Readings

Selected chapters from:

Ashenfelter, O. C., Layard, R., & Card, D. (Eds.). (1986–2011). *Handbook of Labor Economics* (Vols. 1–4). Amsterdam: Elsevier.

Bansak, C., Simpson, N. B., & Zavodny, M. (2015). *Economics of Immigration.* London: Routledge.

Boeri, T., & van Ours, J. C. (2013). *The Economics of Imperfect Labor Markets* (2nd ed.). Princeton: Princeton University Press.

Borjas, G. J. (2016). *Labor Economics* (7th ed.). New York: McGraw-Hill.

Borjas, G. J. (2014). *Immigration Economics.* Cambridge: Harvard University Press.

Cahuc, P., Carcillo, S., & Zylberberg, A. (2014). *Labor Economics* (2nd ed.). Cambridge: MIT Press.

Ehrenberg, R. G., & Smith, R. S. (2018). *Modern Labor Economics: Theory and Policy* (13th ed.). London: Routledge.

Auxiliary reference texts:

Angrist, J. D., & Pischke, J.-S. (2009). *Mostly Harmless Econometrics: An Empiricist's Companion.* Princeton: Princeton University Press.

Angrist, J. D., & Pischke, J.-S. (2014*). Mastering 'Metrics: The Path from Cause to Effect*. Princeton: Princeton University Press.

Baltagi, B. H. (2013). *Econometric Analysis of Panel Data* (5th ed.). Chichester: John Wiley & Sons.

Greene, W. H. (2018). *Econometric Analysis* (8th ed.). New York: Pearson.

Wooldridge, J. M. (2016). *Introductory Econometrics: A Modern Approach* (6th ed.). Boston: Cengage Learning.

Wooldridge, J. M. (2010). *Econometric Analysis of Cross Section and Panel Data* (2nd ed.). Cambridge: MIT Press.

Additional readings (journal articles and papers) will be provided for various subtopics before and after particular lectures.

MACRO TOPICS II

Lecturer:
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None
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TBA

Course Information

We will study about ten articles from the reading list below. We will start with the first article on the list, and discuss the selection of subsequent articles in class. You are required to read the selected articles in advance of lectures and to write a short question at the beginning of each lecture. Lectures will build on your questions about the contents of the papers.

Requirements and Grading

The grade is based on the midterm exam (25%), the final exam (25%), occasional home problems (25%), and your questions submitted at the beginning of lectures (25%).

Readings

Jones, C. and Kim, J. (2018), "A Schumpeterian Model of Top Income Inequality," *Journal of Political Economy* 126: 1785-1826.

Fagereng, A., Guiso, L., Malacrino, D., and Pistaferri, L. (2018), "Heterogeneity and Persistence in Returns to Wealth," Manuscript.

Benhabib, J., Bisin, A., and Luo, M. (Forthcoming), "Wealth Distribution and Social Mobility in the US: A Quantitative Approach," *American Economic Review*.

Acemoglu, D. and Restrepo, P. (2018), "Robots and Jobs: Evidence from US Labor Markets," Manuscript.

Acemoglu, D. and Restrepo, P. (2018), "The Race between Man and Machine: Implications of Technology for Growth, Factor Shares, and Employment," *American Economic Review* 108: 1488-1542.

Auto, D., Dorn, D., Katz, L., Patterson, C., and Van Reenen, J. (2017), "The Fall of Labor Share and the Rise of Superstar Firms," NBER Working Paper 23396.
Hornstein, A., Krusell, P., and Violante, G. (2011), "Frictional Wage Dispersion in Search Models: A Quantitative Assessment," *American Economic Review* 101: 2873-2898.

Lopes de Melo, R. (2018), "Firm Wage Differentials and Labor Market Sorting: Reconciling Theory and Evidence," *Journal of Political Economy* 126: 313-346.

Kahn, L. and Lange, F. (2014), "Employer Learning, Productivity, and the Earnings Distribution: Evidence from Performance Measures," *Review of Economic Studies* 81: 1575-1613.

Kaplan, G. and Violante, L. (2014), "A Model of Consumption Response to Fiscal Stimulus Payments," *Econometrica* 82: 1199-1239.

Kaplan, G., Moll, B., and Violante, G. (2018), "Monetary Policy according to HANK," *American Economic Review* 108: 697-743.

