THE INSTITUTE FOR ECONOMIC DEVELOPMENT

RESEARCH REVIEW

Contents Spring 2015

BOSTON UNIVERSITY

The Institute for Economic Development (IED) is a research center within Boston University's Department of Economics focusing on the economic problems of developing countries and related fields of finance, trade, foreign investment, health, education, political economy, economic history and institutions.

College Diversity and Investment Incentives

By: Thomas Gall, Patrick Legros, and Andrew F. Newman

Discussion Paper 262

Both policy makers and college administrators have embraced the goal of student diversity in higher education. However, the policies that have been designed to promote these goals, such as affirmative action, remain controversial. Even though it is widely acknowledged that the college experience is heavily influenced by the nature of one's peers, affirmative action policies are often considered to be the subject of a classic equity-efficiency trade-off. Even if increased diversity may be desirable for equity reasons, critics of affirmative action argue that these policies come at an efficiency cost, by reducing the incentives to make costly educational investments.

Through the theoretical model developed in this paper, the authors suggest that the equity-efficiency trade-off of affirmative action policies may be misconstrued. In fact, free market policies may generate too much segregation in colleges. This implies that free market investment incentives are also distorted, and so affirmative action policies need not trade off efficiency at all. In the authors' model, individuals are matched to other individuals by attending a college. As a result of college attendance, individuals receive lifetime earnings benefits from their academic achievement and their level of privilege, as well as from the achievement and privilege of their peer. Academic achievement is the result of pre-college educational investments, which are optimally chosen. Furthermore, diversity is desirable, in the sense that the total surplus from diverse pairings is greater than the total surplus from segregated pairings involving the same sets of privileged and underprivileged individuals. In a first-best world, underprivileged students would make unconstrained side payments to privileged students to ensure diverse matches. This would also ensure an optimal level of educational investment, and therefore an efficient outcome.

However, as the authors argue, lifetime earnings benefits cannot easily be transferred among students via a price system. Moral hazard, social norms, and regulations all play a role in limiting the transferability of future income, and so colleges remain inefficiently segregated. Absent any policy intervention, segregation will distort incentives; underprivileged individuals will make smaller educational investments, while privileged individuals will overinvest in human capital. Thus, policies that encourage diversity may actually improve the efficiency of educational investment incentives.

The authors go on to analyze two frequently used diversity policies within this theoretical framework. The first is an "achievement-blind" policy that integrates backgrounds to match population measures without considering individual achievement. In the United States, this policy has been implemented through programs such as student "busing." The second policy considered is an "affirmative action" policy in which underprivileged individuals are given priority in admissions, conditional on achievement. Both of these policies may improve on the free market in terms of aggregate investment, output, surplus, and inequality. However, the second policy generally outperforms the first, and numerical simulations suggest that a policy that conditions on achievement can closely approximate the second-best outcome of the authors' model.

Weak Ex Ante Collusion and Design of Supervisory Institutions

By: Dilip Mookherjee, Alberto Motta, and Masatoshi Tsumagari

Discussion Paper 263

Governments or citizens often wish to rely on information provided by expert intermediaries or supervisors. However, their ability to do so is limited by the trustworthiness of that information. For example, an investor may wish to rely on a ratings agency for information on the riskiness of financing an entrepreneur, or a government appoints an industry specialist as consultant or regulator. In this context, expert collusion is a particularly important problem; an expert who can collude with the subject of her information will have an incentive to provide false information. In some circumstances, this may cause the intermediary relationship to fail completely.

This paper shows that each of these scenarios can be described by a model with a principal seeking information about an agent through an intermediary or supervisor, where the intermediary knows less about the agent than the agent himself, but more about the agent than the principal does. The supervisor and agent collude ex ante through a side contract, where they can coordinate both participation and reporting decisions to the principal. On the other hand, the collusion is weak in the sense that the supervisor nor the agent can commit to how they will behave should bargaining over their side contract break down.

The authors then show that the principal can do no better than select an allocation that is weakly collusion-proof. Because of the asymmetric information relationship between the three parties, the principal is able in effect to manipulate the side contract to ensure a more beneficial outcome than would be achieved by not appointing a supervisor at all, or by delegating to a supervisor unconditionally. However, this relationship also requires that the contracting be centralized, in the sense that there needs to be a scope for agents to 'appeal' and trigger direct communications with the principal. Absent any such centralization, a supervisor given unconditional authority will achieve a worse outcome for the principal than would a contract that did not involve the supervisor at all.

