# ECONOMICS in Action



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### **Getting People Into The Equation:**

The Economics of James E. Rauch



James Rauch UCSD Economics Department

Jim Rauch is about to celebrate his 20th Anniversary in the Department of Economics, and if there is a single thread that runs through his work it is bringing human qualities to the otherwise impersonal marketplace of neoclassical economics.

This can best be seen in his 2001 book, *Networks and Markets*, in which Rauch studies the role of people who know each other, often in a non-economic context, and how these relationships affect economic activity. His widely cited paper on "human capital"

externalities" in cities quantifies how people, through sharing ideas, can make all concerned more productive.

In recent months, as part of sabbatical study at the American University of Beirut, Rauch presented findings that take issue with the 2002 *Arab Human Development Report*, an important United Nations assessment of the state of development in the Arab world.

Rauch's disagreement with this influential document was on two levels: "Do you look at improvement, or do you simply make a straight comparison with the levels of other countries? As someone trained to deal with development, I think you should look at improvement. That's a philosophical difference. Second, as a social scientist I know that you can't just pick indicators out of the air to prove your point," he emphasizes.

The UN report suggested the Arab economies were stuck but Rauch, thinking that there has been considerable progress in the Arab world, constructed his own analysis around three premises:

1. The "Human Development Index" (HDI) is a good indicator. (It examines health/life expectancy; literacy/school enrollment and income per capita.)

2. The Arab world must be broken into sub-Saharan Africa, oil exporters, and a Mediterranean remainder ("olive oil exporters").

3. Performance in human development must be measured by improvement under Arab regimes of the past 40 years, not merely levels currently attained.

The main reason that Rauch and the UN report came to opposite conclusions was their invention and use of an "Alternative Human Development Index" (AHDI), which excluded per capita income, included measurements for civil and political liberties, participation of women, internet per capita and carbon dioxide emissions per capita. The authors said they chose those metrics to show the deficits of the Arab world, but Rauch strongly objected, arguing that "choosing data to generate pre-ordained conclusions is bad social science."

Using his measurements Rauch showed that average years of education had grown from one year to nearly six over the past 40 years; that life expectancy had caught up to analogous countries around the world, but income levels remained a big question mark. "The results were more decisive than I anticipated. Out of nine country-to-country comparisons (Arab sub-Saharan Africa to non-Arab sub-Saharan Africa, etc.) Arab performance was better in eight.

"The Arab economists who wrote the original report wanted to light a fire under Arab governments. In the West we may have a different approach to motivational philosophy: We build our children's self-esteem so they believe they can go out and do anything. There they say, 'you haven't done much so you'd better try a lot harder."

In a recent article published in the *San Diego Union-Tribune*, Rauch concluded, "The bottom line is that the pundits are wrong: on average, Arab regimes have performed better than other countries at raising the education, health and incomes of their citizens and vastly better than the European colonial regimes that preceded them."

Challenging accepted beliefs is a Rauch pattern. He and his siblings were enrolled in a model integrated school district in the 60's in suburban New York and, after high academic accomplishment at Princeton, he sought a liberal, diverse outlook for graduate school. "Yale, at that time, was known as a heterodox place where people were not toeing the mainstream line—what we call neoclassical economics. I was looking for a place with diverse viewpoints and they were also known for development and that was my interest. I liked Yale very much and was lucky to get a job at UCSD."

Asked if he has a certain "missionary orientation" to development economics – to feed the hungry, eradicate poverty – Rauch said, "I did when I was in graduate school and over my life I've kind of moved back and forth. As an assistant professor maybe I was just concerned about keeping my job. Then I did my first book (*Leading Issues in Economic Development*) and the book on Networks and that made me a

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### Chair's Corner: Issues in Education



Richard Carson, Chair UCSD Economics Department

Today's students are this country's future and their training begins early. But are our students receiving the best training through education? Do we need to re-examine our assumptions about public schools in a world in which experimentation with major changes to the educational system is widespread? In response to these questions, UCSD Economics professors Julie Cullen, Julian Betts, and Nora Gordon have undertaken projects recently that examine issues that have significant implications for our public schools and students.

Many parents seem to associate high achieving peers with "good" schools and will chose to move their child to a "better" school if they can. Julie Cullen has been studying the outcomes of such choices, with interesting results. She recently examined data from nineteen oversubscribed public high school magnets and magnet programs in Chicago that use random lotteries to admit students and compared the performance of students who gained access to "better" schools to students who did not. The lottery mechanism here allows one to use as the comparison group students who wanted to change to a "better" school, but who were not allowed to do so. When Julie examined the data, she found that the lottery students who gained access to "better" schools did not have appreciably higher academic outcomes than the lottery students who were not allowed to move. Her interest piqued, Julie is now working with data from the lower grade levels to learn more about what is driving the results – whether the intervention came too late, or, perhaps, if parents' perceptions of what makes a "good" school and its impact are not well-informed.