Bianchi, J. and Mendoza, E. (2018), "Optimal Time-Consistent Macroprudential Policy," *Journal of Political Economy* 126: 588-634.

Burstein, A. and Vogel, J. (2017), "International Trade, Technology, and the Skill Premium," *Journal of Political Economy* 125: 1356-1412.

Arkolakis, C., Ramondo, N., Rodriguez-Clare, A., and Yeaple, S. (2018), "Innovation and Production in the Global Economy," *American Economic Review* 108: 2128-2173.

Adda, J., Dustmann, C., and Stevens, K. (2017), "The Career Costs of Children," *Journal of Political Economy* 125: 293-337.

MICRO TOPICS II

Lecturers:

Avner Shaked

(avner.shaked@gmail.com, office 113, phone 162)

Jakub Steiner

(jakub.steiner@cerge-ei.cz, office 325, phone 182)

Krešimir Žigić

(kresimir.zigic@cerge-ei.cz, office 306, phone 245)

Teaching assistant:

Office hours:

TBA

Jakub Steiner's Part

Behavioral Theory
Acknowledgment: This course follows the structure of the behavioral-economics course of Professor Mark Dean from Columbia University who has kindly shared his teaching material with me.

The course will cover deviations of human behavior from the predictions of the standard economic model of rational decision-making. The course is divided into 4 topics.

Topic 1: *Rational decision-making*
As a benchmark, we will study the standard decision-making model in which choice is represented by the maximization of a stable utility function. In later topics, we will compare this benchmark model against the behavioral deviations from rational behavior.

Suggested reading:
"Lecture Notes in Microeconomic Theory" by Ariel Rubinstein Chapters 1-3.

"Notes on the Theory of Choice", David Kreps, Chapter 1-3.

"The Money Pump as a Measure of Revealed Preference" Fede Echenique, SangMok Lee and Matt Shum, Journal of Political Economy 2011.

"When Choice is Demotivating: Can One Desire Too Much of a Good Thing?" Iyengar, S. S., M. R. Lepper, Journal of Personality and Social Psychology, 2000.

"The Endowment Effect, Loss Aversion, and Status Quo Bias: Anomalies," Kahneman, Daniel & Knetsch, Jack L & Thaler, Richard H, Journal of Economic Perspectives, 1991.

"The Causes of Preference Reversal "Amos Tversky, Paul Slovic and Daniel Kahneman American Economic Review, 1990.

"Adding Asymmetrically Dominated Alternatives: Violations of Regularity and the Similarity Hypothesis," Huber, Joel, John W. Payne, and Christopher P. Puto, Journal of Consumer Research, 1982.

Topic 2: *Bounded Rationality*
One of the reasons people may deviate from the predictions of the rational model is that optimization is hard. We will review models that explicitly consider the cost of information processing and of optimization. We will start with a model of satisficing by Herbert Simon and continue with the model of rational inattention by Christopher Sims.

Suggested reading:
"Modelling Bounded Rationality" Ariel Rubinstein, MIT press 1998.

"Maps of bounded rationality: psychology for behavioral economics". Kahneman, Daniel 2003. The American Economic Review.

"Poverty Impedes Cognitive Function." Mani, Anandi, Mullainathan, Sendhil, Shafir, Eldar, and Jiaying Zhao. 2013. Science, 341: 976-980.
"Stochastic Choice and Consideration Sets," Paola, Manzini & Marco, Mariotti, SIRE Discussion Papers 2013-28, 2013.

"Revealed Attention" Y. Masatlioglu, D. Nakajima and E. Ozbay, American Economic Review, 2012.

"Consideration Sets and Competitive Marketing,", Kfir Eliaz & Ran Spiegler Review of Economic Studies, 2011.

"Search and Satisficing" Andrew Caplin, Mark Dean and Daniel Martin, American Economic Review, 2011.

"Testing models of consumer search using data on web browsing and purchasing behavior." Babur De Los Santos, Ali Hortacsu, and Matthijs R. Wildenbeest. American Economic Review, 2012.

"Rational inattention to discrete choices: A new foundation for the multinomial logit model." Filip Matejka and Alisdair McKay. American Economic Review, 2015.

"Strategic pricing and rational inattention to quality." Daniel Martin, Games and Economic Behaviour, 2017.