The authors' theory provides a rational basis for the widespread use of supervisors, even in circumstances where collusion is rampant. The theory also implies that appeal mechanisms are valuable in reducing collusion, because they restrict the unconditional authority of the supervisor and thereby limit collusion incentives. Finally, the theory demonstrates that supervisors who are altruistic or biased in favor of agents' interests are harmful to principals' interests, and therefore that policies or mechanisms which permit the choice of unbiased supervisors may be beneficial.

Political Decentralization

By: Dilip Mookherjee

Discussion Paper 264

A long-standing critique of the large, centralized development initiatives of the mid-20th century is that governments were not able to provide the public goods and services necessary for development. This critique has spawned a wide-ranging literature, which has argued that the nature of political institutions in developing countries may be the source of these failures. Among the most compelling of these is that political decentralization, the delegation of decision-making to local governments, may be necessary for development initiatives to succeed. This paper serves as an overview of the major strands of this literature, including both its theoretical and empirical components. It argues that although considerable progress has been made in studying decentralization, further research is necessary before we obtain a more comprehensive understanding of its effects.

The theoretical literature on decentralization has developed in two successive generations with considerably different premises. The first generation of theoretical models considers problems of efficient allocation among government entities, in a world where different regions have heterogeneous tastes, and a central government cannot efficiently differentiate provision of public goods across regions. These papers suggest that the value of decentralization in both taxation and provision depend on the heterogeneity of citizen preferences. The costs include inter-governmental externalities and loss of scale economies. However, these papers do not incorporate issues of agency into their models. The second generation of theoretical models focuses on political economy and corruption problems from centralization, with the bulk of the literature focusing explicitly on the role of agency in political decentralization. In these models, individual government agents choose actions that may benefit them at the expense of some or all of their constituents; these actions are frequently referred to as corruption or political capture by special interest groups. Many of these models then conclude that decentralization has the potential to enhance governance by making it less costly to observe or punish the actions of government agents. Whether this potential can be realized depends on how susceptible local governments are to problems of capture or corruption.

Based on these models, a broad empirical literature has set about identifying the determinants of capture of local governments. Notably, capture tends to be higher in communities with greater inequality and greater levels of socioeconomic disparity. Poor, isolated, and poorly educated communities are also particularly subject to capture; so political decentralization is particularly prone to fail in these areas. However, the author suggests that the existing notions of political capture may be too narrow to capture other costs and benefits related to decentralization. Issues such as clientelism, trade-offs between short-term and long-term gains, the relationship between decentralization and local democracy, and between national or regional and local governments remain relatively underexplored in the literature. The author suggests directions for future research into these issues.

Equity Short-term Finance under Philip II, with an Option to Long-term Funded Debt

By: Carlos Álvarez-Nogal and Christophe Chamley

Discussion Paper 265

Under the rule of Philip II, the Kingdom of Spain held a sovereign debt that grew to roughly 60% of GDP. This made it the first economy to reach a "modern" sovereign debt level. Yet, the Spanish King Philip II managed a global but fragmented empire from a small, core administration of councils and accountants that supervised the delegation of many government activities. A portion of government revenues were delegated to cities through contractual lump-sum payments, and this required the king's administration to balance its budget in the face of fluctuating revenues and expenditures. In a world where most modern sovereign financial instruments were not yet available, this paper shows that the empire developed a sophisticated credit market that relied on both short-term and long-term debt.

By analyzing a dossier of more than 400 pages from the archives of Simancas, the authors show that Spanish government debt of this era had two interconnected components. Funded debts, known as juros, were long-term instruments, such as perpetual bonds or life annuities, which were funded by earmarked revenues. These juros constituted about 90% of the total public debt. Floating debts, known as asientos, on the other hand, were relatively expensive short-term contracts between the crown and a class of "moneyed men." Many of these moneyed men were foreigners or men who had foreign ties, and their wealth allowed them to accumulate short-term debt and then refinance it using the longer-term juros. In this way the health of the credit market became directly tied to the health of international trade.

Although most of these credit contracts are not readily available, the authors go on to analyze the direct text of one specific juro contract. By providing a detailed translation and analysis of the contract's text, they show that the contract had relatively sophisticated mechanisms and rules in place. These mechanisms included multiple credit tranches, an option for early reimbursement, and an audit mechanism. In particular, the contract provides for an equity stake in returning trade ships. Because of the strong links between the juros and the asientos, an understanding of these terms will help researchers to understand the causes and effects of the royal decree in 1596 that suspended payments on all asiento debt. The authors suggest that the sophistication of the juros played an important role in unwinding the sovereign debt crisis.

