

Fall-Spring 2015-2016 Research Projects

1. “Innovation and Production in the Global Economy”

Professor [Costas Arkolakis](#)

The RA will be asked to solve a problem of endogenous location and production of multinational firms in different markets. In particular, the task involves the development of a non-linear optimization routine. This routine will maximize a nonlinear function (profit of the firm) subject to different sets of possible constraints (constraints faced in different markets). The routine then needs to be ultimately designed to compute the maximum value attained under each possible set of constraints and compare these values to find the global firm optimum. The RA will be asked to help both in the design of the routine and the programming of an algorithm that can compute the solution. Prior knowledge of constraint optimization (linear or non-linear) or relevant techniques from computational physics is helpful. Good programming knowledge in matlab is essential.

2. “Revisiting Chinatown”

Professor [José Antonio Espín Sánchez](#)

In the 1974 motion picture *Chinatown* the private investigator J. J. “Jake” Gites (Jack Nicholson) is involved in a conspiracy that involved corruption, deceit and “family secrets.” The goal of the conspirators consisted on buying the lands of unsuspected farmers in the Owens Valley (some 400 miles north of Los Angeles) and then building an aqueduct to bring the water to the city, where it would be worth a fortune. Although, this description is fictional and far from really, there is much controversy on the way the city of L.A. purchase the water and land rights in the Owens Valley.

The goal of the project is to gather individual unpublished detailed data of all the purchases of land and water rights (1905-1934). With the individual data we will be able to assess whether the prices paid were “fair.” We will also assess why some farmers and not others were able to organize in sellers’ pools. Finally we will test whether the city of L.A. established a purchasing patter of “checkers,” thereby isolating farmers’ properties in order to buy them later at a lower price.

The goal for the RA will be to help processing the data from the farmer’s plots. She will use GIS software to create maps of the plots and to transform that information into econometric analysis. Knowledge of GIS is advice, but it is not a prerequisite.

3. “Re-thinking Models of Insurance Valuation for the Young and Privately Insured”

Professor [Amanda Kowalski](#)

Even though health conditions evolve over many years, private health insurance plans generally renew annually, potentially leaving some risks uninsured. In a given year, approximately 95% of medical expenditures are for the highest-spending 25% of individuals. If these individuals have high expenditures across several years, then they will value public health insurance as a safety net to catch them should they lose their private coverage. In my working paper on this subject (<http://www.econ.yale.edu/~ak669/longitudinal.latest.draft.pdf>), I consider the value of public health insurance as a safety net for the young and privately insured, taking into account how individual medical expenditures evolve over time. I demonstrate that methods of valuing health insurance that ignore the correlation of health

expenditures over time fail to capture a large portion of the valuation of health insurance. I am currently undertaking a revision of this paper and would like a research assistant to help me implement theoretical and empirical changes to the methodology and to help with revising the text of the paper itself.

Candidates should have a strong familiarity with Stata, the ability to work with equations and models, and persuasive writing skills. This project requires the ability to understand, modify, and re-design very technical code in Stata. It also requires the ability to grasp theoretical concepts from microeconomics and then the ability to communicate them clearly, concisely, and persuasively.

In a first step, the work of the RA will involve collecting and organizing the data as well as constructing descriptive statistics and reporting them in tables and graphs. In a next step, some basic econometric analysis should be performed. The RA should have an interest in data work, familiarity with STATA and basic econometrics, as well as an interest in learning more independently.

4. “Matching of Entrepreneurs and Venture Capitalists”

Professor [Ilse Lindenlaub](#)

This is a new project aimed at understanding the matching between entrepreneurs/start-ups and venture capitalists. In particular, we want to understand “who matches with whom” in this market, which characteristics of entrepreneurs and venture capitalists matter most in the matching process and what are the trade-offs that agents face when searching for a match. We also want to analyze how matching patterns vary over the business cycle.

In a first step, the work of the RA will involve collecting and organizing the data as well as constructing descriptive statistics and reporting them in tables and graphs. In a next step, some basic econometric analysis should be performed. The RA should have an interest in data work, familiarity with STATA and basic econometrics, as well as an interest in learning more independently.