"Salience and Consumer Choice", Pedro Bordalo, Nicola Gennaioli and Andrei Shleifer, Mimeo, 2012.

"Libertarian Paternalism is not an Oxymoron", Thaler, Richard H. and Cass R. Sunstein, Conference Series; [Proceedings], Federal Reserve Bank of Boston, 2003.

"Optimal Defaults and Active Decisions," Gabriel D. Carroll & James J. Choi & David Laibson & Brigitte C. Madrian & Andrew Metrick, The Quarterly Journal of Economics, 2009.

Topic 3: *Temptation and Self Control*
Even perfectly rational people may make irrational choices if they are subject to temptation and self-control problems. We will define temptation and self-control problems as internal conflicts between various selves of a decision-maker.

Suggested reading:
"Procrastination, Deadlines, and Performance: Self-Control by Precommitment," Ariely, Dan, and Wertenbroch, Klaus. Psychological Science, 2002.

"Temptation and Self-Control" Faruk Gul and Wolfgang Pesendorfer, Econometrica, 2001.

"Golden Eggs and Hyperbolic Discounting", Laibson, David. Quarterly Journal of Economics 1997.

"Contracting with Diversely Naive Agents," Kfir Eliaz & Ran Spiegler, Review of Economic Studies, 2006.

''Commitment Devices'', Bryan, Gharad and Karlan, Dean S. and Nelson, Scott, Annual Review of Economics, 2012 7.

"Paying Not To Go To The Gym", Della Vigna, S. and Malmendier, U., American Economic Review 2006.

"Self-Control at Work" Supreet Kaur, Michael Kremer and Sendhil Mullainathan, 2014, Journal of Political Economy.

Topic 4: *Risk and Uncertainty*
Most economic decisions are risky since the decision-maker does not have complete information about the consequences of the actions available to her. We first extend the rational framework to risky decisions and then proceed to study behavioral phenomena such as probability weighting and overconfidence.

Suggested reading:
"Lecture Notes in Microeconomic Theory" by Ariel Rubinstein Chapter 7.

"Notes on the Theory of Choice", David Kreps, Chapter 4-7.

"Developments in Non-expected Utility Theory: The Hunt for a Descriptive Theory of Choice under Risk," Chris Starmer, Journal of Economic Literature, 2000.

"Prospect Theory: An Analysis of Decision under Risk", Kahneman, Daniel, and Amos Tversky, Econometrica, 1979.

''Ellsberg Revisited: An Experimental Study," Yoram Halevy, Econometrica, 2007.

"Overconfidence and Excess Entry: An Experimental Approach," Camerer, C. and Lovallo, D, American Economic Review, 1999.

"Rational Overoptimism (and Other Biases)", Van den Steen, E, American Economic Review, 2004.

"Selling to Overconfident Consumers," Grubb, Michael D, American Economic Review, 2009.

Krešimir Zigić's Part

The second part of the course continues to explore various applications of strategic behavior, notably in the field of economics of innovation and international trade.

Innovation and R&D

Etro, F. (2007). *Competition, Innovation and Antitrus: A Theory of Market Leaders and Its Policy Implications.* Berlin: Springer. [Chapter 4].

Etro, F. (2004). Innovation by Leaders. *The Economic Journal*, 114(495), 281–303.

Belleflamme, P., & Peitz, M. (2010). *Industrial Organization: Markets and Strategies*. Cambridge: Cambridge University Press. [Chapter 18].

Vives, X. (2008). Innovation and Competitive Pressure. *The Journal of Industrial Economics,* 56(3), 419–469.

Kamien, M. I., Muller, E., & Zang, I. (1992). Research Joint Venture and R&D Cartels. *American Economic Review*, 82(5), 1293–1306.

Lee, T., & Wilde, L. L. (1980). Market Structure and Innovation: A Reformulation. *Quarterly Journal of Economics*, 94(2), 429–436.

Loury, G. C. (1979). Market Structure and Innovation. *Quarterly Journal of Economics*, 93(3), 395–410.

Senyuta, O., & Žigić, K. (2016). Managing Spillovers: An Endogenous Sunk Cost Approach. *Information Economics and Policy*, 35(June), 45–64.

Strategic Trade Policy

Brander, J. (1986). Rationales for Strategic Trade and Industrial Policy. In P. R. Krugman (Ed.). *Strategic Trade Policy and the New International Economics* (pp. 23–46), Cambridge: MIT Press.