Indian Labor Regulations and the Cost of Corruption: Evidence from the Firm Size Distribution

By: Amrit Amirapu and Michael Gechter

Discussion Paper 266

Excessive regulations are often said to be costly to firms, and this is particularly true in India, where regulations have been blamed for the presence of significant misallocation of resources across firms. This fact may have important productivity consequences: existing estimates suggest that aggregate total factor productivity in India could be 40-60% higher if not for this high degree of misallocation. In theory, regulations that are applied based on firms' employment may be particularly costly, as they may dissuade firms from growing or achieving their optimal size. Although there is already a large literature on this subject, it has had to rely almost exclusively on subjective measures of regulations for identification and has therefore led to some controversy.

The authors try to get around this problem in the following way. Using data from India's 2005 Economic Census they first show that the distribution of establishment size closely follows a power law. This is in line with existing empirical observations. However, the authors also show that there is a sharp discontinuous and proportional decrease in the density of establishments with 10 or more workers. Since 10 workers is the threshold at which a variety of establishment-level regulations begin to apply, this suggests that these regulations may increase the unit labor costs of firms. In order to estimate these costs the authors employ a recent model of firm size choice in the presence of size-dependent regulations by Garicano, LeLarge and Van Reenen (2013), but adapted to allow for the possibility that firms may misreport their true size.

The primary estimates of the paper suggest that firms behave as if operating at or above the 10-worker threshold increases labor costs by 35 percent per worker. State-level analyses suggest that firms in more corrupt states have higher estimated costs, especially if their industry is regulatory dependent. In turn, higher costs are associated with slower employment and productivity growth for registered manufacturing firms (less so for unregistered manufacturing firms, which are less exposed to such regulations). Taken together, these findings suggest that the true cost of the regulations may have more to do with bureaucracy and corruption than with the content of the labor and industrial regulations themselves, and that regulatory costs may play a role in pushing workers from the formal to the informal sector of the economy.

Formal Banking and Economic Growth: Evidence from a Regression Discontinuity Analysis in India

By: Nathaniel Young

Discussion Paper 267

Because access to credit expands the choice set of households and firms, it allows them to smooth consumption and investments over time. Yet, in many developing countries, opportunities for formal banking are relatively limited. For these reasons, a considerable literature has suggested that strong financial systems are a key component of economic growth as well as poverty alleviation. However, identifying a clear empirical relationship between formal financial institutions and economic growth is challenging, because financial institutions could be a symptom of economic growth as well as its cause. In particular, banks may choose to locate in profitable areas that may be expected to experience more rapid economic growth.

This paper provides novel evidence that expansion of formal sector financial services causes economic growth. The author uses data surrounding a previously unstudied branching policy reform in India that took place in 2005. The reform designated certain government districts as "under banked," and this determination was made using a strict threshold based on the district population per bank branch, relative to the national average. In order for a bank to open a branch in a sought after district that was not under banked, they also had to commit to opening a branch in a different district which was under banked. A centralized process of reviewing bank expansion plans also served to incentivize entry into under-banked districts. Therefore, the author develops a regression discontinuity design, which can identify a causal link between bank entry and subsequent economic growth under the assumption that the districts that fall just on either side of the designated threshold are otherwise economically similar.

The author then employs the regression discontinuity design using several direct and indirect measures of economic growth. Taken together, these analyses offer strong causal evidence that the expansion of the financial system facilitates growth in productive activities that are important for driving economic development. States in which financial services were expanded saw significant growth in the yield and output of revenue-generating crops. Additionally, enterprises in states most affected by the reform experienced faster growth in their total investments and their capital-labor ratios. Finally, using satellite data, the author shows that areas with expanding bank services experienced greater growth in the intensity of nighttime light, an important proxy for local GDP growth. These results improve upon existing literature, and suggest that policies that encourage formal banking expansion benefit the goals of economic growth and poverty alleviation.

Generalizing the Results from Social Experiments: Theory and Evidence from Mexico and India

By: Michael Gechter

Discussion Paper 268

Randomized evaluations have played a key role in the field of development economics in recent years. These evaluations have allowed economists and policy makers to test numerous theories and to promote a wide range of policy interventions based on causal evidence. Yet, results from randomized evaluations frequently face questions about their external validity. That is, to what extent the causal effects estimated in one region or time period are informative about causal effects in another region or time? It is clear that not every finding applies in every context, and so causal effects from one place may not be fully informative about effects elsewhere. Yet, rejecting all experimental findings as lacking external validity is impractical, as it would necessitate running a different randomized evaluation in every context of interest. Therefore, the author develops an econometric methodology to bound average causal effects in a context of interest using experimental evidence from somewhere else.