5. “Urbanization, Growth and Structural Change”

Professor [Michael Peters](#)

Two important regularities of the growth process are: (1) Urbanization (i.e. a sustained movement from the countryside to cities) and (2) Structural change (i.e. a decline in the importance of agriculture and a rise in manufacturing and service employment). While these two aspects of economic development are clearly related, the underlying mechanisms are less understood.

One set of theories highlights demand side factors: as the economy develops and people get richer they spend relatively less of their income on food and more on services and goods. If services and goods are predominantly produced in cities, urbanization is a corollary of the growth process induced by changed in spending patterns. Another set of theories highlights supply side factors: if e.g. manufacturing firms benefit more from technological advances and innovation takes place in dense areas like cities, urbanization is a necessary ingredient for growth and causes structural transformation.

In this project, which is joint work with Fabian Eckert, who is a Phd Student at the Economics Department, we want to use detailed geographic data on employment patterns, land prices and worker mobility from Germany to distinguish these forces. Knowing the mechanism why urbanization and economic development are closely linked, is important to evaluate place-based policies (like city planning or moving restrictions), which are present in many developing countries today like China and India.

This is an empirical project using geographic data. Hence, it would be very helpful if applicants had experience in GIS using historical maps or were eager to learn these skills on the job. Furthermore, some experience in applied econometrics and working knowledge of STATA would be a plus.

6. “Understanding the Determinants of Foreign Aid”

Professor [Nancy Qian](#)

Foreign aid is the most important development policy tool and the United States is the largest aid donor. At the same time, there is little evidence on the benefits of foreign aid for poor recipient countries. One reason may be that aid is simply not targeted to improve outcomes in poor countries, and is instead spent to benefit the citizens of donor countries. This project examines the latter hypothesis with U.S. Aid data. Research assistance is required for data construction, cleaning and simple analysis. Knowledge in Python and Stata are useful.

7. “Explaining Declines in Air Pollution from US Manufacturing”

Professor [Joseph Shapiro](#)

Between 1990 and 2008, emissions of the most common air pollutants from U.S. manufacturing fell by 60 percent, even as U.S. manufacturing output grew substantially. Most of this reduction stems from decreases in the amount of pollution emitted per unit of output rather than changes in the quantities or types of products produced. Several competing theories explain why pollution per unit of output has been falling in U.S. manufacturing. I am seeking help exploring the historical evolution of a few manufacturing industries for evidence on how changes in production technologies have contributed to declines in emissions intensity. This involves compiling and analyzing industry-specific information.

No previous knowledge of specific software or programming languages is required.

8. “Analyzing Differences between US and Russia Attitudes Towards Markets and Democracy”

Professor [Robert Shiller](#)

In 1991, 25 years ago and at the time of the fall of the Soviet Union, I wrote a paper with Maxim Boycko of Russia and Vladimir Korobov of Ukraine, comparing attitudes towards free markets between Moscow and New York. The results can be seen here: <http://www.nber.org/papers/w3453>

We then did identical telephone surveys in the two cities, and compared the results. We wish now to do a followup of that paper, 25 years later, to see if Russian and American attitudes have changed, and also to append some questions about attitudes towards democracy. I need a research assistant to scour the literature about changing attitudes in these two countries, so that we can be cognizant of others’ observations, to attend to details of the survey implementation, and perhaps other things. We must have this paper done by early December, as we are slated to present it at the American Economic Association meetings January 4, 2016. I will be in Turkey until September 2, 2015.

9. “Mapping Global Ties”

Professor [Tsyvinski](#)

I am looking for an RA with a strong background in network analysis and economics. RAs duties will include analyzing a new dataset of global issues and tying the analysis with economic data. The dataset covers qualitative knowledge on countries, industries and global issues. The project seeks to map these issues using the tools of network

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analysis, detect the most salient issues, and the connections among them. The overarching goal is to use the tools of connecting both the soft information on global issues and the quantitative insight from the economics data to study the changing nature of global ties.

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