Brander, J. (1995). Strategic Trade Policy. In G. M. Grossman & K. Rogoff (Eds.). *The Handbook of International Economics* (Vol. 3), (pp. 1395–1455), Amsterdam: North-Holland.

Brander, J., & Krugman, P. (1983). A 'Reciprocal Dumping' Model of International Trade. *Journal of International Economics*, 15(3–4), 313–321. [or in G. M. Grossman (Ed.). (1992). *Imperfect Competition and International Trade*, Cambridge: MIT. (Henceforth, Grossman volume)].

Brander, J., & Spencer, B. (1984). Tariff Protection and Imperfect Competition. In H. Kierzkowski (Ed.). *Monopolistic Competition and International Trade* (pp. 194–206). Oxford: Clarendon Press.
Eaton, J., & Grossman, G. M. (1992). Optimal Trade and Industrial Policy under Oligopoly. In Grossman volume (pp.121–139).

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

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

Kovač, E., & Žigić, K. (2014). International competition in vertically differentiated markets with innovation and imitation: Trade policy versus free trade. *Economica,* 81(323), 491–521.

Moraga-González, J. L., & Viaene, J. M. (2005). Trade Policy and Quality Leadership in Transition Economies. *European Economic Review*, 49(2), 359–385.

Neary, J. P., & Leahy, D. (2000). Strategic Trade and Industrial Policy Towards Dynamic Oligopolies. *Economic Journal*, 110(463), 484–508.

Neary, P. (2003). Presidential Address: Globalization and Market Structure. *Journal of the European Economic Association*, 1(2/3), Papers and Proceedings of the Seventeenth Annual Congress of the European Economic Association (Apr. - May, 2003), 245–271.

Qiu, L. D., & Lai, E. L.-C. (2004). Protection of Trade for Innovation: The Roles of Northern and Southern Tariffs. *Journal of Japan and World Economy*, 16(4), 449–470.

Žigić, K. (2000). Strategic Trade Policy, Intellectual Property Rights Protection, and North-*S*outh 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*, 39(4), 533–556.

Avner Shaked's Part

Bargaining
Models of Individual Bargaining, Bargaining in Markets.
Osborne, J. M. and A. Rubinstein: *Bargaining and Markets*, Academic Press, 1990.

Search
Foundation of the theory of Search, various search models.

Pissarides, Christopher. Royal Economic Society Easter School 2008, Lecture Notes.

Pissarides, Christopher. *Equilibrium Unemployment Theory*, 2000. MIT Press

Bounded Rationality
Models in which consumers are not fully rational.
Spiegler, R., Bounded Rationality and Industrial Organization, Oxford University Press, 2011.

Contract Theory
Some models introducing Contract theory
Bolton, P. Dewatripont, M. Contract Theory, MIT, 2004.

Hart, O. Firms, Contracts, and Financial Structure, Clarendon Press, 1995.

POLITICAL ECONOMY

Lecturer:
Jan Zápal
(jzmicro@cerge-ei.cz,office 307, phone 107)
Teaching assistant:
Not applicable
Office hours:
See the office door

Course Information
The course offers an overview of political economy. After completing the course, students should be familiar with different topics comprising political economy and have a sense of each topic's research frontier. The course is meant to be taken in combination with a public finance component.

The course is comprised of 12 weekly meetings. Each meeting lasts three hours during which a lecture is combined with a (paper) student presentation. There are no exercise sessions.

Course Outline
1. social choice
2. modeling elections
3. other roles of elections, information transmission/aggregation
4. (legislative) bargaining
5. influence
6. agency
7. parties
8. political economy of growth, political failures
9. behavioral political economy
10. conflict
11. media
12. redistribution/income inequality, polarization

Requirements and Grading
The final grade will be based on:
- 20% problem sets,
- 30% final exam,
- 50% paper presentation.

Problem sets (about six) will be distributed during the course and are due by the last lecture of the course. Please submit (email) your problem sets as a pdf in LaTeX.

The final exam will be based on the course readings, the problem sets, and the presentations. The exam is open-book and consists of four short questions (out of four given) and one long question (out of two given).

One paper presentation should take place in each week (excess supply and demand of weeks and students will be rationed out) and should be devoted to a specific paper. Papers suitable for presentation are designated with a P on the reading list.