The author considers a setting where a randomized experiment is conducted in one context, with a treatment group that is given access to a program and a control group that does not receive access. Individuals in an alternative context do not have access to the program, but a policy maker wishes to predict the average causal effect in this alternative context. Since the underlying observable and unobservable characteristics of individuals in the alternative context may not be identical to those in the experimental context, the average causal effect in the new context will not necessarily be the same as the average effect in the experiment. By placing a restriction on the relationship between treated and untreated outcomes in the context of interest, the author shows that we can still provide informative bounds on the average causal effect in the alternative context. Specifically, for a given untreated outcome, the author assumes that the distribution of treated outcomes in the alternative context is consistent with the experimental results. Additional assumptions about the dependence between individuals' treated and untreated outcomes provide narrower bounds on the average causal effect in the context of interest.

The author empirically evaluates the results of the method as compared to existing methods, using data from two well-known randomized experiments. In Mexico, a cash transfer program provided funds to microentrepreneurs in Leon beginning in 2006. The author shows that existing methods would lead us to be overconfident in extrapolating from the small experiment in Mexico to other urban areas in the country. The small size of the original experiment makes it impossible to reject a zero average effect in other urban areas, even though the experiment found a significant positive effect of the transfers. In India, analysis of an experimental evaluation of a remedial education program in two cities shows that this method is able to recover the average causal effect in one city using results from the other city, even where existing methods are unsuccessful. Thus, the methods derived in this paper improve upon existing methods, and they offer researchers a formal and tractable way of assessing how well results from one context may generalize to another.

Bureaucrats and Politicians: How Does Electoral Competition Affect Bureaucratic Performance?

By: Anusha Nath

Discussion Paper 269

A large theoretical and empirical literature suggests that a lack of political competition may lead to adverse policy outcomes. This literature typically assumes that due to re-election concerns, voters are more able to discipline incumbent politicians when political competition is high. However, politicians typically do not implement policies themselves: government bureaucrats handle the implementation of government policies, and the role of the politician is to oversee this implementation. Enhanced political competition might adversely affect ability of politicians to control bureaucrats owing to greater politician turnover. In fact, as data from India shows, bureaucrats perform better when the incumbent politicians are more likely to be re-elected.

This paper proposes a mechanism by which political competition may inhibit policy implementation. Politicians incentivize bureaucrats to exert effort on project implementation by promising them future rewards. In uncompetitive districts, politicians are more credibly able to promise these rewards, so are more able to incentivize high levels of effort.

To demonstrate this effect, the author assembles data on the time taken to approve local public goods projects from India's Members of Parliament Local Area Development (MPLAD) scheme. In this program, each member of parliament gets a fixed sum of money to spend on infrastructure projects within his constituency. The politician has full control over the type, location, and cost of the project, but these projects require bureaucratic approval to proceed. Bureaucrats' promotions are determined in part by politicians. So politicians with a high probability of reelection can incentivize bureaucrats by promising to approve their future promotion. The author analyzes the time to bureaucratic approval in two contexts. First, she shows that as the probability of winning reelection goes to zero due to term limits, average time for bureaucratic approval increases by 13%. Second, she shows that in "party stronghold" districts where the same party has repeatedly won elections, projects are sanctioned 11% faster. Finally, the author takes advantage of the non-overlap between political districts and bureaucratic districts to show that these results are not explained by differences in the quality or characteristics of the bureaucrats themselves.

Robots Are Us: Some Economics of Human Replacement

By: Seth G. Benzell, Laurence J. Kotlikoff, Guillermo LaGarda, and Jeffrey D. Sachs

Discussion Paper 270

Many tasks that were previously performed by humans are now performed by so-called "smart machines." These machines combine physical capital with sophisticated software code to substitute for repetitive human labor, and the scope of tasks that they are able to perform is expanding rapidly. Yet, it is not clear that this method of "self-induced redundancy" will benefit consumers in the long run. In fact, the authors argue, technological change through smart machines could leave us earning too little to purchase the products that our smart machines can make. As the Luddites and numerous others predicted, smart machines could thus "replace" humans, and in doing so make those humans permanently worse off.