Julian Betts has been examining the premier reform program in San Diego City Schools - the "Blueprint for Success" - to see if its special interventions have worked as planned to bring underperforming students up to state standards. His recent studies of the first two years of the program show mixed outcomes. Notable improvement was found in elementary school students, with a lesser improvement among middle-schoolers. Unfortunately, the positive results do not carry over into the high schools. Julian found that participation in the Blueprint program's double- and triple-length English classes seemed to actually aggravate existing high school achievement gaps, although students who participated in a summer reading program did show higher reading proficiencies. Using the same rich database, Julian is now working with several UCSD graduate students on this and other questions ranging from quasiexperimental studies of the impact of school choice to new ways of evaluating teacher effectiveness and the effect of class size reduction on student learning.

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### Ivana Komunjer: Following a Scientific Path to Econometrics

### By Barry Jagoda, UCSD Communications



Ivana Komunjer UCSD Economics Department

At 17, Ivana Komunjer left home in Zagreb, Croatia and joined her academic parents who were taking the opportunity for research fellowships in Paris. Ivana and her younger sister would learn French, enroll in Parisian schools and probably return to Croatia in a year or two. As it turned out, hostilities ensued between emerging countries of the former Yugoslavia. The Komunjers decided to stay in Paris.

Ivana had thought that, like her chemist mother and physicist father, she too would become a research scientist. In retrospect, a series of

academic and career decisions have led on a zigzag path resulting in her arrival as an assistant professor in the UCSD Department of Economics beginning this fall. In fact, through many years of education, Ivana was planning a career in physics. This was the idea through preparatory school at a Parisian lyceum, during two additional years of grinding study aimed toward acceptance at one of the great advanced French universities, a "grand ecole" and, finally, even as she matriculated at the engineering-scientific oriented Ecole Polytechnique (like the other prestige advanced universities, set up by Napoleon to prepare highly skilled academicians for his military services and to manage his planned conquests).

But after three years of work in science and math at Ecole Polytechnique, as she was preparing for her senior thesis in statistical mechanics, Ivana was directed by an academic advisor to meet with a scholar at the French atomic labs. This professor turned out to be a specialist in the application of statistical mechanics to financial markets and derivatives. Voila! It became apparent that all these lessons from physics could be applied to finance and economics – and Ivana never looked back.

The next year took her through a master's degree in economics at another prestigious French university and then she was admitted to a Ph.D program at the top French business school, Ecole des Hautes Etudes Commerciales, or HEC. There she focused on finance. During this period, one of her advisors took a sabbatical leave, spending six months at UCSD. Seizing the opportunity Ivana, came also as a visiting scholar in the Economics department. Exposed to the work of Rob Engel, Clive Granger and other UCSD econometric specialists tipped her academic interest in that direction. After coursework in La Jolla, and benefiting from the strong program here, Ivana returned to Paris, finished her dissertation and entered the job market.

Though she was offered a number of positions, Ivana accepted an assistant professorship at California Institute of Technology. Among other reasons that she liked being there was that it reminded her of her own French graduate schools, small programs with highly intellectual students. She honed her skills teaching econometrics and finance at Cal Tech for three years and then, out-of-the-blue, came a call from the recruiting committee at UCSD, saying they had great interest in considering her for the faculty in La Jolla, particularly because of her skills as an econometrician.

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They offered, she accepted and this academic year Ivana is teaching an undergraduate course, Financial Investments, and a graduate course, Statistics and Probability Theory, part of the core sequence for econometrics graduate students.

Meantime, happily located in San Diego, a city she loves, Ivana is likely to continue her travels to Europe. Her younger sister is a computer scientist working in Paris, and her mother is a chemist there. With an extended family also in Zagreb, she's bound to get back to Croatia, a place to which she is deeply attached. Plus there is European skiing, one of her deep passions.

For now, as Ivana expresses it, "I see myself evolving more and more toward being a theoretical econometrician, one who strives for the beauty of the results. Of course I'm still working on practical economic problems because it is good to see the data organized and put to work."

## Navin Kartik: Signaling Games and How Strategic Information Affects the Marketplace

### By Barry Jagoda, UCSD Communications



Navin Kartik UCSD Economics Department

As a 27-year-old assistant professor of economics specializing in microeconomic theory, Navin Kartik is a long way from his roots in southern India. But, academically, he is very much at home with his work on signaling theory and political economy using the methodology of game theory

Navin was in the 5th grade when his father, now a university professor of management, but for many years an engineer and manager working for large Indian corporations, got a new assignment in Tanzania. This led to enrollment in an international school, which prepared the future academician

for matriculation at Brandeis University. "I loved Brandeis. It's a liberal arts university with a strong research focus. That's where I first was exposed to economics. I got interested in international trade theory."

Choosing Stanford for graduate work Navin was surprised to learn that they didn't have a strong program in international economics and trade, but he had already become interested in microeconomics. "My advisor was very good and I quickly learned that the field is very mathematical."

Signaling games is a subfield of microeconomic theory and Navin ended up doing much of his dissertation work in this field. Coincidentally, the classic paper on signaling theory was written in 1982 by two members of the UCSD faculty, Joel Sobel and Vince Crawford. "In traditional economic theory, up until the 1970s, people assumed information was commonly known by everyone. But the new field of 'information economics' raises the question of how private information affects the marketplace. For example, what is the effect of someone simply making a statement without backup? We call this cheap talk." It was in this arena that Navin did his most important dissertation work, in a paper

called "Information Transmission with Cheap and Almost-Cheap Talk. Using "signaling games" research Navin analyzes the effect of exchanges between market competitors under various conditions of the use of information.

"Game theory is essentially a methodology that can be applied to almost anything; for example, understanding how producers decide what to sell; evaluating decision-making by politicians and sorting out issues in informational economics just to name several. The idea is to use formal equations to understand the strategic reasoning of people or entities."

Kartik's areas of research demonstrate the flexibility of game theory. He has been asking questions about how politicians reveal character during a campaign. He has been demonstrating the benefits of diversity in "committee work" by showing that colleagues must work harder to prove their point-of-view if they are involved in group work with persons who sit at the table with diverse perspectives. And he has looked into the question of the effect of more participants in a network as an inducement to get people to try out new products or ideas, or to make the nexus more valuable for all involved.

In the current academic year, Navin is teaching the basic course in microeconomics, Intermediate Microeconomics 100A, where students look at how consumers make choices, how producers make choices and how the two come together in the marketplace. And graduate students benefit from his instruction in the core course in game theory.

"Game theory in the last 15 to 25 years has become a very important tool in economic theory. Before we didn't have the tools to look at strategic issues, at situations where your action will affect others and their views affect you. That is all changing."

After five years at Stanford and now into his second full year at UCSD, Navin is enjoying California and is passionate about his own research. He and his wife of three years, Anjali, live close to the university in the Sorrento Valley neighborhood.

Summing up, Navin says, "The choice to come to UCSD has worked out really well. There are excellent colleagues in my field and much overall collegiality in the department. And my wife and I really like San Diego."

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Many recent developments in education policy have involved decisions made at the school district rather than at the school level (including, for example, Chicago's decision to have an open enrollment program, and San Diego's work with the "Blueprint for Success"). Nora Gordon has been exploring how school districts form and optimal school district size. She examined the recent experience of Iowa, which enacted a state-level policy offering small districts financial incentives to consolidate. It appears that these incentives did induce some districts to consolidate, but at substantial cost to state taxpayers. This raises the question of whether the districts benefited from their new organizational structure. In preliminary work, she has found that high school dropout behavior does not change significantly over time as districts merge, revealing that bigger does not necessarily result in a worse outcome, as is often alleged.

There is much for us to learn about what actually makes a "better" school. It is heartening to see such a strong group of UCSD faculty working on these issues. These are but a few of the current studies of the public education system underway here in the department. Hopefully, through our research, we can better equip our public school students, parents, and policy-makers for decisions which will impact our educational system.

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better known scholar. Now, with the work on Arab development, and on a couple of other projects, I have returned to areas of passion."

Rauch points out that the field has changed in recent years. A graduate student is more likely to be encouraged to evaluate a small project that shows specific costs and benefits. Earlier one might have written a growth model and suggested that if countries just followed your plan they would prosper. "The dominant signal the profession is giving young people is that you should write papers with a scope that is small enough for you to crunch the numbers accurately," says Rauch.

Accepted standard or not, Rauch is at work on a growth model of his own. He had been wondering if successful export firms in less developed countries started out as strong companies or if they became successful because of their work as exporters. After numerous interviews and research Rauch has concluded that it was the firms already producing quality products that were the successful exporters, mainly because they needed to expand their marketplace beyond their own borders to find enough customers for their quality products. "The last time I produced a large scale growth model was ten years ago, but I'm at work on one right now to show what needs to be done to make the success of exporting firms have a large impact on the economy overall."

And back to people: Working with economists and sociologists, under a grant from the Russell Sage Foundation, he is writing and editing a book on the source of economic networks. Explains Rauch, "We know they create a lot of trade and investment, but how do they arise? The book is called *Formation and Decay of Economic Networks* and I want to make sure it is written in an accessible way."

### **Staff Updates**

Mya Anderson has joined the department as an Undergraduate Advisor. Mya has several years' experience in advising at UCSD, in the Biology and Theatre and Dance Departments. She grew up in Northern California and earned her degree from the University of Oregon, Eugene. She is married, and a big fan of tall green trees and open spaces, the beach (by default), and of course the Mighty Oregon Ducks.

**Rebecca Franco**, another new employee in the student services area, comes to us from UC Berkeley. She has many years experience in student affairs and will be working primarily with prospective graduate students and coordinating the admissions process. Rebecca enjoys designing and fabricating jewelry, and is fond of animals. She looks forward to returning to San Diego, where much of her family live, after a two-year stint in Northern California.

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Economics in Action Department of Economics University of California, San Diego 9500 Gilman Drive # 0508 La Jolla, California 92093-0508



UNIVERSITY OF CALIFORNIA, SAN DIEGO DEPARTMENT OF ECONOMICS 9500 GILMAN DRIVE # 0508 LA JOLLA, CALIFORNIA 92093-0508

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