Readings
The reading list will be distributed during the first lecture.

QUANTITATIVE ECONOMIC HISTORY

Lecturer:
Christian Ochsner
(christian.ochsner@cerge-ei.cz, office 322, phone 226)
Teaching assistant:
Ketevani Kapanadze
(ketevani.kapanadze@cerge-ei.cz)
Office hours:
TBA

Course Information

This course combines an overview of economic history with methods of empirical identification strategies for causal inferences. The topics deal with the causes and determinants of the long-run evolution of economic and socio-economic variables. Topics including the Little Divergence of Europe, the Industrial Revolution, lessons of the Great Depression and the economic history of the post-WWII period will be covered. The focus of the course is mainly on Europe and the US. Two special blocks focus on the economics of wars (and their consequences) and on the economics of totalitarian regimes. Additionally, the origin and persistence of soft economic variables including cultural norms, trust and beliefs will be covered. These variables are becoming increasingly important in current research to analyse persistent economic differences.

The course is roughly divided into a teaching part and a paper discussion part. The teaching part provides stylized facts, historical and theoretical concepts in the field of economic history and gives an overview of empirical identification strategies for causal inferences. The major empirical concepts will follow Angrist and Pischke (2010). In the paper discussion part, students will read, present and discuss research papers that fit the material covered in the teaching class. Most of the discussion papers are recent seminal contributions in the field of quantitative economic history that offer a novel empirical approach. This combination of facts and figures in economic history, causal inferences and paper discussion will lead students to the research frontiers in this field. However, the concepts and papers covered will enable students to think about and conceptualize their own research ideas outside the field of economic history as well. Thus, students who plan to do their PhD thesis in the field of applied economics (e.g., policy evaluation, labour economics, behavioural economics) would particularly benefit from the course.

Course Outline
- ✓ I. Pre-industrial Europe: Little divergence and the sources of change
- ✓ Industrial Revolution: A view on Great Britain and the first globalization
- ✓ Cultural economics: Historical legacies and trust and norms
- ✓ The economics of wars: WWI and WWII
- ✓ The Great Depression: USA and Europe

✓ Totalitarian regimes: Nazi Germany and USSR
✓ Post-WWII economic history I: Regional economics
✓ Post-WWII economic history II: Monetary regimes

Requirements and Grading

Grades will be based on the student's performance in the presentations of two academic journal articles, the short paper summaries of these papers, and the final exam. The final grade shares apply the following regime:

Paper assignment No. 1:
  Paper presentation and lead of discussion (45min): 15 %
  Executive Summary (max. 5 pages):   10 %
Paper assignment No. 2:
  Paper presentation and lead of discussion (45min): 15 %
  Executive Summary (max. 5 pages):   10 %
Final exam (written):   50 %

Assignments will be allocated to students in the second week of the course. The first presentations will start in week 3 and will then take place throughout the whole trimester. Both the presentation and the executive summary should give a brief overview of (i) the major contribution to the literature, (ii) the applied empirical strategy, (iii) the major findings and (iv) a personal critical assessment. The final exam will be a non-technical written exam covering the lecture material and the academic papers discussed. More details will be given during the course.

Readings (preliminary)

Some textbooks:

Acemoglu, D. and J. A. Robinson (2012), "Why Nations Fail: Origins of Power, Poverty and Prosperity", Crown Publishers, New York.

Allen, R. C. (2011), "Global Economic History: A Very Short Introduction", Oxford University Press, New York.

Angrist, J. D. and J.-S. Pischke (2010), "Mostly Harmless Econometrics: An Empiricist's Companion", Princeton University Press, Oxford and Princeton.

Broadberry, S. and K. H. O'Rourke (eds.) (2010), "Cambridge Economic History of Modern Europe – 1870 to the Present, Volume 2", Cambridge University Press, Cambridge.

Eichengreen, B. (1992), "Golden Fetters: The Gold Standard and the Great Depression, 1919-1939", Oxford University Press, New York.

Eichengreen, B. (2007), "The European Economy since 1945: Coordinated Capitalism and Beyond", Princeton University Press, New Jersey.

Some articles:

Abadie, A. and J. Gardeazabal (2003), "The Economic Costs of Conflict: A Case Study of the Basque Country", *American Economic Review* 93 (1): 113–132.