The authors consider the effects of a technical breakthrough in a model of overlapping generations in which there are two types of worker; high-tech and low-tech. High-tech workers have a comparative advantage in producing analytical tasks, while low-tech workers have a comparative advantage in empathetic and personal tasks. Thus, high-tech workers may produce software code, which can be combined with capital to produce automatable goods and services. High-tech workers are compensated by licensing this code and selling the rights to their code. Low-tech workers produce service goods, which do not require the use of physical capital, and which cannot be automated.

When a technical breakthrough makes code less costly to maintain, the demand for new code increases. In the short run, this leads to increased wages for high-tech workers. However, the authors show that over time, the increased durability of code may lead to a dramatic reduction in the demand for new code, and therefore a decline in wages for both high-tech and low-tech workers. The share of income that is paid to labor falls, while capital becomes relatively more valuable. Thus, technological change may be immiserizing for workers. The authors show that an increased savings rate may mitigate the immiserizing effects of technological change by increasing the capital stock and increasing the returns to labor. Finally, the authors also show that non-rival code may exacerbate the immiserizing effects of code by reducing the returns to future coding labor.

Annual Distinguished Alumni Award

The Institute for Economic Development and the Department of Economics continued the annual award to honor a distinguished alumnus. The Department Chair and IED Director, along with a few senior faculty, established this award to recognize the remarkable accomplishments of our alumni and to inspire and motivate current students in the department.

The 2015 recepient of the Distinguished Alumni Award is **Yukiko Okawa Omura**, MAPE 80. She rose to success when working at the Inter-American Development Bank, J.P. Morgan and Lehman Brothers. Yukiko went on to serve as Managing Director of Union Bank of Switzerland and of Dresdner Bank AG. She then became the Executive Vice President of the Multilateral Investment Guarantee Agency (MIGA), followed by an appointment as the Vice President of the International Fund for Agricultural Development (IFAD).

Yukiko Okawa Omura was honored at an alumni reception at the BU Castle on May 14th, 2015, attended by students, faculty and alumni. Yukiko was presented with the award at commencement and spoke eloquently to the graduates and guests about her degree and subsequent professional career.

Funding Opportunities for Research

The Weiss Foundation grants for Junior Faculty and PhD Students continued this year. The Weiss Family Program Fund for research in development economics was established last year by the generosity of past IED Affiliate and Emeritus Professor of Economics, Andrew Weiss. Kevin Lang helps manage it along with faculty members in the Harvard and MIT economics departments, and it is administered by Harvard University. The Fund supports research by undergraduates, graduate students, and junior faculty at Harvard, MIT, and Boston University working on development economics.

This year the Institute for Economic Development assisted Kehinde Ajayi, Assistant Professor, Samual Bazzi, Assistant Professor, and Matthew Gudeon, fouth year PhD candidate, with applications to the Weiss Foundation for funding on their developmental economics projects for a total of $23,600. All three applications were successful with their funding requests:

Assistant Professor Kehinde Ajayi was awarded $10,600 for data sets to assist in her research project “Guidance and Information for Improved Decisions in Education.”

Assistant Professor Samuel Bazzi was awarded $3000 for travel to Brazil to conduct his research project “Firm Entry Barriers, Growth Constraints, and Job Creation: Theory and Evidence from Brazil.”

Ph.D. candidate Matthew Gudeon was awarded $10,000 in support of his research project “Decentralization and Violence: Theory and Evidence from Indonesia,” which enabled him to spend a month in Indonesia to gather data necessary for the project.

Professor Randall Ellis was awarded $173,278 in additional funding for one year on a collaborative research project with Harvard University entitled “Mental Health Coverage in Health Care Reform.” Professor Ellis is able to fund a PhD Research Assistant for one year.

Faculty Profiles

The following paragraphs summarize the projects and development-related research being conducted by Institute affiliates from the Department of Economics at Boston University

Kehinde Ajayi's research focuses on economic development and the economics of education in Africa. She is particularly interested in how information affects decision-making and in understanding the resulting implications for policies aimed at reducing inequality. She has a longstanding project examining the determinants and consequences of schooling choices at the secondary school level in Ghana. She is also working on a new project to evaluate how public perceptions about the stability of financial institutions affect the use of formal financial services in Nigeria.

Marianne Baxter's research is in the fields of macroeconomics and international economics. In research related to her prior work on macroeconomic consequences of home production, she has been engaged in a large-scale econometric analysis of household expenditures and household time use as they pertain to home production. She is also working with a new data set using IKEA catalogs from many countries and up to twenty years to study the determinants of departures from the law of one price.

Samuel Bazzi's research interests span development, labor and macroeconomics. His current research examines the role of labor mobility in the development process. His studies look at how income growth in poor countries affects international migration, the role of recruiter intermediaries in facilitating international labor mobility, the importance of migrants' skill transferability for regional economic development, and the effect of trade liberalization on labor reallocation across firms. Other work investigates the causes of conflict and barriers to the entry and growth among small firms. His primary ongoing projects are in Brazil and Indonesia.

Christophe Chamley's research is on social learning, coordination of expectations and markets in macroeconomics, and in the history of states' finances from 5000 BC to the 19th century.

Francesco Decarolis specializes in industrial organization with a focus on auctions, health insurance, and anti-competitive behavior. His recent research concerns the effects produced by different auction formats in the context of public procurement auctions and the effects on insurers competition of government subsidies in Medicare.

Randall Ellis' recent research focuses on how payment systems affect consumers, health care providers and health plans. In June 2014 he will be completing his final two years as Past President of the American Society of Health Economists. His research on risk adjustment and predictive modeling resulted in the payment models used in the US since 2000 and Germany since 2009, with similar models being evaluated in other countries. During the past year Ellis has given talks in the US and Australia. He is currently collaborating with researchers in the US, Australia, Chile, and China, and as well as with multiple graduate students on US and developing country topics.

Carola Frydman works at the intersection of economic history, corporate finance, and labor economics. Recently, she investigated changes in executive compensation, the market for managers, and income inequality in the U.S. over the twentieth century. Her current project studies the evolution of businesses organizations and financial markets from 1900 to 1930, focusing on the value of connections to bankers through boards of directors, and the detrimental consequences of these ties on firm outcomes during financial crises.

Stefania Garetto is an applied trade economist with a strong interest in multinational corporations. Her most recent publications analyze the risk implications of firms' international operations. She integrates new trade theory and theoretical asset pricing models to analyze both qualitatively and quantitatively the economic drivers of international activity and their consequences. In a series of related papers, she analyzed the relationship between export/FDI status and financial indicators. Her current work focuses on the activities of multinational firms in the banking sector.

Simon Gilchrist's research examines the effects of financial market imperfections and financial crises on real economic activity, with particular focus on the implications for investment behavior, business-cycle dynamics, and the conduct of monetary policy. Recent work explores the predictive content of credit spreads for macroeconomic activity, the effect of uncertainty on investment and output, and the consequences of financial frictions for firm-level price setting and aggregate inflation dynamics.

John Harris works on issues of applied macroeconomic theory, regional and urban economics, and migration theory. His recent research includes comparative analysis of economic development in Africa and Southeast Asia. He also has extensive field experience in Africa and Asia, with emphasis on Indonesia, Uganda, Botswana, Kenya, Nigeria, Sudan, and Tanzania.

Leroy Jones specializes in policy-oriented micro issues in developing countries. Particular areas of interest include public enterprise, privatization, government-business solutions and industrial organization. He has substantive experience in Indonesia, Korea, Pakistan, Venezuela and thirteen other countries. Professor Jones directs the Institute's Program in Public Enterprise.

Robert King focuses his research on monetary policy and macroeconomics. Particular areas of current interest are the nature of price dynamics, the influence of reputation and credibility on optimal monetary policy, and the history of banking markets.

Kevin Lang's research concerns education and labor markets, with a particular focus on discrimination. While his work is primarily centered on the United States, he is currently involved in projects in Israel (on the motherhood pay penalty among university graduates) and Singapore (on discriminatory behavior among street sex workers).

Laurence Kotlikoff specializes in fiscal policy, macroeconomics, money and banking, computational economics, healthcare, and personal finance. He also works on the economics of robots. The author or co-author of 17 books and hundreds of journal articles, Kotlikoff is also a prolific columnist and a #1 NY Times Best Seller author. His columns have appeared in the New York Times, the Wall Street Journal, Bloomberg, Forbes, PBS.org, and many of the other top newspapers and magazines in the U.S. and overseas. His recent work has focused on generational policy, banking reform, corporate tax reform, social security reform, healthcare reform, computing large scale life-cycle models with aggregate shocks, and modeling the economic impacts of robots.

Robert Lucas's recent work focuses on migration. His chapter on African migration appeared in the North-Holland Handbook series last year. Lucas has also edited a handbook on international migration and economic development, which was published by Elgar earlier this year. For that volume he prepared a chapter on the link between bilateral trade and international migration, including fresh evidence derived from the most extensive data available to date. Lucas's current work is on internal, rural-urban-rural migration in developing countries. He gave a talk on both international and internal migration at the UN in New York in May 2015. In addition, Lucas has been acting as a member of the advisory committee on remittances to G8 countries and of the steering committee for the Global Research Competition organized by the Global Development Network.

Robert A. Margo had a book published this past year, a co-edited NBER conference volume entitled Human Capital in History: The American Record (University of Chicago Press). Two chapters by Margo, one co-authored with Lawrence Katz, appear in the volume. Margo has another co-edited NBER volume that will be published in August 2015 entitled Enterprising America: Businesses, Banks, and Credit Markets in Historical Perspective (University of Chicago Press). Margo is the current President of the Economic History Association, and will be giving his presidential address at the upcoming EHA meetings in Nashville in September.

Jianjun Miao continues to work on two lines of research. The first concerns macroeconomic implications of financial frictions, specifically business cycle and growth implications of bubbles and credit constraints. The second involves new models of ambiguity sensitive preferences and applications to macroeconomics and finance.

Dilip Mookherjee has been working on a combination of theoretical and empirical topics related to development economics. Current empirical projects include land policies, political economy, financial development and food marketing supply chains in South Asia; theoretical topics include inequality, poverty and corruption control.

Andrew Newman is currently engaged in several research projects pertaining to development, organizational economics, inequality, and the economics of the household. Recent work involves developing a testable competitive equilibrium framework for studying how firms' internal organization decisions such as outsourcing or vertical integration interact with markets and how those decisions in turn affect product market performance, particularly in the face of globalization. He has been contributing to the economic theory of matching markets and applying that to affirmative action policies. He is also exploring how the processes by which people learn about their economic environment can lead to organizational dysfunction and change.

Claudia Olivetti specializes in labor economics and economic history. She has written on the causes of the changing role of women in the family and in the workplace, and on the consequences of this change (with both a US and cross country focus). Her current research explores the role of early socialization for the formation of gender norms and investigates the link between marriage and intergenerational mobility in a historical perspective. She is set to leave Boston University to take up an appointment at Boston College from the academic year 2015-16 onwards.

Daniele Paserman specializes in labor, applied microeconomics, political economy and behavioral economics.

Pankaj Tandon concentrates on technological change, microeconomics, public enterprises, and food policy. He has worked on evaluating privately financed infrastructure projects and privatization programs. His main field experience has been in Egypt, India, Mexico, and Venezuela.

Professors Emeriti: Peter Doeringer, Shane Hunt, Gustav F. Papanek and Paul P. Streeten

Seminars

IED organizes a weekly seminar during the academic year where visiting speakers present their research. The following is the list of seminars for the 2014-15 year:

Fall 2014

9/22/14
Rohini Pande (Harvard University)
"The Value of Regulatory Discretion: Experimental Evidence and Structural Estimates from Environmental Inspections in India" (joint with Esther Duflo, Michael Greenstone and Nicholas Ryan)

9/29/14
Horacio Larreguy Arbesu (Harvard University)
"Taking One for the Team: Shocks at Destination and Household's Supply of Migrants"

10/6/14
Simone Schaner (Dartmouth College)
"The Persistent Power of Behavioral Change: Long-Run Impacts of Temporary Savings Subsidies for the Poor"

10/14/14
Claudia Olivetti & Daniele Paserman (Boston University)
"Intergenerational Mobility Across Three Generations: Evidence from the US Census"

10/20/14
Treb Allen (Northwestern University)
"Universal Gravity"

10/27/14
Andrew Foster (Brown University)
"Spillovers, Coordination Failure, and the Consequences of Fragmentation in Rural India"

11/3/14
Andrew Newman & Claudia Olivetti (Boston University)
"Career Women and the Durability of Marriage"

11/10/14
Christopher Udry (Yale University)
"Self-Selection into Credit Markets: Evidence from Agriculture in Mali"

11/17/14
Farzad Saidi (University of Cambridge)
"Networks, Finance, and Development: Evidence from Hunter-Gatherers"

11/24/14
Kelsey Jack (Tufts University)
"Seasonal Liquidity Constraints and Agricultural Productivity: Evidence from Zambia" with Gunther Fink (Harvard School of Public Health) and Felix Masiye (University of Zambia)

12/1/14
Gautam Rao (Harvard University)
"Diversity, Discrimination and Generosity in Delhi Schools"

12/8/14
Stuti Khemani (World Bank)
"Buying Votes Vs. Supplying Public Services: Political Incentives to Under-invest in Pro-Poor Policies"

Spring 2015

3/2/15
Michael Callen (Harvard Kennedy School)
"Tailoring Intertemporal Incentives: An Application to Polio Vaccination Drives in Pakistan"

3/16/15
Jonas Hjort (Columbia University)
"Firms' Response and Unintended Health Consequences of Industrial Regulations"

3/23/15
Michael Peters (Yale University)
"Lack of Selection and Limits to Delegation: Firm Dynamics in Developing Countries"

3/30/15
Seema Jayachandran (Northwestern University)
"Why Are Indian Children So Short?"

