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Curriculum Vitae

- CITIZENSHIP:
- Nepal (F-1)
- EDUCATION:
- Ph.D. Economics, The Pennsylvania State University. (Expected 2010)
 - M.S. in Quantitative Economics, Indian Statistical Institute, June 2004
 - B.A. (Honors) Economics, University of Delhi, Shri Ram College of Commerce, June 2002.
- Ph.D. THESIS:
- Essays in Structural Estimation of Multidimensional Screening Models
Thesis Advisors: Isabelle Perrigne and Quang Vuong
- FIELDS:
- **Primary:** Industrial Organization, Applied Microeconometrics
 - **Secondary:** Microeconomic Theory, Game Theory.
- PAPERS:
- Working Papers:
 1. "Identification of Insurance Models with Multidimensional Screening," with Isabelle Perrigne and Quang Vuong. (Job Market Paper 1)
 2. "Competition and Nonlinear Pricing in Yellow Pages," with Yao Huang. (Job Market Paper 2)
 3. "An Insurance Model with Bi-Dimensional Screening," with Isabelle Perrigne.
 4. "Nonidentification of Insurance Models with Probability of Accidents," with Isabelle Perrigne and Quang Vuong.
 - Work in Progress:
 1. "An Empirical Analysis of Multidimensional Screening in Automobile Insurance," with Isabelle Perrigne and Quang Vuong.
 2. "Car Choice and Insurance Coverage," with Isabelle Perrigne.
 3. "Stackelberg Common Agency Game."
 4. "Identification of Multiproduct Nonlinear Pricing."

- GRANTS & FELLOWSHIPS:**
- Research Support (Summer 2007), Penn State
 - Graduate Fellowship, Indian Statistical Institute.
- TEACHING EXPERIENCE:**
- Instructor: Principles of Microeconomics (Summer 2005 & 2006), Statistical Foundation of Econometrics (Summer 2008)
 - Teaching Assistant and Recitation Leader: Intermediate Microeconomics Analysis (Fall 2004-Fall 2007)
- RESEARCH EXPERIENCE:**
- Research Assistant for Professors Isabelle Perrigne and Quang Vuong sponsored by National Science Foundation grant. (Since Fall 2007).
- PRESENTATIONS:**
- Stanford University, SITE, July 2009.
 - Pennsylvania State University, October 2009.
- REFERENCES:**
- Professor Isabelle Perrigne
Department of Economics, University Park, PA 16802.
Tel: +1-814-863-2157; E-mail: perrigne@psu.edu
 - Professor Quang Vuong
Department of Economics, University Park, PA 16802.
Tel: +1-814-863-2158; E-mail: qvuong@psu.edu
 - Professor Mark Roberts
Department of Economics, University Park, PA 16802.
Tel: +1-814-863-1535; E-mail: mroberts@psu.edu
 - Professor Vijay Krishna
Department of Economics, University Park, PA 16802.
Tel: +1-814-863-8543; E-mail: vkrishna@psu.edu
 - Dr. Mark McLeod (Teaching Reference)
Department of Economics, University Park. PA 16802
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THESIS ABSTRACT

“Identification of Insurance Models with Multidimensional Screening” (with I. Perrigne and Q. Vuong)
 We study the identification of insurance models with multidimensional screening, where insurees are characterized by risk and risk aversion. The model is solved using the concept of certainty equivalence under constant absolute risk aversion and an unspecified joint distribution of risk and risk aversion. The paper then analyzes how data availability constrains identification under four data scenarios ranging from the ideal situation (continuum of contracts and no truncated damage distribution) to the most realistic one (finite contracts with a truncated damage distribution). The observed number of accidents for each insuree plays a key role in identification. Despite bunching in multidimensional screening, we show that the joint distribution of risk and risk aversion is identified. With finite contracts and a truncated damage distribution, the latter is identified up to the probability of damage being above the deductible. We also derive the restrictions imposed by the model on observables and propose several identification strategies for the damage probability at the deductible.

“*Competition and Nonlinear Pricing in Yellow Pages*” (with Yao Huang)
 This paper proposes a structural framework to analyze the pricing strategies of two yellow page-advertising

publishers. The data collected from the Yellow Page Association and the phone books suggest that the utility publisher is a leader in the market. Therefore, we consider a Stackelberg duopoly model of nonlinear pricing in which firms buying advertising are characterized by a bi-dimensional vector of tastes for the two directories. The model and the econometric specification incorporate the features observed in the data such as the quadratic price schedules and a basic free advertisement offered to all firms by both publishers. Empirical results show substantial heterogeneity among firms' willingness to pay. The estimated model is used to assess the welfare loss due to (i) asymmetric information, (ii) a merger between the two publishers and (iii) withdrawal of the non-utility publisher from the market.

“Insurance Model with Bi-Dimensional Screening” (with I. Perrigne)

This paper extends the Stiglitz (1977) model to incorporate heterogeneous preferences of insurees and random damage in the event of an accident. The insurees' heterogeneity in both risk and risk preferences leads to a multidimensional screening problem. We show that the certainty equivalence without insurance coverage can be used by the insurer to optimally screen insurees. The certainty equivalence reduces the dimension of screening and leads to some pooling of insurees as implied by the results in the multidimensional screening literature. We show that the optimal coverage preserves the certainty equivalence ranking and that the deductible should be independent of damage despite its randomness.

“Nonidentification of Insurance Model with Probability of Accidents” (with I. Perrigne and Q. Vuong)

This paper studies the nonparametric identification of multidimensional insurance models where insurees are heterogeneous in both risk and risk aversion. Following the theoretical literature, the risk is measured as the probability of accident. When the data contain only information on whether an insuree has been involved in some accident we show that the joint distribution of risk and risk aversion is not identified.