Alesina, A., Giuliano, P. and N. Nunn (2013), "On the Origins of Gender Roles: Women and the Plough", *Quarterly Journal of Economics* 128 (2): 469–530.

Angrist, J. D. and V. Lavy (1999), "Using Maimonides' rule to estimate the effect of class size on scholastic achievement", *Quarterly Journal of Economics* 114 (2): 533–575.

Becker, S. O. and L. Woessmann (2009), "Was Weber Wrong? A Human Capital Theory of Protestant Economic History", *Quarterly Journal of Economics* 124 (2): 531–596.

Becker, S. O., Boeckh, K., Hainz, C. and L. Woessmann (2016), "The Empire Is Dead, Long Live the Empire! Long-Run Persistence of Trust and Corruption in the Bureaucracy", *Economic Journal* 126 (590): 40–74.

Bernanke, B. and K. Carey, (1996), "Nominal Wage Stickiness and Aggregate Supply in the Great Depression," The Quarterly Journal of Economics 111 (3): 853–883.

Bleakley, H. and J. Lin (2012), "Portage and Path Dependence", *Quarterly Journal of Economics* 127 (2): 587–644.

Davis, D. and D. Weinstein (2002), "Bones, Bombs, and Break Points: The Geography of Economic Activity", *American Economic Review* 92 (5): 1269–1289.

Dell, M. (2010), "The Persistent Effects of Peru's Mining Mita", *Econometrica* 78 (6): 1863–1903.

Eggertsson, G. B. (2008), "Great Expectations and the End of the Depression", *American Economic Review* 98 (4): 1476–1516.

Eichengreen, B. (1992), "The Legacy of Hyperinflation," in: Golden Fetters: The Gold Standard and the Great Depression, 1919-1939," Oxford University Press: 125–152.

Guiso, L., Sapienza, P. and L. Zingales (2016), "Long Term Persistence", *Journal of the European Economic Association* 14 (6): 1401–1436.

Hanlon, W. W. (2015), "Necessity Is the Mother of Invention: Input Supplies and Directed Technical Change", *Econometrica* 83: 67–100.

Hanlon, W. W. (2017), "Temporary Shocks and Persistent Effects in Urban Economies: Evidence from British Cities after the U.S. Civil War", *Review of Economics & Statistics* 99 (1): 67–79.

Harrison, M. (2005), "The Fundamental Problem of Command: Plan and Compliance in a Partially Centralised Economy," *Comparative Economic Studies* 47 (2): 296–314.

Kline, P. and E. Moretti (2014), "Local Economic Development, Agglomeration Economies and the Big Push: 100 Years of Evidence from the Tennessee Valley Authority", *Quarterly Journal of Economics* 129 (1): 275–331.

Nunn, N. and L. Wantchekon (2011), "The Slave Trade and the Origins of Mistrust in Africa", *American Economic Review* 101 (7): 3221–3252.

Paola, P. and N. Nunn (2017), "Understanding Cultural Persistence and Change", NBER Working Papers 23617.

Redding, S. and D. Sturm (2008), "The Costs of Remoteness: Evidence from German Division and Reunification", *American Economic Review* 98 (5): 1766–1797.

Redding, S., Sturm, D. and N. Wolf (2011), "History and Industry Location: Evidence from German Airports", *Review of Economics and Statistics* 93 (3): 814–831.

Ritschl, A. (2002), "Deficit Spending in the Nazi Recovery, 1933-1938: A Critical Reassessment," *Journal of the Japanese and International Economies* 16 (4): 559–582.

Sargent, T. J. (1982), "The Ends of Four Big Inflations", in: Inflation: Causes and Effects, University of Chicago Press: 41–98.

Schumann, A. (2014), "Persistence of Population Shocks: Evidence from the Occupation of West Germany after World War II", *American Economic Journal: Applied Economics,* 6: 189–205.

Voigtländer, N. and H.-J. Voth (2012), "Persecution Perpetuated: The Medieval Origins of Anti-Semitic Violence in Nazi Germany", *Quarterly Journal of Economics* 127 (3): 1339–1392.

Voigtländer, N. and H.-J. Voth (2013), "How the West "Invented" Fertility Restriction", *American Economic Review* 103 (6): 2227–2264.
Voigtländer, N. and H.-J. Voth (2013), "The Three Horsemen of Riches: Plague, War, and Urbanization in Early Modern Europe", *Review of Economic Studies* 80 (2): 774–811.