4/6/15
Leo Burszstyn (University of California, Los Angeles)
"Identifying Ideology: Experimental Evidence on Anti-Americanism in Pakistan"

4/13/15
Rocco Macchiavello (University of Warwick)
"Tropical Lending: International Prices, Strategic Default and Credit Constraints Among Coffee Washing Stations"

4/22/15
Karna Basu (Hunter College)
"Asymmetric Punishment as an Instrument of Corruption Control" (joint with Kaushik Basu and Tito Cordella)

4/27/15
Esteban Rossi-Hansberg (Princeton University)
"The Geography of Development: Evaluating Migration Restrictions and Coastal Flooding"

5/4/15
Nancy Qian (Yale University)
"The Institutional Causes of China's Great Famine, 1959-1961"

Distinguished Visitors

Edward Dekel (Northwestern University) visited from September 15th through the 19th. He gave one seminar and two lectures on microeconomic theory.

Fabrizio Perri (Federal Reserve Bank, Minneapolis) visited from October 27th through October 30th. He gave one seminar and two lectures on macroeconomics.

James Tybout (Pennsylvania State University) visited from February 23rd through the 27th. He gave one seminar and two lectures on development economics.

Andrew Chesher (University College London) visited from March 23rd to 27th. He gave one seminar and two lectures in econometrics.

Leemore Dafny (Northwestern University Kellogg School) visited from April 27th through May 1st. She gave one seminar and two lectures on health economics.

2015 Rosenstein-Rodan Prize

The Rosenstein-Rodan prize is awarded annually for the best paper in a development-related area written by a PhD economics student.

The 2015 Rosenstein-Rodan prize will be shared by two students: William Johnson for "Economic Growth Among a Network Of Industries," and Benjamin Ogden for "The Imperfect Beliefs Voting Model."

William's paper studies a model of economic development in which technological spillovers induce a network structure among industries. Industries that are more central in the network contribute more to aggregate growth. The model helps explain certain industry-level dynamics in US and international data.

Benjamin's paper studies theoretically the consequences for political competition of voter mistakes in interpreting candidate policy platforms. His model shows how increasing political polarization of the voter population can result from increased social segregation, as a consequence of parties appealing to voter groups with more precise beliefs over their respective electoral platforms.

Students Activity

PhD Students Completed Dissertations and Placement

As of May 1, 2015 eighteen new BU Ph.D students have accepted job offers. Twelve of them will go to academic positions at universities and six to private industry. We congratulate the following students on their new positions:

Amrit Amirapu, Assistant Professor, University of Kent, UK; **Anindya Chakrabarti**, Assistant Professor, Indian Institute of Management, Ahmedabad, India; **Tszkin Julian Chan**, Economist, Bates White, Washington DC; **Mingli Chen**, Assistant Professor, University of Warwick, United Kingdom; **Aparna Dutta**, Economist, Bates White, Washington DC; **Michael Gechter**, Assistant Professor, Penn State University, PA and Associate Research Fellow, International Food Policy Research Institute, Washington DC; **Deborah Goldschmidt**, Associate, Analysis Group, New York; **Jasmina Hasanhodzic**, Assistant Professor, Babson College - Finance Department, MA; **Hyungseok Joo**, Lecturer, Wayne State University, MI; **Yangshin Park**, Associate Research Fellow, KIET: Korea Institute for Industrial Economics and Trade, Korea; **Alejandro Rivera**, Assistant Professor, University of Texas - Finance Department, Dallas, TX; **Yasemin Satir**, Economist, TEPAV: The Economic Policy Research Foundation of Turkey, Ankara, Turkey; **David Seymour**, Assistant Professor, Istanbul Technical University, Turkey; **Shunan Wu**, Assistant Professor, Central University of Finance and Economics, Beijing, China; **Nathaniel Young**, Research Economist, European Bank for Reconstruction and Development, London, UK; **Grace Wei Yu**, Associate, Charles River Associates, Boston, MA.

The following Ph.D. graduates secured post-doctoral positions:

Anusha Nath, University of Minnesota, MI; **Mengxi Zhang**, University of Technology, Sydney, Australia.

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