Ivan Cherkashin

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Curriculum Vitae

- Citizenship
- Russian citizen, USA permanent resident (Green Card)
- Education
- **Ph.D., Economics**, Penn State University, **expected** spring 2010
 - **Degree “Kandidat nauk”** (Candidate of Science), Central Economics and Mathematics Institute, Russian Academy of Sciences, 2004
 - **M.A., Economics**, New Economic School, Moscow, Russia, 2003
 - **B.A.**, (cum laude), Economics, State University of Humanitarian Sciences, Moscow, Russia, 2002
- Ph.D. Thesis
- Essays in International Trade
Thesis advisor: Professor Kala Krishna
- Research fields
- **Primary:** International trade , Industrial organization
 - **Secondary:** Labor economics, Development economics
- Publications
- “The Inside Scoop: Acceptance and Rejection at the Journal of International Economics,” joint with S. Demidova, S. Imai and K. Krishna, ***Journal of International Economics***, Vol. 77, Issue 1, pp.120-132, 2009 (Also available as NBER *working paper* # 13957)
- Working papers
- “Firm Heterogeneity and Costly Trade: A New Estimation Strategy and Policy Experiments,” joint with S. Demidova, H.L. Kee, K. Krishna, (***Job Market Paper***)
 - The Great Russian Devaluation and Labor Demand, (***Job Market Paper***)
- Publications in Russian
- “What Does Rent Give to Federal Budget (on the Russia’s Budget Dependence upon ‘Oil Dollars”),” ***Voprosy Ekonomiki***, Vol.7, pp. 51-69, 2004
 - “Russian Enterprises and Business Groups: An Empirical Study of Investment Projects,” I. Cherkashin, *Theory and Practice of Institutional Reforms in Russian Economy*, Issue 2, Moscow, CEMI Russian Academy of Sciences, pp. 126-134, 2003
- Research and academic experience
- Short term consultant, The World Bank, June 2009 – current
 - Research Assistant for professor Kala Krishna, Spring 2008, Summer 2007, Summer 2008, Summer-Fall 2009
 - Internship, Bates White, Washington, DC, Summer 2006
 - Research Assistant for professor Barry Ickes, Summer 2005
 - Analyst, Institute for Open Economy, Moscow, 2003-2004

- Summer Instructor: Statistical Foundations for Econometrics (Econ 390), Department of Economics, Penn State, Summer 2007
 - Teaching Assistant for professor Joris Pinkse: Introduction to Econometrics, (Penn State, ECON 490 class), 2 semesters
 - Teaching Assistant for professor Mark McLeod: Intermediate Microeconomics, (Penn State, ECON 302 class), 5 semesters
 - Teaching Assistant for professor Reuben Gronau: Labor economics (graduate level), Economic School 2003
- Teaching experience
- “Firm Heterogeneity and Costly Trade: A New Estimation Strategy and Policy Experiments,” joint with S. Demidova, H.L. Kee, K. Krishna
 - International Trade and Investment Meeting, National Bureau of Economic Research, San Francisco, December 4-5, 2009
 - Society for Economic Dynamic Annual Meeting, Istanbul, Turkey, 2009
 - 2009 North American Summer Meeting of the Econometrics Society, Boston University, June 4-7, 2009
 - 43d Annual Conference of the Canadian Economic Association, May 29-31, 2009
 - Midwest Economic Theory and International Economics Meeting, Iowa City, Iowa, May 1-3, 2009
 - “The Inside Scoop: Acceptance and Rejection at the JIE,” joint with S. Demidova, S. Imai and K. Krishna
 - 2008 North American Summer Meeting of the Econometric Society, David A. Tepper School of Business, Carnegie Mellon University, Pittsburg, PA, June 19-22, 2008
 - Midwest Economic Theory and International Economics Meeting, Ann Arbor, Michigan, November 2-4, 2007
 - “Russia’s Accession to WTO: Labor Demand Story,”
 - XIII Research Conference, New Economic School, Moscow, April, 2003
- Presentations at the conferences
- Bates White Fellowship, 2006-2007
 - Full Scholarship, Russian Academy of Sciences, 2003
 - Full Scholarship, New Economic School, 2001-2003
 - Full Scholarship, State University of Humanitarian Sciences, 1998-2003
 - Best student paper award, New Economic School, 2003
- Honors and fellowships
- Referee for the Journal of International Economics
 - Referee for International Review of Economics and Finance
- Professional activities
- Languages: Russian (native), English (fluent)
 - Statistical packages: Stata, E-views, SPSS, EasyReg, LimDep
 - Programming languages: Matlab, Gauss
 - Other software: Maple, MathCAD, SWP, GAMS, MS-Office
- Language and computer skills
- References
- Professor Kala Krishna, Penn State University. E-mail: kmk4@psu.edu
523 Kern Graduate Building, University Park, PA, 16802. Tel: 814 865 – 1106
 - Professor Jonathan Eaton, Penn State University, E-mail: jxe22@psu.edu
518 Kern Graduate Building, University Park, PA, 16802. Tel: 814 865 – 8871
 - Professor Stephen Yeaple, Penn State University, E-mail: sry3@psu.edu
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 - Professor Mark McLeod. E-mail: mam63@psu.edu (For teaching)
507 Kern Graduate Building, University Park, PA, 16802. Tel: 814 865 – 9028

Thesis title: Essays in International Trade

Thesis advisor: Professor Kala Krishna, E-mail: kmk4@psu.edu

Essay 1. “Firm Heterogeneity and Costly Trade: A New Estimation Strategy and Policy Experiments,” joint with S. Demidova, H.L. Kee and K. Krishna. (*Job market paper (International trade, Industrial Organization)*)

This paper studies how heterogeneous firms respond to trade policies in their export markets. Firms are heterogeneous in two ways: they face different demand conditions in each market and have different productivities. We thus augment the standard Melitz framework and embed it in a partial equilibrium small country setting. The model is designed to deal with real world trade policy variations, like tariffs, preferences and the fixed and variable costs of obtaining them. Our estimation procedure can be used on purely cross sectional data, and requires only commonly available variables at the firm level such as sales, and the number of firms, which significantly extends its empirical applicability. The application is to Bangladeshi apparel exports to the US and EU. We are able to recover all the parameters of the model, including the multiple levels of fixed costs that firms incur in producing and exporting, preference parameters, and the parameters of the distributions that underlie the multidimensional heterogeneity.

The estimated model implies that there is a very large response of exports to changes in fixed or variable costs. This occurs primarily through changes in the mass of firms entering the industry while the sales of incumbent firms change by little. As a result, trade liberalization by one country, say the EU, results in an increase in exports of Bangladesh to all its export markets, rather than diversion from these markets to the EU. Our work suggests that developing countries could significantly raise their exports by investing in ways of reducing the costs of exporting. This includes improving infrastructure at all levels: from building ports and roads to providing expertise and access to critical factors like refrigeration, irradiation, and certification of produce to meet international standards.

Essay 2. “The Great Russian Devaluation and Labor Demand.” (*Job market paper (Labor Economics, International Trade and Development)*)

Does a greater degree of integration into world markets lead to a more elastic demand for labor? Often referred to as the Rodrik hypothesis, this question, despite being important from both theoretical and applied policy standpoints, is still not satisfactorily answered. Several studies that examine data for different countries, periods and aggregation levels, have failed to draw uniform conclusions. Poor and aggregated data, the lack of a large enough shocks to tariffs, an inability to separate the effect of trade from that of other reforms, and the absence of a rich set of predictions in hand from a model are likely reasons for this fact. In this paper, I avoid these concerns by using a unique firm level panel data set for several thousand manufacturing firms in Russia over the period when there was rapid and significant currency devaluation. This event made imports of final and intermediate goods more expensive while making Russian exports less expensive and acted like a tariff on imports and / or a subsidy on exports. In a simple, but yet revealing model, I specify the implications of a devaluation for the labor demand and derive a set of testable predictions. I then use the data to test the essence of these predictions and show that the trade barriers affect labor demand elasticities.