Additional readings (also for the paper assignments) will be assigned via the course website at the beginning of the course.

COMBINED SKILLS I

Lecturers:
<u>Andrea Downing</u>
(andrea.downing@cerge-ei.cz, office 317, phone 254)
<u>Deborah Nováková</u>
(deborah.novakova@cerge-ei.cz, office 315, phone 197)
Office hours:
TBA

Course Information

Combined Skills 1 combines development of oral presentation skills with production of a "practice" or initial research proposal, with preparation for writing MA or DPW papers in mind (though of course your proposed project may change before then). It is possible in some cases to develop the position paper from AW2 to meet the extended requirements of a research proposal, or the student may choose to change the topic entirely. The CS1 paper may also be a Second-Year Research Fellowship Competition submission. Students give and receive comprehensive peer feedback on their ideas throughout the semester and are encouraged to discuss their proposed projects with any interested economist.

CS1 focuses strongly on collaborative development of both paper and presentation and therefore attendance is important. Please see below!

Requirements and Grading

Feedback to Peers   15%
Presentation   35%
Written Paper   50%

100% attendance is mandatory. Any necessary absences must be discussed with your instructor, preferably in advance, and any work missed must be made up. Missing more than three classes (unexcused) will result in a one-letter-grade penalty on the final course grade. **Please note** that 'a class' means 9.45-11.15 or 11.30-13.00. Missing 9.45-13.00 once equals missing TWO classes. The ASC forgives absences and late submissions of graded tasks in cases when the SAO informs us that the absence/s is/are officially excused. Any unexcused late submission will be automatically graded 0.

3 Academic Calendar 2018 – 2019

Academic Calendar for PhD Program 2018/2019

Month	Week	1st year students	2nd year students	3rd and 4th year students	Preparatory semester
September	3-7	H	H	H	
	10-14				
	17-21		A/D		
	24-28	*		*	
October	1-5				
	8-12				
	15-19				
	22-26	M*	M*	*	
	29-2	Fall Semester	Fall Semester	Research Seminar Series	
November	5-9			*	
	12-16	*	*	*	
	19-23			DPW	
	26-30				
December	3-7				
	10-14	F	F		
	17-21	Holidays *	Holidays *	Holidays *	
	24-28	*	*	*	
	31-4				
January	7-11		U	U / A/D	
	14-18	Spring Semester	Spring Semester	Research Seminar Series	
	21-25				
	28-1				
February	4-8				
	11-15	M	M		
	18-22				
	25-1				
March	4-8				
	11-15				
	18-22				
	25-29	F	F		
April	1-5				
	8-12				
	15-19	H	H	H	
	22-26	*	*	*	
	29-3	*	*	*	
May	6-10			Research Seminar Series	
	13-17		G	G	
	20-24		G		
	27-31	M		P	
June	3-7			DW	
	10-14				
	17-21		U U		
	24-28	*	*	*	
July	1-5				
	8-12				
	15-19	F	F		
	22-26		RMS	Preparatory Semester	
	29-2				
August	5-9		G		
	12-16		G	F	
	19-23		G	H	
	26-30	H	H	H	H

Legend:

- 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 (timing provisional, subject to change after ESC meeting in November 2018)
- H — official CERGE holiday
- DPW — dissertation proposal workshops week
- DW — dissertation workshops week
- * — public holidays (all official public holidays in the Czech Republic) - classes supposed to take place in these days will be re-scheduled:

Public holidays:

- 28 September - Czech Statehood Day (Friday)
- 28 October - Establishment of the Czechoslovak Republic (Sunday)
- 17 November - Freedom and Democracy Day (Saturday)
- 24 December - Christmas Eve (Monday)
- 25 December - Christmas Day (Tuesday)
- 26 December - Christmas Day (Wednesday)
- 1 January - New Year's Day (Monday)
- 19 April (Easter Friday)
- 22 April (Easter Monday)
- 1 May - Labor Day (Wednesday)
- 8 May - Liberation from Fascism (Wednesday)
- 5 July - Cyril and Methodius (Friday)
- 6 July - Burning at Stake of Jan Hus (Saturday)

Notes:

Notes: