Professor Xavier Sala-i-Martin has won a Lenfest Distinguished Columbia Faculty Award, “given annually to faculty of unusual merit across a range of professorial activities—including scholarship, University citizenship and professional involvement—with a primary emphasis on the instruction and mentoring of undergraduate and graduate students.” The new award, which is in its first year at the University, carries an annual award for a three-year period.

“Xavier truly combines excellence in research and teaching,” says the Chair of the Economics Department, Janet Currie. “On the research side his output has been astonishing.” Since his arrival at Columbia in 1996, Sala-i-Martin has published 29 papers, with 15 in refereed journals, including 6 in the very top journals. In 1999 he made a foray into the field of health economics with a paper in the American Economic Review, ”Health Investment Complementarities Under Competing Risks,” which won the Kenneth Arrow Award for the best paper in from the International Health

Michael Woodford, John Bates Clark Professor of Political Economy, has been awarded the Deutsche Bank Prize in Financial Economics for 2007. The Prize Committee cited his work on a “theory of monetary macroeconomics that holds widespread appeal to academic researchers owing to its rigorous microeconomic foundations.”

The Deutsche Bank Prize, an international academic prize, was established in 2004 by the Center for Financial Studies (CFS) in cooperation with Frankfurt University. Awarded every two years, it honors an internationally renowned researcher, “who has excelled through influential contributions to research in the fields of finance and money and macroeconomics, and whose work has lead to practice and policy-relevant results.” The Prize carries a cash award and the prize holder is appointed a “Distinguished Fellow” of the CFS. Cited by the Prize committee as “one of the most highly acclaimed researchers in the field of monetary economics,” Woodford will be the presented with the award in a ceremony in Frankfurt in October, 2007.

Professor Padma Desai’s Conversations on Russia selected as a Financial Times Notable Book of the Year

Russia specialist Professor Desai’s latest book, Conversations With Russia: Reform From Yeltsin to Putin, was a Financial Times Notable Book for 2006, containing interviews with “just about every major figure in the country’s transition from communism to managed capitalism. What she heard is revealing, disturbing and ultimately encouraging.” From Vladimir Putin to Boris Yeltsin to George Soros, the individual profiles and the issues discussed focus on what could have been done differently to avoid the massive blow from which the Russian economy is still reeling.

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HTTP://WWW.COLUMBIA.EDU/CU/ECONOMICS
Woodford has proved the immense practical value of his theory by analyzing the central role played by expectations and communication in the implementation of monetary policy,” said Volker Wieland, CFS Director and Chairman of the 2007 Deutsche Bank Prize Jury, adding that “Woodford’s work, summarized in his influential monograph *Interest and Prices: Foundations of a Theory of Monetary Policy*, has quickly become the standard reference for monetary theory and analysis among academic economists and their colleagues at central banks.”

Woodford’s work advocates that central banks adhere to systematic and transparent rules in the design of monetary policy. The effects of monetary policy depend critically upon what market participants expect about future policy and the course of the economy. Thus, interest rates should be set according to systematic rules and central banks need to communicate information about how they intend to conduct policy in the future. The best way for central banks to communicate the future course of policy, according to Woodford, is to be explicit about the rules that guide policymaking decisions. Good rules require explicitly stated targets for policy, such as inflation, and clear explanations stating how an interest rate level consistent with the policy target is to be achieved. Woodford argues in favor of direct inflation targeting rather than using intermediate targets or reference values for money and credit aggregates.

Michael Woodford studied at the University of Chicago as well as the Yale Law School, and received his Ph.D. at the Massachusetts Institute of Technology (MIT). He has held teaching and research positions at the University of Chicago and Princeton University. He taught at Columbia from 1984 to 1986 and has been at the University from 2004 to the present. He has published widely, has held several committee and consultancy positions, and has also been the recipient of a McArthur and a Guggenheim Foundation Fellowship.

www.db-prize-financialeconomics.org

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Sala-i-Martin’s area of interest and expertise is world poverty and he has long studied income inequality between rich and poor countries, regions, and individuals, important questions with clear implications for contemporary debates over globalization.

“Xavier’s teaching is phenomenal,” says Currie. “He clearly loves to teach. The ability to transmit his passions to his students is one of the things that makes him such a good teacher.” He has taught macroeconomics, growth, and development at the graduate level and is now teaching a course on growth and development for SIPA students and advanced undergraduates. He has won the graduate teaching award twice and over the past ten years, he has consistently had over 300 students enrolled in his intermediate macroeconomics class, for a total of more than 3,000 students. In his undergraduate teaching evaluations for last year, 96% of students said that they would recommend taking a class with him. His students’ comments are glowing, describing him as “brilliant,” “excellent,” “awesome,” and “off the meter” but also “demanding,” “inspiring,” “riveting,” and “fun and exciting.”

Sala-i-Martin founded the Umbele Foundation in Africa in 2003, which fosters economic development in the region by, among other things, providing incentives to children to attend school by paying them for their attendance. In 2004, when Sala-i-Martin won the Premio Juan Carlos I de Economia Prize ($95,000 U.S.), he donated the proceeds to the foundation. The prize is awarded by the Bank of Spain to the best economist in Spain and Latin America. In addition to these activities, he is also the current President of the Futbol Club Barcelona.
This has been an exciting year to date. The fall saw Edmund Phelps win the Nobel Prize, and Michael Woodford was named the winner of the Deutsche Bank Prize in January. Xavier Sala-i-Martin was one of ten faculty selected in a Columbia-wide competition for his excellence in both teaching and research. Padma Desai’s book, *Conversations on Russia: Reform from Yeltsin to Putin*, was named a notable book of the year by the Financial Times, and the list goes on.

We have been working to upgrade our physical space with a much-needed renovation of the tenth floor of the International Affairs Building. We are particularly proud of the spacious new area that has been set aside to deal with the concerns of graduate and undergraduate students. No more lining up in the hallway to see an advisor!

We have given similar thought to intellectual housekeeping. The Graduate Review Committee, headed by Pierre-André Chiappori, proposed a number of changes to the graduate program which will strengthen student research and improve advising. The Undergraduate Review Committee, chaired by Kyle Bagwell, is continuing to meet with the aim of making improvements to our undergraduate offerings.

We are actively recruiting, and hope that by adding to our numbers, we will have even more capacity to continue our upward trajectory.

Sincerely,

Janet Currie

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**Recent Faculty Publications**

- “In the Right Place at the Wrong Time: The Role of Firms and Luck in Young Workers’ Careers” by Till Von Wachter, *American Economic Review*, December 2006

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**Recent Working Papers**

- Evaluating Effects of Tax Preferences on Health Care Spending and Federal Revenues* by John F. Cogan, R. Glenn Hubbard and Daniel P. Kessler NBER #12733 (PE)
- “Bequest and Tax Planning: Evidence From Estate Tax Returns” by Wojciech Kopczuk NBER #12701 (AG, PE)
- “Linear-Quadratic Approximation of Optimal Policy Problems” by Pierpaolo Benigno and Michael Woodford NBER #12672 (EFG, ME)

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**Visitors at the Program for Economic Research**

Every week, researchers and scholars visit the Columbia Economics Department under the auspices of the Program for Economic Research (PER). Each scholar presents their research in a department workshop or seminar to the faculty and students. Interactions in these seminars advance the body of knowledge and encourage collaboration between economists at Columbia and throughout the world.

**Fall 2006**
- Marios Angeletos (MIT) 26 – 29 September
- Martin Schneider (NYU) 2 – 6 October
- Petra Todd (U. Penn) 9 – 13 October
- Oliver Hart (Harvard) 16 – 20 October
- Michael Greenstone (MIT) 23 – 27 October
- Roland Benabou (Princeton) 30 October – 3 November
- Marcos Rangel (Chicago) 4 – 8 December
Dynamic Capitalism:
Entrepreneurship is Lucrative and Just

BY EDMUND S. PHELPS
This article appeared in the Opinion section of the Wall Street Journal on Tuesday, October 10, 2006 and is reprinted here with the author’s permission.

There are two economic systems in the West. Several nations—including the U.S., Canada and the U.K.—have a private-ownership system marked by great openness to the implementation of new commercial ideas coming from entrepreneurs, and by a pluralism of views among the financiers who select the ideas to nurture by providing the capital and incentives necessary for their development. Although much innovation comes from established companies, as in pharmaceuticals, much comes from start-ups, particularly the most novel innovations. This is free enterprise, a.k.a. capitalism.

The other system—in Western Continental Europe—though also based on private ownership, has been modified by the introduction of institutions aimed at protecting the interests of “stakeholders” and “social partners.” The system’s institutions include big employer confederations, big unions and monopolistic banks. Since World War II, a great deal of liberalization has taken place. But new corporatist institutions have sprung up: Co-determination (Cottageon, or Mitbestimmung) has brought “worker councils” (Betriebsrat); and in Germany, a union representative sits on the investment committee of corporations. The system operates to discourage changes such as relocations and the entry of new firms, and its performance depends on established companies in cooperation with local and national banks. What it lacks in flexibility it tries to compensate for with technological sophistication. So different is this system that it has its own name: the “social market economy” in Germany, “social democracy” in France and “concertazione” in Italy.

Dynamism and Fertility

The American and Continental systems are not operationally equivalent, contrary to some neoclassical views. Let me use the word “dynamism” to mean the fertility of the economy in coming up with innovative ideas believed to be technologically feasible and profitable—i.e., the economy’s talent at commercially successful innovating. In this terminology, the free enterprise system is structured in such a way that it facilitates and stimulates dynamism while the Continental system impedes and discourages it.

Wasn’t the Continental system designed to stifle dynamism? When building the massive structures of corporatism in interwar Italy, theoreticians explained that their new system would be more dynamic than capitalism—maybe not more fertile in little ideas, such as might come to petit-bourgeois entrepreneurs, but certainly in big ideas. Not having to fear fluid market conditions, an entrenched company could afford to develop radical innovation. And with industrial confederations and state mediation available, such companies could arrange to avoid costly duplication of their investments. The state and its instruments, the big banks, could intervene to settle conflicts about the economy’s direction. Thus the corporatist economy was expected to usher in a new futurismo that was famously symbolized by Severini’s paintings of fast trains. (What was important was that the train was rushing forward, not that it ran on time.)

Friedrich Hayek, in the late 1930s and early ’40s, began the modern theory of how a capitalist system, if pure enough, would possess the greatest dynamism—not socialism and not corporatism. First, virtually everyone right down to the humblest employees has “know-how,” some of which Michael Polanyi called “personal knowledge” and some merely private knowledge, and out of that an idea may come that few others would have. In its openness to the ideas of all or most participants, the capitalist economy tends to generate a plethora of new ideas.

Second, the pluralism of experience that the financiers bring to bear in their decisions gives a wide range of entrepreneurial ideas a chance of insightful evaluation. And, importantly, the financier and the entrepreneur do not need the approval of the state or of social partners. Nor are they accountable later on to such social bodies if the project goes badly, not even to the financier’s investors. So projects can be undertaken that would be too opaque and uncertain for the state or social partners to endorse. Lastly, the pluralism of knowledge and experience that managers and consumers bring to bear in deciding which innovations to try, and which to adopt, is crucial in giving a good chance to the most promising innovations launched. Where the Continental system convenes experts to set a product standard before any version is launched, capitalism gives market access to all versions.

The issues swirling around capitalism today concern the consequences of its dynamism. The main benefit of an innovative economy is commonly said to be a higher level of productivity—and thus higher hourly wages and a higher quality of life. There is a huge element of truth in this belief, no matter how many tens of qualifications might be in order. Much of the huge rise of productivity since the 1920s can be traced to new commercial products and business methods developed and launched in the U.S. and kindred economies. (These include household appliances, sound movies, frozen food, pasteurized orange juice, television, semiconductor chips, the Internet browser, the redesign
of cinemas and recent retailing methods.) There were often engineering tasks along the way, yet business entrepreneurs were the drivers.

There is one conceivable qualification that ought to be addressed. Is productivity not finally at the point, after 150 years of growth, that having yet another year’s growth would be of negligible value? D.H. Lawrence spoke of America’s “everlasting slog.” Whatever the answer, it is important to note that advances in productivity, in generally pulling up wage rates, make it affordable for low-wage people to avoid work that is tedious or grueling or dangerous in favor of work that is more interesting and formative.

Of course, productivity levels in the smaller countries will always owe more to innovations developed abroad than to those they develop themselves. Some might suspect that the domestic market is so tiny in a country such as Iceland, for instance, that even in per capita terms only a very small number of homemade innovations would bring a satisfactory productivity gain—and thus an adequate rate of return. In fact, most of the Continental economies, including the large ones, have been content to sail in the slipstream of a handful of economies that do the preponderance of the world’s innovating. The late Harvard economist Zvi Griliches commented approvingly that in such a policy, the Europeans “are so smart.”

I take a different view. For one thing, it is good business to be an innovative force in the “global economy.” Globalization has diminished the importance of scale as well as distance. Tiny Denmark sets its sights on markets in the U.S., the EU and elsewhere. Iceland has entered into European banking and biogenetics. France has long done this—and can do more of it. But it could do so more successfully if it did not insulate its innovational decisions so much from evaluations by financial markets—including the stock market—as Airbus does. The U.S. is already demonstrably in the global innovation business. To date, there is an adequate rate of return to be expected from “investing” in the conception, development and marketing of innovations for the global economy—a return on a par with the return from investing in plant and equipment, software and other business capital. That is a better option for Americans than suffering diminished returns from investing solely in the classical avenue of fixed capital.

I would, however, stress a benefit of dynamism that I believe to be far more important. Instituting a high level of dynamism, so that the economy is fired by the new ideas of entrepreneurs, serves to transform the workplace—in the firms developing an innovation and also in the firms dealing with the innovations. The challenges that arise in developing a new idea and in gaining its acceptance in the marketplace provide the workforce with high levels of mental stimulation, problem-solving, employee-engagement and, thus, personal growth. Note that an individual working alone cannot easily create the continual arrival of new challenges. It “takes a village,” preferably the whole society.

The concept that people need problem-solving and intellectual development originates in Europe: There is the classical Aristotle, who writes of the “development of talents”; later the Renaissance figure Cellini, who jubilates in achievement; and Cervantes, who evokes vitality and challenge. In the 20th century, Alfred Marshall observed that the job is in the worker’s thoughts for most of the day. And Gunnar Myrdal wrote in 1933 that the time will soon come when more satisfaction derives from the job than from consuming. The American application of this Aristotelian perspective is the thesis that most, if not all, of such self-realization in modern societies can come only from a career.

Today we cannot go tilting at windmills, but we can take on the challenges of a career. If a challenging career is not the main hope for self-realization, what else could be? Even to be a good mother, it helps to have the experience of work outside the home.

I must mention a “derived” benefit from dynamism that flows from its effects on productivity and self-realization. A more innovative economy tends to devote more resources to investing of all kinds—in new employees and customers as well as new office and factory space. And although this may come about through a shift of resources from the consumer-goods sector, it also comes
through the recruitment of new participants to the labor force.

Also, the resulting increase of employee-engagement serves to lower quit rates and, hence, to make possible a reduction of the “natural” unemployment rate. Thus, high dynamism tends to bring a pervasive prosperity to the economy on top of the productivity advances and all the self-realization going on. True, that may not be pronounced every month or year. Just as the creative artist does not create all the time, but rather in episodes and breaks, so the dynamic economy has heightened high-frequency volatility and may go through wide swings. Perhaps this volatility is not only normal but also productive from the point of view of creativity and, ultimately, achievement.

**Ideals and Reality**

I know I have drawn an idealized portrait of capitalism: The reality in the U.S. and elsewhere is much less impressive. But we can, nevertheless, ask whether there is any evidence in favor of these claims on behalf of dynamism. Do we find evidence of greater benefits of dynamism in the relatively capitalist economies than in the Continental economies as currently structured? In the Continent’s Big Three, hourly labor productivity is lower than in the U.S. Labor-force participation is also generally lower. And here is new evidence: The World Values Survey indicates that the Continent’s workers find less job satisfaction and derive less pride from the work they do in their job.

Dynamism does have its downside. The same capitalist dynamism that adds to the desirability of jobs also adds to their precariousness. The strong possibility of a general slump can cause anxiety. But we need some perspective. Even a market socialist economy might be unpredictable: In truth, the Continental economies are also susceptible to wide swings. In fact, it is the corporatist economies that have suffered the widest swings in recent decades. In the U.S. and the U.K., unemployment rates have been remarkably steady for 20 years. It may be that when the Continental economies are down, the paucity of their dynamism makes it harder for them to find something new on which to base a comeback.

The U.S. economy might be said to suffer from incomplete inclusion of the disadvantaged. But that is less a fault of capitalism than of electoral politics. The U.S. economy is not unambiguously worse than the Continental ones in this regard: Low-wage workers at least have access to jobs, which is of huge value to them in their efforts to be role models in their family and community. In any case, we can fix the problem.

Why, then, if the “downside” is so exaggerated, is capitalism so reviled in Western Continental Europe? It may be that elements of capitalism are seen by some in Europe as morally wrong in the same way that birth control or nuclear power or sweatshops are seen by some as simply wrong in spite of the consequences of barring them. And it appears that the recent street protesters associate business with established wealth; in their minds, giving greater latitude to businesses would increase the privileges of old wealth. By an “entrepreneur” they appear to mean a rich owner of a bank or factory, while for Schumpeter and Knight it meant a newcomer, a parvenu who is an outsider. A tremendous confusion is created by associating “capitalism” with entrenched wealth and power. The textbook capitalism of Schumpeter and Hayek means opening up the economy to new industries, opening industries to start-up companies, and opening existing companies to new owners and new managers. It is inseparable from an adequate degree of competition. Monopolies like Microsoft are a deviation from the model.

It would be unhistorical to say that capitalism in my textbook sense of the term does not and cannot exist. Tocqueville marveled at the relatively pure capitalism he found in America. The greater involvement of Americans in governing themselves, their broader education and their wider equality of opportunity, all encourage the emergence of the “man of action” with the “skill” to “grasp the chance of the moment.”

I want to conclude by arguing that generating more dynamism through the injection of more capitalism does serve economic justice.

We all feel good to see people freed to pursue their dreams. Yet Hayek and Ayn Rand went too far in taking such freedom to be an absolute, the consequences be damned. In judging whether a nation’s economic system is acceptable, its consequences for the prospects of the realization of people’s dreams matter, too. Since the economy is a system in which people interact, the endeavors of some may damage the prospects of others. So a persuasive justification of well-functioning capitalism must be grounded on all its consequences, not just those called freedoms.

To argue that the consequences of capitalism are just requires some conception of economic justice. I broadly subscribe to the conception of economic justice in the work by John Rawls. In any organization of the economy, the participants will score unequally in how far they manage to go in their personal growth. An organization that leaves the bottom score lower than it would be under another feasible organization is unjust. So a new organization that raised the scores of some, though at the expense of reducing scores at the bottom, would not be justified. Yet a high
score is just if it does not hurt others. “Envy is the vice of mankind,” said Kant, whom Rawls greatly admired.

The ‘Least Advantage’d

What would be the consequence, from this Rawlsian point of view, of releasing entrepreneurs onto the economy? In the classic case to which Rawls devoted his attention, the lowest score is always that of workers with the lowest wage, whom he called the “least advantaged”. Their self-realization lies mostly in marrying, raising children and participating in the community, and it will be greater the higher their wage. So if the increased dynamism created by liberating private entrepreneurs and financiers tends to raise productivity, as I argue—and if that in turn pulls up those bottom wages, or at any rate does not lower them—it is not unjust. Does anyone doubt that the past two centuries of commercial innovations have pulled up wage rates at the low end and everywhere else in the distribution?

Yet the tone here is wrong. As Kant also said, persons are not to be made instruments for the gain of others. Suppose the wage of the lowest-paid workers was foreseen to be reduced over the entire future by innovations conceived by entrepreneurs. Are those whose dream is to find personal development through a career as an entrepreneur not to be permitted to pursue their dream? To respond, we have to go outside Rawls’s classical model, in which work is all about money. In an economy in which entrepreneurs are forbidden to pursue their self-realization, they have the bottom scores in self-realization—no matter if they take paying jobs instead—and that counts whether or not they were born the “least advantaged.” So even if their activities did come at the expense of the lowest-paid workers, Rawlsian justice in this extended sense requires that entrepreneurs be accorded enough opportunity to raise their self-realization score up to the level of the lowest-paid workers—and higher, of course, if workers are not damaged by support for entrepreneurship. In this case, too, then, the introduction of entrepreneurial dynamism serves to raise Rawls’s bottom scores.

Actual capitalism departs from well-functioning capitalism—monopolies too big to break up, undetected cartels, regulatory failures and political corruption. Capitalism in its innovations plants the seeds of its own encrustation with entrenched power. These departures weigh heavily on the rewards earned, particularly the wages of the least advantaged, and give a bad name to capitalism. But I must insist: It would be a non sequitur to give up on private entrepreneurs and financiers as the wellspring of dynamism merely because the fruits of their dynamism would likely be less than they could be in a less imperfect system. I conclude that capitalism is justified—normally by the expectable benefits to the lowest-paid workers but, failing that, by the injustice of depriving entrepreneurial types (as well as other creative people) of opportunities for their self-expression.

PER-Sponsored Faculty and Student Research

The Program for Economic Research (PER) provides seed grants and financial support to faculty and students to advance their research and publish papers. PER sponsored the following research projects in part over the past year.

Gender and Dynamic Agency: Theory and Evidence on the Compensation of Female Top Executives
– Stefania Albanesi and Claudia Olivetti

There are substantial gender differences in the structure of compensation of female and male top executives. The gender gap in total compensation is 38.7%, adjusted for firm size and industry. Female top executives receive a larger fraction of total compensation in the form of salary and their earnings display lower pay-performance sensitivity relative to their male counterparts. This paper uses a dynamic model of executive compensation with hidden effort to explore these differences.

We consider two alternative hypotheses regarding the possible determinants of such gender differences. We first assume that female executives have lower impact—that is effort has a lower effect on the probability of high profits for female executives. We then posit that female executives have lower effectiveness—that is they have a smaller role in the determination of firm profits, for a given impact of their effort. These hypotheses are based on survey responses of male and female top executives, pointing to the existence of a pervasive set of culturally-related barriers that could be interpreted as reducing the relative impact or effectiveness of female executives. These include lack of role models, exclusion from informal networks, display of style different than the organizational norm, gender based stereotyping, and inhospitable corporate culture.

We find that a version of the model in which female executives have lower effectiveness is consistent with the observed gender differences in the structure of executive compensation. The version with lower impact fails to replicate, among other things, the lower fraction of performance pay earned by female executives.

Law Enforcement in Local Governments: Evidence From a Random Audits Program in Brazil
– Stephan Litschig

This paper examines whether judicial enforcement promotes compliance with the rules and regulations governing the appropriate use of public resources in local governments. We focus on violations of such rules as revealed by auditors in the course of their investigations of federal transfers to local governments in...
Brazil. Specifically, we examine the effect of variation in the probability of prosecution, conditional on detection, on the level of reported offenses per civil servant. We use residence of the local prosecutor as a proxy measure for a higher probability of prosecution and argue that the organizational structure of the judiciary implies that prosecutor location is exogenous. We find that the incidence of offenses is 16% lower in counties where the prosecutor resides. This reduction in the level of offenses per civil servant is mostly driven by fewer violations of financial reporting requirements, fewer cases of inexcusable or ineffective civil society oversight and fewer cases of improper handling of transfer payments to local residents. Our results suggest that the judiciary system plays an important role in promoting good governance at the local level.

**Inference in Incomplete Models**  
-Marc Henry

The aim of this study is to provide a test for the specification of a structural model without identifying assumptions. We show the equivalence of three natural definitions of correct specification, which we take as our null hypothesis. Using a representation of the null hypothesis as a Monge-Kantorovich optimal mass transportation, we show that the natural test statistic is a form of Kolmogorov-Smirnov statistic for Choquet capacities. When the model is given in parametric form, the test can be inverted to yield confidence intervals for the identified parameter set. The approach can be applied to areas as diverse as the estimation of models with sample selection, censored observables and to games with multiple equilibria.

In many contexts, the ability of econometric models to identify, hence estimate from observed frequencies, the distribution of residual uncertainty often rests on strong prior assumption that are difficult to substantiate and even to analyze within the economic decision problem.

A recent approach, pioneered by Manski has been to forego such prior assumptions, thus giving up the ability to identify a single probability distribution for residual uncertainty, and allow instead for a set of distributions compatible with the empirical setup. A variety of models have been analyzed in this way, whether partial identification stems from incompletely specified models (typically models with multiple equilibria) or from structural data insufficiencies (typically cases of data censoring). See Manski (2005) for an up-to-date survey on the topic.

All these models with incomplete identification share the basic fundamental structure that the residual uncertainty and the relevant observable quantities are linked by a one-to-many mapping instead of a one-to-one mapping as in the case of identification.

In this paper, we propose a general framework for conducting inference without additional assumptions such as equilibrium selection mechanisms necessary to identify the model (i.e. to ensure that the one-to-many mapping is actually one-to-one). The usual terminology for such models is “incomplete” or “partially identified.”

**The effects of generalized school choice on achievement and stratification: Evidence from Chile’s voucher program**  
- Miguel Urquiola and Chiang-Tai Hsieh

A central argument in the school choice debate is that public schools are inefficient local monopolies, and that educational quality would improve dramatically if only parents were allowed to freely choose between schools. For example, Hoxby (2003) asks “what is the range of productivity over which choice could cause productivity to vary? Recent history suggests that school productivity could be much higher than it is now—60% to 70% higher.” Two arguments underlie this view. First, there is a widely held belief that private schools are more effective than public schools. Although the evidence from quasi-experiments with vouchers is mixed, if private schools are in fact more efficient, then school choice could raise students’ achievement merely by facilitating their transfer to the private sector. A second, perhaps even more compelling argument for choice comes from the notion that organizations respond to incentives. Therefore, by correctly aligning the incentives public schools face, choice would force their seemingly ossified bureaucracies to improve. . .

This paper makes two contributions to the school choice debate. First, we make the point that if choice leads to greater segregation, one will not able to isolate the extent to which public schools improve their productivity in response to the competitive threat induced by choice, from the effect of sorting on the public sector’s performance. On the one hand, if choice results in cream-skimming (as we suggest happened in Chile), the average performance of public schools might fall even if they become more effective, simply because they have lost their best students. On the other hand, if low SES students leave the public sector, as Bettinger (1999) suggests happened in Michigan with charter school entry, then the average performance of public schools might improve even if they do not raise their productivity. We argue that the best one can do is to measure changes in outcomes at the aggregate level.

Second, we focus on a country that implemented an unrestricted nationwide school choice program. We show that the first order consequence of the voucher program in Chile was middle-class flight into private schools, and that this shift does not seem to have resulted in achievement gains, certainly not of the magnitude claimed by some choice advocates. Again, we cannot rule out the possibility that our estimates are biased by unobserved trends in schooling outcomes, but we show that our results do not change when we introduce a number of controls for such trends.

[This paper appeared in original form in the Journal of Public Economics in 2006.]
Recent Discussion Papers

The department sponsors a discussion paper series for faculty, co-authors, and visitors. Download the full text of these papers at http://www.columbia.edu/cu/economics/.

Linear-Quadratic Approximation of Optimal Policy Problems, 0607-02
– Pierpaolo Benigno and Michael Woodford

We consider a general class of nonlinear optimal policy problems involving forward-looking constraints (such as the Euler equations that are typically present as structural equations in DSGE models), and show that it is possible, under regularity conditions that are straightforward to check, to derive a problem with linear constraints and a quadratic objective that approximates the exact problem. The LQ approximate problem is computationally simple to solve, even in the case of moderately large state spaces and flexibly parameterized disturbance processes, and its solution represents a local linear approximation to the optimal policy for the exact model in the case that stochastic disturbances are small enough. We derive the second-order conditions that must be satisfied in order for the LQ problem to have a solution, and show that these are stronger, in general, than those required for LQ problems without forward-looking constraints. We also show how the same linear approximations to the model structural equations and quadratic approximation to the exact welfare measure can be used to correctly rank alternative simple policy rules, again in the case of small enough shocks.

The Role of Lockups in Takeover Contests, 0607-03
– Yeon-Koo Che and Tracy R. Lewis

This paper examines breakup fees and stock lockups as devices for prospective target firms to encourage bidder participation in takeover contest. We show that, unless bidding costs for the first bidder are too high, breakup fees provide for the socially desirable degree of competition and ensure the efficient allocation of the target to the highest valued buyer in a takeover auction. In contrast, stock lockups permit the target firm to subsidize entry of a new bidder at the expense of an incumbent bidder. Stock lockups induce too much competition when offered to a second bidder and too little competition when offered to a first bidder. Despite their socially wasteful properties, target management would favor stock lockups as they induce takeover competition at least cost to the target.

– Kyle Bagwell and Robert W. Staiger

What do trade negotiators negotiate about? There are two distinct theoretical approaches in the economics literature that offer an answer to this question: the terms-of-trade theory and the commitment theory. The terms-of-trade theory holds that trade agreements are useful to governments as a means of helping them escape from a terms-of-trade-driven Prisoners’ Dilemma. The commitment theory holds that trade agreements are useful to governments as a means of helping them make commitments to the private sector. These theories are not mutually exclusive, but there is little direct evidence on the empirical relevance of either. We attempt to investigate empirically the purpose served by market access commitments negotiated in the World Trade Organization. We find broad support for the terms-of-trade theory in the data. We claim more tentatively to find support in the data for the commitment theory as well.

Market Versus Non-Market Assignment of Initial Ownership, 0607-05
– Yeon-Koo Che and Ian Gale

We study the assignment of initial ownership of a good when agents differ in their ability to pay. Selling the good at the market-clearing price favors the wealthy in the sense that they may acquire the good instead of poor buyers who value it more highly. Non-market assignment schemes, even simple random rationing, may yield a more efficient allocation than the competitive market would — if recipients of the good are allowed to resell. Schemes that favor the poor are even more desirable in that context. The ability to resell the good is critical to the results, but allowing resale also invites speculation, which undermines its effectiveness. If the level of speculation is sufficiently high, restricting resale may be beneficial.
Five Economics Majors Elected to Phi Beta Kappa

Each fall Columbia College selects twenty members of the senior class to be inducted into Phi Beta Kappa. This year five of the twenty students are undergraduate Economics majors. All five have been or are undergraduate Teaching Assistants in the department, and four of the five are thesis writers. The students are Arun Chandrasekhar, Maria Jose Coelho, Subash Iyer, Nicholas Klagge and Casey Levine.

Each year ten per cent of the senior class is elected to membership of Phi Beta Kappa. Two per cent (Junior Phi Beta Kappa) is elected in November on the basis of academic achievement (high GPA) and support through faculty recommendations. The other eight per cent is elected in the spring on the basis of academic achievement, as determined by GPA and the rigor of a student's academic program, as well as on evidence of intellectual promise, character, and achievements outside the classroom. Students will also be honored in formal ceremonies in May.

Graduate Students Receive Wueller Awards

Graduate students Tumer Kapan and Ayako Kondo received Wueller fourth-year pre-dissertation awards for 2006-2007. They will each receive a stipend and a semester’s relief from teaching. The runners-up were Matthew Wai-Poi and Sergei Koulayev who will each receive a research stipend.

The third-year award went to graduate student Johannes Schmieder. This award also carried a stipend and relief from teaching. The runners-up, Daniel Choate, Yinghua He, Ulf Nielsson, and Prasanna Sethupathy, are also eligible for a stipend.

Recent Faculty Books

Fair Trade for All: How Trade Can Promote Development by Professor Joseph Stiglitz (Oxford University Press, January 2006)
Nobel Prize-winning economist and ex-World Bank official Stiglitz is the leading mainstream critic of the free-trade, free-market “Washington Consensus” for developing countries. In this follow-up to his best-selling Globalization and Its Discontents, he and Charter, a development expert, present their vision of a liberalized global trade regime that is carefully geared to the interests of poorer countries.

The End of Poverty: Economic Possibilities for our Time by Professor Jeffrey Sachs (Penguin Press, February 2006)
“Book and man are brilliant, passionate, optimistic and impatient.”—The Economist

“This book assembles a selection of scholarly analyses of the work of the great economic historian Eli Heckscher, famous for his classic book Mercantilism and for the Heckscher-Ohlin theory, known to every student of economics. Many of the excellent contributions assess his writings in light of later developments and theories.”—W. Max Corden, Emeritus Professor of International Economics, The Johns Hopkins University

In this CESifo volume, leading international economists provide new insights on recent developments in the economic analysis of the limits of insurability. They find that asymmetric information is a central reason why competition in insurance markets may fail to guarantee that mutually advantageous risk exchanges are realized in today’s economies.

Essentials of Economics by Professor R. Glenn Hubbard (Prentice Hall, August 2006)
The latest volume in the series of economics texts by Hubbard and O’Brien uses business case examples to illustrate economic principles from a practical perspective.
In Pictures: Fall and Winter Events

A memorial for the late Professor Jacob Mincer was held on Saturday, October 21 on the Columbia campus. Mincer’s work is widely regarded as having provided the foundations for modern labor economics. Friends, family, former students, and colleagues gathered in New York to remember him and his contributions to the discipline.

The memorial service was held in 301 Philosophy Hall

Professor Ronald Findlay and David Bloom (Harvard)

Aloysius Siow (U. Toronto) and Gary Becker (U. Chicago)

The annual holiday party was held on December 13 on the top floor of the International Affairs Building.

Graduate students gather in the Dag Hammarskjöld Lounge

Edmund Phelps was honored at a reception on January 18 for friends, colleagues, students, and alumni.

Professor Janet Currie introduced the evening’s speakers

Professor Graciela Chichilnisky speaks with Professor Jagdish Bhagwati

Professor Michael Woodford spoke on Phelps’s intellectual achievements

Continued on next page
Economics at Columbia, the newsletter for the Economics Department, is now in its second issue. Our audience includes members of the Columbia community as well as alumni, friends, and fellow economists elsewhere.

Economics at Columbia appears once per semester. Submissions from faculty, students and alumni are welcome; news or other items, including photographs or brief descriptions of current research, should be sent via email to econ-news@columbia.edu. We welcome your feedback.