Essay 3. “The Inside Scoop: Acceptance and Rejection at the Journal of International Economics,” joint with S. Demidova, S. Imai and K. Krishna, *Journal of International Economics*, Vol. 77, Issue 1, pp.120-132, 2009 (Also available as NBER *working paper* # 13957)

There is little work on the inner workings of journals. What factors seem to affect the ability to publish in a journal? Could simple rules (which are already used by some journals) like the desk rejection of a significant minority of papers, help to streamline the process? At what cost? How well do journals seem to do in choosing papers? What can we say about the extent of type 1 and type 2 errors? Do editors seem to have uniform standards or are some harsher than others? We use data on submissions to the *Journal of International Economics* to help answer these questions.

Sascha Claudius

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Curriculum Vitae

- CITIZENSHIP:**
- Germany (F-1)
- EDUCATION:**
- Ph.D. Economics, Penn State University, June 2010
 - M.A. Philosophy and Economics, Humboldt-University Berlin, May 2005
 - Preliminary Diploma (Vordiplom) Mathematics, Free University Berlin, May 2005
- Ph.D. THESIS:**
- “An Empirical Analysis of the Determinants of Democracy”
Thesis Advisors: Edward J. Green
Herman J. Bierens
- FIELDS:**
- **Primary:** Applied Econometrics
 - **Secondary:** Political Economy, Applied Time Series Analysis
- PAPERS:**
- “An Empirical Analysis of the Relationship between Income and Democracy” (October 2009), Job Market Paper
 - “A Note on the Game-Theoretic Foundations of Infinite Horizon Environments with Limited Commitment” (December 2008)
- GRANTS & FELLOWSHIPS:**
- Bates White Graduate Research Fellowship (2008-2009)
 - German National Academic Foundation (2001-2005)
- TEACHING EXPERIENCE:**
- Introductory Microeconomics (Instructor, Penn State)
 - Corporate Economics (Teaching Assistant, Penn State)
 - Intermediate Macroeconomics (Teaching Assistant, Penn State)
 - Intermediate Microeconomics (Teaching Assistant, Penn State)
 - Advanced International Trade (Teaching Assistant, Penn State)
 - Introductory Economics (Teaching Assistant, Free University Berlin)
- RESEARCH EXPERIENCE:**
- Research Assistant to Prof. Irwin Collier (2002-2005), Free University Berlin

PRESENTATIONS
& OTHER
PROFESSIONAL
ACTIVITIES:

- Bates White, LLC, Summer Fellow (2008), Washington, DC
- German Parliament (Bundestag), Study Commission “Globalization of the World Economy”, Student Assistant (2000-2002), Berlin, Germany

REFERENCES:

- Edward J. Green, Professor, Penn State
415 Kern Graduate Building, University Park, PA 16802-3306.
Tel: 1-814-865-8493, Email: eug2@psu.edu
- Herman J. Bierens, Professor, Penn State
510 Kern Graduate Building, University Park, PA 16802-3306.
Tel: 1-814-865-4921, Email: hbierens@psu.edu
- Randal Heeb, Partner, Bates White, LLC
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Tel: 1-202-747-5968, Email: randal.heeb@bateswhite.com

THESIS ABSTRACT

Essay 1. “An Empirical Analysis of the Relationship between Income and Democracy”, Job Market Paper

The observation that there are rich and democratic as well as poor and non-democratic countries has led scholars to hypothesize that economic development leads to political development, i.e., higher income causes democracy. This paper tackles various issues in the empirical literature investigating this claim.

All democracy data are ordinal, i.e., ordered and discrete. In contrast to Barro (1999) and Acemoglu et al. (2008), who treat the democracy data as continuous, I develop and estimate a dynamic model where the ordinal democracy variable has the Markov property. As pointed out by Robinson (2006), most work in the literature fails to take into account that democracy might have an effect on income. Consequently, I test whether income has an effect on democracy and whether democracy has an effect on income. The effects between income and democracy are dynamic as they unfold over time. This leads me to employ the standard econometric causality concept in time series analysis, Granger causality. Mosconi and Seri (2006) have extended the concept of Granger causality to binary processes. Using a similar Markov approach allows me to apply their definition of Granger causality in my econometric model. I also show that GDP per capita is a unit root process for almost all countries and that failing to take this into account leads to model misspecification and misleading results.

My empirical analysis suggests the following. First, higher income Granger causes democracy for full democracies, which means that a high income helps to stabilize democracies. Second, higher income Granger causes democracy for medium democracies implying that income can have a positive effect on regime type where there is already a somewhat favorable environment. Third, I find that Granger causality runs from democracy to income meaning that income and democracy form a bidirectional feedback system.

Essay 2. “Inequality and Democracy: Stylized Facts and a Structural Model” (in progress)

Democracy is a regime type with a flat distribution of power. This makes it easier to redistribute income in a democracy than in an autocracy. For this reason the rich elite typically prefer autocracy while the poor majority prefer democracy. The poor majority threatens the rich elite with social unrest in order to force a democratization. The elite can answer this challenge by threatening with repression. Social unrest and repression are costly. The cost of social unrest and repression in conjunction with the level of income inequality determine the likelihood of regime change. Boix (2003) promotes the idea that income inequality inhibits a transition to democracy because the rich elite anticipates a redistribution of income. Acemoglu and Robinson (2006) on the other hand, view the relationship between inequality and democratic transition as an inverted U-shaped curve. The benefits of a transition towards democracy are small in a very egalitarian society, while the costs of repression are relatively low for the rich elite in a highly unequal society. These ideas provide the background for my empirical analysis. The analysis proceeds in two steps.

There are two main sources for data on income inequality. Deininger and Squire (1996) provide an unbalanced panel of Gini coefficients compiled from different sources. Using these data Boix (2003) finds that inequality inhibits democratic transition. Houle (2009) on the other hand, uses a panel of labor shares collected by the United Nations Industrial Development Organization as a measure of income inequality. He finds that inequality does not affect the probability of a regime change. The first step is to carry out a careful statistical analysis to determine to what extent these data sets produce the same stylized facts.

The second step is to develop a structural model which will connect the theoretical literature to the empirical analysis of the data. The main novelty is to use the existing theoretical work to identify the effect of income inequality on democracy. In particular, I exploit the relationship between the unobservable cost of social unrest and repression and the observable income inequality and regime change. Furthermore, I account for the fact that the data on democracy are discrete and ordered while the inequality data are bounded. This is a novel contribution as the existing literature is not concerned with the identification of the effect of inequality on democracy.

These two steps, establishing stylized facts and developing a structural model, provide a novel contribution to the literature on inequality and democracy.

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Curriculum Vitae

- CITIZENSHIP:
- Turkey
- EDUCATION:
- Ph.D. Economics, The Pennsylvania State University (expected June 2010)
 - M.A. Economics, Bogazici University, Turkey, 2004
 - B.A. Management, Bogazici University, Turkey, 2002
- Ph.D. THESIS:
- “Essays on International Trade, Human Capital and Labor Markets”
Thesis Advisors: Andrés Rodríguez-Clare
James R. Tybout
- FIELDS:
- **Primary:** International Trade, Macroeconomics
 - **Secondary:** Labor Economics, Growth and Development
- PAPERS:
- “Adjusting to Trade Liberalization: Reallocation and Labor Market Policies” (Job Market Paper)
 - “Firm Dynamics, Job Turnover and Wage Distributions in an Open Economy”, with Nezih Guner and James Tybout, (June 2009)
 - “Human Capital, Technology Adoption and Development”, (January 2009), [Revise and Resubmit at The B.E. Journal of Macroeconomics]
 - “Necessary and Sufficient Conditions of Dynamic Optimization”, with Edward J. Green, (January 2008)
- GRANTS & FELLOWSHIP S:
- *National Science Foundation* - Graduate Student Award to attend the 2. Lindau Meeting of Nobel Laureates and Students in Economic Sciences in Lindau, Germany, August 2006
- TEACHING EXPERIENCE:
- *Introduction to Economics* (instructor, undergraduate, online course, 1 semester)
 - *International Economics* (instructor, undergraduate, 2 semesters)
 - *International Economics* (TA, undergraduate, 2 semesters)
 - *Intermediate Microeconomics* (TA, undergraduate, 2 semesters)
 - *Graduate Macroeconomics* (TA, 1st year Ph.D., 2 semesters, taught by Prof. Edward J. Green)
 - *Introduction to Microeconomics* (TA, 1st year MBA Class in Koc University, Turkey, 1 semester, taught by Prof. Murat Sertel)

RESEARCH
EXPERIENCE:

- Research Assistant to Prof. Barry Ickes, The Center for Research on International Financial and Energy Security, The Pennsylvania State University, June 2009 – present. *Oil Price Volatility and Global Imbalances*.
- Research Assistant to Professor James R. Tybout, The Pennsylvania State University, September 2008 - May 2009. *Openness, Industrial Evolution and Job Flows*

PRESENTATIONS & OTHER
PROFESSIONAL
ACTIVITIES:

- Midwest Economic Meetings, International Trade, The Pennsylvania State University, October 2009
- SED Annual Meeting, Istanbul-Turkey, May 2009
- IZA/World Bank Employment and Development Conference, Bonn-Germany, May 2009
- Cornell-Penn State Macro Workshop, The Pennsylvania State University, April 2009
- Missouri Economics Conference, University of Missouri-Columbia, March 2009
- Conference on Growth, Employment and Active Policies, Bogazici University, Istanbul, Turkey, June 2004

REFERENCES:

- Prof. Andrés Rodríguez-Clare
617 Kern Graduate Building, University Park, PA, 16802, USA
Tel: 1-814- 863-1295; E-mail: andres@psu.edu
- Prof. James R. Tybout
517 Kern Graduate Building, University Park, PA, 16802, USA
Tel: 1-814-865-4259; E-mail: jxt32@psu.edu
- Prof. Edward J. Green
415 Kern Graduate Building, University Park, PA 16802, USA
Tel: 1-814-865-8493; E-mail: eug2@psu.edu
- Prof. Nezih Guner
Universitat Autònoma de Barcelona
Bellaterra, Cerdanyola del Vallès, 08193, Spain
Tel: 34-93-581-3068; E-mail: nezih.guner@uab.es

THESIS ABSTRACT

Adjusting to Trade Liberalization: Reallocation and Labor Market Policies (Job Market Paper)

Labor market responses to trade liberalization typically exhibit three adverse features: slow net absorption of labor by export-oriented sectors, large reallocation costs for displaced workers and a disproportionate adjustment burden for older workers. In order to explain these facts, I propose a model that extends a two-sector labor search and random matching framework to an environment with overlapping generations, on-the-job accumulation of human capital, and match specific productivity. I calibrate the model to Brazilian data and use it to study the dynamics of an economy

in transition after trade liberalization. I ask whether public policy can remedy the adverse effects of trade liberalization. To this end, I compare the distributional and efficiency effects of alternative worker assistance programs in general equilibrium. I find that an employment subsidy is complementary to trade liberalization: although welfare-reducing in steady state, it may enhance the gains from trade by facilitating faster formation of necessary skills during the adjustment period. On the other hand, unemployment insurance lowers the gains from trade by hampering the reallocation of labor.

Firm Dynamics, Job Turnover, and Wage Distributions in an Open Economy (with Nezhir Guner and James Tybout)

As Latin American countries have become more open, their job turnover rates have risen, their informal sectors have become larger, and their wage distributions have become less equal. We develop a dynamic general equilibrium trade model that explains these phenomena. The model combines standard search frictions in labor markets with heterogeneous firms that experience ongoing productivity shocks. Each period, firms decide whether to exit or continue producing. Those firms that remain active choose their export volumes and adjust their employment levels through vacancy postings or lay-offs. Openness matters in our model because it makes profits more sensitive to productivity shocks, as Rodrik (1997) argued. Thus when trade barriers are low, firms drawing negative shocks shed labor relatively rapidly (and perhaps exit), while firms drawing positive shocks acquire new workers relatively rapidly. Further, since openness decreases the rents of the former and increases the rents of the latter, it spreads the wage distribution. After fitting this model to Colombian micro data on establishments and households, we isolate the effects of trade frictions on labor market outcomes using counter-factual simulations. Preliminary results suggest that the mechanisms highlighted by our model can be important.

Human Capital, Technology Adoption and Development

This paper presents a model of development in which skilled labor is an input in technology adoption. The model combines Nelson and Phelps (1966) type technology dynamics with a growth model in which intermediate goods are used to produce a final good. The intermediate goods producers hire skilled labor to increase their productivity by adopting techniques from an exogenously evolving stock of world knowledge. I solve for the stationary equilibrium and derive analytic expressions for steady state income level and wage premium. In a quantitative exercise, I calibrate the model and compare its predictions with data. The model successfully accounts for cross-country income differences and within-country wage premia on skilled labor. These results strengthen the idea that different types of human capital perform separate tasks and should not be aggregated into a single stock of human capital in development accounting exercises. The availability of skilled labor is potentially much more important for development than such aggregative exercises have so far suggested.

Alexey Kushnir

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Curriculum Vitae

- CITIZENSHIP:
- Russian Federation
- EDUCATION:
- Ph.D. Economics, Penn State University (Expected).
 - M.A. Economics, New Economic School, 2006.
 - M.S. Moscow Institute of Physics and Technology, 2006.
 - B.S. Moscow Institute of Physics and Technology, 2004
- Ph.D. THESIS:
- Essays in Market Design
Advisor: Vijay Krishna
- FIELDS:
- **Primary:** Microeconomic Theory, Market Design, Matching Markets, Auctions
 - **Secondary:** Industrial Organization
- PAPERS:
- “Signaling in Matching Markets,” with Peter Coles and Muriel Niederle, Job Market Paper
 - “Harmful Signaling in Matching Markets,” Job Market Paper
- WORK IN PROGRESS:
- “Centralized Matching Markets with Interdependent Values,” with Utuku Unver
 - “Private Value Contests,” with Lev Lokutsievskiy
- GRANTS & FELLOWSHIPS:
- Pennsylvania State University Summer Fellowship (2007)
 - New Economic School Fellowship (2004/05/06)
 - Moscow Institute of Physics and Technology Academic Council Fellowship (2003)
 - Mayor-of-Moscow Fellowship (2002/03/04)
- AWARDS:
- Pennsylvania State University, Department of Economics, Outstanding Undergraduate Instructor Award (2009)
 - Pennsylvania State University Graduate Scholar Award (2006)
 - New Economic School Best Student Award (2006)
- TEACHING EXPERIENCE:
- Penn State University (2006-2009)
Lecturer: Introductory Econometrics (U) (evaluations: 6.22/7.00)
Teaching assistant: Advanced Microeconomics (G), Microeconomics (G) (x2), Political Economics (U), Economics of the Corporation (U)
 - New Economic School (2005-2006)
Teaching assistant: Auctions (G), Theory of Economic Reforms (G), Mathematics for Economists (G)

- Moscow Institute of Physics and Technology (2004-2005)
Teaching assistant: Stochastic Processes (U)

RESEARCH
EXPERIENCE:

- Visiting scholar:
 - Harvard Business School (visit Peter Coles), August 2009 – September 2009
 - Boston College (visit Utku Unver), March 2009 – May 2009
- Research assistant
 - Vijay Krishna, Summer 2008 - Spring 2009

PRESENTATIONS
& OTHER
PROFESSIONAL
ACTIVITIES:

- 2009: Boston College, 14th Coalition Theory Network Workshop
- 2008: Society of Economic Design, SUNY Stony Brook, New Economic School, Midwest Economic Theory and International Economics Meeting
- 2006: XIX New Economic School Conference
- 2005: XLVIII Moscow Institute of Physics and Technology Conference

REFERENCES:

- Vijay Krishna,
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- Marek Pycia,
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- Peter Coles,
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Job Market Papers Abstract

My job market papers examine a natural signaling mechanism in two-sided matching markets between firms and workers. We consider a game of incomplete information. Each worker can send a limited number of costless signals to firms indicating her interest in positions there; workers send signals simultaneously. Then, each firm makes an offer to at most one worker; firms make offers simultaneously. Finally, workers choose at most one offer from those available to them. Recently, the American Economic Association has introduced such signaling option in the job market for new Ph.D. economists. In a similar setting, some online dating sites (e.g., www.cupid.com) allow agents to send virtual roses to potential partners as signals of their interest.

The two papers study the same model and differ only in how agents' preferences are assumed to be distributed. In the first, agents' preferences are quite dispersed. In the second, agents' preferences are tightly distributed. The influence of costless signaling in the two environments is quite different.

The paper "*Signaling in Matching Markets*" (written jointly with Peter Coles and Muriel Niederle) analyzes markets with firm segments. Workers agree on the ranking of firms across "segments," but have idiosyncratic and uniformly distributed preferences within segments. For instance, all workers may agree as to which firms are in the "top five" segment and which are in the "six to ten" segment, etc., but may disagree as to the exact ranking within a segment. Firm preferences over workers are idiosyncratic and uniformly distributed. We show that, on average, introducing a signaling mechanism increases both the expected number of matches as well as the expected welfare of workers for this environment (more precisely, any non-babbling equilibrium that satisfies the refinement D1 of Cho and Kreps has these properties). The welfare of firms, on the other hand, changes ambiguously. In addition, the signaling mechanism adds the most value for markets wherein the number of firms and the number of workers are of roughly the same magnitude. Furthermore, the optimal number of signals—the number of signals that maximizes the expected increase in the number of matches—increases when workers have more positions to fill. Finally, additional periods of interaction between firms and workers decrease the impact of signaling.

By contrast, the paper "*Harmful Signaling in Matching Markets*" shows that there are instances when preference signaling is actually harmful for matching markets (more precisely, the expected number of matches is weakly smaller in any equilibrium of the game with signals than in the unique equilibrium of the game with no signals; moreover, there is an equilibrium where this comparison is strict). Workers have almost aligned preferences over firms: each worker has "typical" commonly known preferences with probability close to one and "atypical" idiosyncratic preferences with the complementary probability close to zero. Firms have some commonly known preferences over workers. Though signals transmit previously unavailable information, they also facilitate information asymmetry. Prior to the signaling, all firms have identical beliefs about worker preferences. However, after the signals are received they may have diverse beliefs. This disparity in beliefs leads to coordination failure. As a result, the introduction of a signaling mechanism may decrease the total number of matches and the welfare of agents.

The papers together suggest that signals play two important roles in match formation: they transmit information and they facilitate information asymmetry. When there is a small amount of information about agent preferences available, as in "*Signaling in Matching Markets*," information transmission plays a more important role in match formation. However, when there is almost complete information about agent preferences, as in "*Harmful Signaling in Matching Markets*," the introduction of signals may lead to coordination failure.

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Curriculum Vitae

- CITIZENSHIP
- Republic of Korea (F-1 Visa)
- EDUCATION
- B.S., Economics and Computer Science, Duke University, 2003
 - M.A., Economics, Duke University, 2006
 - Ph.D., Economics, The Pennsylvania State University, expected June 2010
- PHD THESIS
- Essays in Game Theory
Thesis Advisor: Edward Green
- FIELDS
- **Primary:** Game Theory
- PAPERS
- “Epistemic Foundations of Iterated Admissibility” (Job Market Paper)
 - “Rationalizing Payoff-Dominant Outcomes”
- AWARDS
- Outstanding Recitation Instructor, Fall 2008, Department of Economics
- TEACHING EXPERIENCE
- Instructor, Summer 2008
 - Courses: Microeconomics
 - Teaching Assistant, Fall 2008 – Fall 2009
 - Courses: Macroeconomic Theory (Graduate), Monetary Economics, Microeconomics, Game Theory
- RESEARCH EXPERIENCE
- Research Assistant, Spring 2009 – Summer 2009
 - for Professor Edward Green
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THESIS ABSTRACT

Essay 1. “Epistemic Foundations of Iterated Admissibility” (Job Market Paper)

How can we justify the play of iteratively admissible strategies in a game as a consequence of the players’ rationality? Brandenburger, Friedenberg, and Keisler (2008) models beliefs as lexicographic probability systems toward that end. If rational players never rule out any scenarios, then they will avoid inadmissible (i.e., weakly dominated) strategies. Under this definition of rationality, Brandenburger et al. showed that, when the set of beliefs is complete (i.e., each lexicographic probability system is a possible belief), iteratively admissible strategies will be played if each player is rational, each player thinks the other players are rational, and so on. They leave as an open question whether the condition on interactive beliefs about rationality, called rationality and common assumption of rationality, and completeness of beliefs can be satisfied simultaneously. I answer this question in the affirmative. Thus, an epistemic foundation for iterated admissibility is provided.

Essay 2. “Rationalizing Payoff-Dominant Outcomes”

I modify two-player simultaneous-move games with a unique payoff-dominant strategy profile by allowing each player to publicly discard any of her original strategic options in turn before play begins. In this setting, I show that extensive-form rationalizable (EFR) profiles, as defined in Pearce (1984), have payoff-dominant outcomes. Furthermore, a strategy profile in which no player makes any commitments is EFR. Thus, the model is interpreted as one of payoff-dominant focal-point formation via forward induction, which is captured by EFR. The result is analogous to that in Ben-Porath and Dekel's (1992) model of money-burning games. That the order of beliefs required to obtain payoff-dominant outcomes is uniformly bounded at three across all games is an advantage of the model in this paper over the money-burning approach, which may require the use of arbitrarily high orders of beliefs to obtain the same result. A limitation of this paper, also shared by the money-burning model, is that the prediction of payoff-dominant play is not robust to the addition of players.

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Curriculum Vitae

- CITIZENSHIP:
- Japan (F-1 visa)
- EDUCATION:
- Ph.D. Economics, The Pennsylvania State University (August 2005-present, expected completion date: June 2010)
 - M.A. Economics, The University of Tokyo, March 2003
 - B.A. Economics, The University of Tokyo, March 2001
- Ph.D. THESIS:
- Essays on Public Economics
Thesis Advisor: Edward Green
- FIELDS:
- **Primary:** Macroeconomics, Public Economics
 - **Secondary:** Political Economy, Game Theory
- PAPERS:
- “Efficiency and Lack of Commitment in an Overlapping Generations Model with Distributional Shocks” (Job Market Paper)
 - “Sequential Voting with Costly Information Acquisition: Three-Voter Case”
 - “On the Comparison of Electoral Systems: District-by-District system versus Proportional system”
 - “On Candidates’ Strategic Response to the Margin of Victory in Elections,” joint with Minoru Kitahara (submitted)
 - “Role of Linking Mechanisms in Multitask Agency with Hidden Information,” joint with Hitoshi Matsushima and Nobuyuki Yagi, (revision requested from *Journal of Economic Theory*)
 - “Line-item Veto with Sophisticated Voters in Separation of Powers”
- AWARDS:
- Finalist for 12th Moriguchi Prize, Osaka University Institute of Social and Economic Research, October 2009 (The winner will be decided in December 2009)
 - CEMANO-COE Distinguished TA Award, Microeconomics (Graduate), The University of Tokyo, Winter 2004

TEACHING
EXPERIENCE:

- Teaching Assistant, University of Tokyo, Prof. Hitoshi Matsushima, Microeconomics (Graduate), Winter 2004
- Teaching Assistant, University of Tokyo, Prof. Akihiko Matsui, Mathematics for Economists (Graduate), Summer 2002
- Teaching Assistant for Several Undergraduate Courses at Penn State University and University of Tokyo

RESEARCH
EXPERIENCE:

- Research Assistant, Penn State University, Prof. Ruilin Zhou, Summer 2009
- Research Assistant, Penn State University, Prof. Vijay Krishna, Fall 2007
- Research Assistant, University of Tokyo, Prof. Hitoshi Matsushima, Summer 2004

PRESENTATIONS
& OTHER
PROFESSIONAL
ACTIVITIES:

- Midwest Economic Meetings, Economic Theory, Fall 2009, Penn State, US
- Far East and South Asia Meeting of the Econometric Society, Tokyo, Japan, 2009
- Fifteenth Decentralization Conference, Tokyo, Japan, 2009
- Kyoto Game Theory Workshop, Kyoto, Japan, 2004
- Japanese Economic Association, Autumn Meeting, Tokyo, Japan, 2003

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- Prof. Neil Wallace
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THESIS ABSTRACT

Essay 1: “Efficiency and Lack of Commitment in an Overlapping Generations Model with Distributional Shocks” (Job market paper)

Abstract: This paper considers a stochastic overlapping generations model in which, at each date, a distributional shock divides the constant social endowment between a young and an old agent. Commitment cannot be externally enforced. More precisely, anyone can walk away from the economy at any time with her endowment. At each date, the young and the old agents simultaneously decide how much of their respective endowments to transfer to the other agent. I focus on a simple stationary transfer rule that is consistent with a limited commitment constraint, and characterize subgame perfect equilibrium (SPE) of these transfer rules. I also discuss the efficiency of these SPE allocations. The main finding is that for some parameter values, the SPE simple stationary transfer rule allocations are interim Pareto efficient in the set of all feasible allocations, a set that includes allocations that violate the limited commitment constraint.

Essay 2: “Sequential Voting with Costly Information Acquisition: Three-Voter Case”

Abstract: This paper extends a model discussed in Dekel and Piccione (2000) by adding a costly information acquisition stage. In Dekel and Piccione (2000), a symmetric sincere voting equilibrium in a simultaneous voting game is also an equilibrium in a sequential voting game. This paper shows that their result is not robust in some class of cost functions.

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Curriculum Vitae

- CITIZENSHIP:
- German, F-1 (Student Visa)
- EDUCATION:
- Ph.D. Economics, Penn State University (Expected Completion June 2010).
 - M.Sc. (Doctorandus) International Economic Studies, University of Maastricht, The Netherlands, June 2005.
 - Visiting student Hong Kong University of Science and Technology, Hong Kong, China, Spring 2005.
- Ph.D. THESIS:
- Essays in Environmental Economics.
Thesis Advisor: Prof. Barry Ickes
- FIELDS:
- **Primary:** Environmental Economics, Political Economy
 - **Secondary:** Public Economics, Resource and Energy Economics
- PAPERS:
- Working papers:
 1. "The Political Economy of Carbon Securities and Environmental Policy" Job Market Paper
 2. "Backstop Technology Research and the Depletion of Fossil Fuels"
 3. "How Geoengineering May Encourage Carbon Dioxide Abatement" CRIFES working paper, joint with Felix Tintelnot
- AWARDS:
- Graduate Fellowship and Fellow Award, 2005, Graduate School, Penn State University.
 - Nomination for ENCORE Master Thesis Prize, 2005.

TEACHING
EXPERIENCE:

- Instructor International Trade (undergraduate), Penn State University, Summer 2009.
- Instructor Introductory Macroeconomics (undergraduate), Penn State University, Summer 2008.
- Instructor Introductory Macroeconomics (undergraduate), Penn State University, Summer 2007.
- Teaching Assistant, Penn State University, Fall 2006 and Spring 2007.

RESEARCH
EXPERIENCE

- Research Assistant for Prof. Barry Ickes, Department of Economics, Penn State University, August 2007 to present

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THESIS ABSTRACT

Essay 1. “The Political Economy of Carbon Securities and Environmental Policy” (Job Market paper)

This paper studies carbon abatement policy instruments from a political economy perspective. Unlike previous models of carbon abatement policies which ignore the impact of lobbies, this paper addresses the question how lobbying affects the government’s choice of the abatement level and how different policy instruments perform in this respect. The paper illustrates some problems with both the cap-and-trade system and carbon taxation. It then proposes an alternative policy instrument — carbon securities — with significant advantages over these traditional systems.

The key feature of the proposed carbon securities is that they entitle their owners to a fixed proportion of ex ante unknown total emissions. The total level of carbon emissions is set by the political process *after* the carbon securities have been sold. In contrast to a traditional permit system, in which a government's choice of emissions quota is influenced by a single lobby which represents carbon using industries, a system based on carbon securities creates a countervailing group of stakeholders with a strong incentive to get organized and influence the government's choice of emission levels.

Specifically, the paper develops a two period model with three agents: a government, a lobby representing carbon-using firms and a lobby representing carbon speculators (this group includes people who buy carbon securities for investment purposes as well as environmentalists). In the first period the carbon securities are sold to carbon speculators and carbon-using firms decide if they want to invest in carbon abatement technology. In the second period, the agents first play a common agency game similar to Grossman and Helpman (1992) to determine the emission level and then each speculator sells her share of the emissions total to carbon-using firms. I find a unique equilibrium in truthful strategies and compare the equilibrium with carbon securities to the equilibria under a carbon tax and a cap-and-trade system.

I show that a system with carbon securities has a number of advantages. First, the carbon price is closer to the social optimum than with a carbon tax or a cap-and-trade system. This is a direct consequence of the presence of stakeholders with an interest in low carbon dioxide emissions. Second, climate and political uncertainty have a smaller effect on the expected variance of the carbon price. Third, there is higher investment in carbon abatement technology under the system I propose. This is because carbon securities encourage both a higher carbon price and a more stable carbon price. Fourth, carbon securities alter the policy environment so that the government can, in effect, credibly commit to long term policies even when the government can only commit to property rights but not to tax rates.

Essay 2. "Backstop Technology Research and the Depletion of Fossil Fuels"

Using a supply-side approach to the problem of global warming, this paper studies the effect of backstop technology research on the speed at which fossil fuels are depleted. The key insight is that backstop technology research encourages fossil fuel owners to supply more of their resource in the near future because they anticipate that their resource will become obsolete before it is depleted. Thus, while backstop technology research offers the promise of an eventual decrease in carbon dioxide emissions, it creates a higher near-future cost of climate change due to the increase in near-future carbon dioxide emissions. The paper shows that even if backstop technology research is costless, for a large enough discount rate on the cost of global warming, no backstop technology research can be optimal.

I apply the theory of optimal extraction of exhaustible resources to study the effect of backstop technology research on the problem of global warming. The moment of

development of the backstop technology is assumed to be an uncertain function of research effort. I show that an increase in backstop technology research effort leads to faster planned depletion of fossil fuels and thus higher near-future carbon dioxide emissions. This change in the distribution of carbon dioxide emissions over time affects the cost of global warming for two reasons: First, planned depletion of the resource may never happen if a backstop technology has already been developed by that time. Second, a more gradual global warming is likely to be associated with lower cost since it makes adaptation easier. I show that the research intensity which minimizes the expected cost of global warming decreases with the discount rate used for global warming related costs. The final section illustrates the implications of the model by means of a simulation. For this, I use data published by the International Energy Agency.

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Curriculum Vitae

- CITIZENSHIP:
- United States
- EDUCATION:
- Ph.D. Economics, Penn State University (Expected June 2010)
 - B.S. Economics, The Pennsylvania State University, 2003
 - Diploma, North Crowley High School, Fort Worth, TX, 1999
- Ph.D. THESIS:
- Essays in Applied Microeconometrics
Thesis Advisor: Edward J. Green
- FIELDS:
- **Primary:** Applied Microeconometrics
 - **Secondary:** Health, Labor, Political Economy, Industrial Organization, Economic Demography, Computational Methods
- PAPERS:
- *Uncovering the Causal Pathways Between Education Investment and Reduced Mortality* (Job Market Paper)
 - S. Bade and A. Rice, *Political Advocacy with Collective Decision Making*. Mimeo 2009.
- GRANTS, FELLOWSHIPS AND AWARDS:
- 2009 The Journal of Private Enterprise Education; Best Educational Note
 - Fall 2008 Liberal Arts Dissertation Fellowship
 - 2008 Harold F. Martin Graduate Assistant Outstanding Teaching Award
 - 2007-2008 Bates White Graduate Fellowship
 - 2006 Penn State College of Liberal Arts Outstanding Teaching Award for Graduate Students.
 - Penn State Department of Economics Outstanding Teacher Award for Spring, Summer, and Fall 2006.

TEACHING
EXPERIENCE:

- Instructor, Econometrics (~25 students), The Pennsylvania State University, Summer 2009.
- Instructor, Principles of Microeconomics, The Pennsylvania State University, Spring 2007.
- Instructor, Current Issues (Senior Writing Intensive, The Pennsylvania State University, Summer and Fall 2006.
- Instructor, Intro to Micro/Macro Economics, The Pennsylvania State University, Spring 2006.
- Teaching Assistant, Principles of Microeconomics (~1000 students per semester), The Pennsylvania State University, Fall 2004, Spring, Summer, and Fall 2005.

RESEARCH
EXPERIENCE:

- Research Assistant for Edward Green; Department of Economics, Penn State University; Summer 2008, Fall 2009
- Research Assistant for Robert Marshall; Department of Economics, Penn State University; Spring 2009

CONSULTING
EXPERIENCE

- Bates White Summer Fellow: worked on a large international anti-trust civil lawsuit with a team to establish liability using modern economic techniques.

PRESENTATIONS &
OTHER PROFESSIONAL
ACTIVITIES:

- *Pre-Electoral Debate: The Case of a Large Election.* The 18th Stony Brook Game Theory Festival of the Game Theory Society, Stony Brook, 2007.
- *Pre-Electoral Debate: The Case of a Large Election.* Cornell-PSU Macro Workshop. Pennsylvania State University, University Park, PA. 6 April 2007.
- *Making Penn State's Most Enrolled-In Class More Welcoming.* Penn State Symposium for Teaching and Learning with Technology. The Pennsylvania State University, University Park, PA. 8 April 2006.

COMPUTER SKILLS

- Proficient in Parallel C, C++, Stata, Matlab

REFERENCES:

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- Prof. Joris Pinkse,
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- Prof. Duane F. Alwin,
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THESIS ABSTRACT

It is well known that there is a strong positive relationship between better health outcomes and higher educational attainment. As a rule of thumb; one extra year of education is associated with an extra one and a half years of life. Two main theories about this association are discussed in the literature: that education improves longevity through some unknown mechanism; or that there is a selection bias due to unobserved heterogeneity. One common example used to support the selection bias theory is that patient people may be willing to invest in more education and better health behaviors when young since these individuals have not heavily discounted the benefits when old. Likewise; impatient people care little about the future and therefore choose not to invest in education and health behavior.

The distinction has important policy ramifications: if the selection bias theory explains most of the association, simply encouraging education may not generate a strong health behavior response. Fortunately recent research has taken advantage of natural experiments to suggest that unobserved heterogeneity does not fully explain why health and education are so strongly related. To the extent that both theories explain some part of the association, it is currently unknown which is dominant and how they interact with each other.

I use the Health and Retirement Study data from 1992-2006 to structurally estimate a dynamic model of health and education choice allowing for permanent unobserved heterogeneity in time preference. This is the first attempt to tie detailed micro data to an economic model in order to examine the effects of education on health behavior. Results suggest that while there is considerable heterogeneity in time preference; controlling for it does not diminish the direct health returns to education.

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1. Curriculum Vitae

- CITIZENSHIP:
- Republic of Korea
- EDUCATION:
- Ph.D., Economics, Penn State University, Sep 2002 ~ May 2007
 - B.A., Economics and History, Sungkyunkwan University, Korea, 2001
- Ph.D. THESIS:
- “Essays in Game Theory and Political Economy”
Thesis Advisor: Professor James Jordan
- FIELDS:
- Primary: Microeconomic Theory, Game Theory, Industrial Organization
 - Secondary: Political Economy
- APPOINTMENT:
- Assistant Professor (July 2007 ~), Department of Economics, Lahore University of Management Sciences (LUMS)
- PUBLICATIONS:
1. “[Spatial Pillage Game](#),” Forthcoming in *Journal of Mathematical Economics*
 2. “[Who benefits from a sender's credibility concern, the sender or a receiver?](#),” Forthcoming in *Economics Letters*
 3. “[Information Manipulation through the Media](#),” Forthcoming in *Journal of Media Economics*
- WORKING PAPERS
(Submitted):
1. “[Preference-based Cooperation in a Prisoner’s Dilemma Game](#),” November 2007
 2. “[Complete Sequential Equilibrium and Its Alternative](#),” September 2009
 3. “[Strategic Information Transmission: Comment](#),” September 2009

WORK IN
PROGRESS:

1. "Control over Information"
2. "Cooperation and Matching Value"
3. "Sequential Rationality and Lexicographic Probability System"
4. "Hierarchy Pillage Game"
5. "Media Manipulation"
6. "Regular Sequential Equilibrium and Perfect Regular Equilibrium"
7. "Supply Chain of Perishable Produce"

PRESENTATIONS:

- Pennsylvania State University, Department of Economics, November 2009
- Midwest Economic Theory Meeting, October 2009
- Public Economic Theory Conference (PET 2009), June 2009
- Public Economic Theory Conference (PET 2008), June 2008
- International Conference on Mathematics and its Application in Information Technology , March 2008
- Eastern Economic Association Annual Conference 2008
- XVth Public Economic Meeting, February 2008
- Midwest Economic Theory Meeting, October 2006

TEACHING
EXPERIENCE:

- **Graduate** at LUMS: Microeconomic Theory, Game Theory for Masters
- **Undergraduate** at LUMS: Advanced Game Theory for seniors, Advanced Mathematical Economics for seniors
- Teaching Assistant at Penn State: Introductory Microeconomics, Introductory Macroeconomics, Game Theory, Monetary Theory

OTHER ACADEMIC
EXPERIENCE:

- Referee for the *German Economic Review*
- Research Assistant for James Jordan (Spring-Summer 2005, Summer 2006)

HONOURS AND
AWARDS:

- The First LUMS Research Award, The best Category (2008 - 2009)
- The Second LUMS Research Award, The best Category (2009 - 2010)

REFERENCES:

- Professor James Jordan (Thesis Advisor)
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2. Job Market Paper Abstract

Title: *Complete Sequential Equilibrium and Its Alternative*

We propose a complete version of the sequential equilibrium (CSE) and its alternative solution concept (WCSE) for general finite-period games with observed actions. The sequential equilibrium (SE) is not a complete solution concept in that it might not be a Nash equilibrium in the general games that allow a continuum of types and strategies. The CSE is always a Nash equilibrium in the general games and is equivalent to the SE in finite games. So, the CSE is a complete solution concept in the general games as a version of the SE. The WCSE is a weak, but simple version of the CSE. It is also a complete solution concept and functions as an alternative solution concept to the CSE. Their relation to converted versions of the perfect equilibrium and the perfect Bayesian equilibrium is discussed.