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The 2013 Martin Feldstein Lecture

Economic Possibilities for Our Children

Lawrence H. Summers*



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This is the 40th anniversary of the summer when I first met Marty Feldstein and went to work for him. I learned from working under Marty's auspices that empirical economics was a profoundly important thing, that it had the opportunity to illuminate the world in important ways, that it had the opportunity to change people's perspectives as they thought about economic problems, and that the successful solution or resolution of economic problems didn't happen with the immediacy with which a doctor treated a patient, but did touch and affect the lives of hundreds of thousands, if not millions, of people.

I learned about how to approach economic research from watching Marty. There is a central element that has been a part of his approach to economics, and it has always been a part of mine, both as an economist and a policymaker. It is the approach of many in our profession, but not all. This is the belief that we cannot aspire to know the world with complete precision; that no single parameter will measure with precision how our economy is going to respond to a policy or a shock. Rather, what we can aspire to establish is a combination of logic, modeling, suggestive anecdote and experience, and empirical measurements from multiple different perspectives that lead to an overall view on economic phenomena. That kind of overall view on economic phenomena moves the world forward much more than a precise estimate of a single parameter.

It is very much in that spirit that I want to reflect with you this afternoon on economic possibilities for our children. Keynes wrote a famous essay entitled "Economic Possibilities for Our Grandchildren." I am not Keynes, so I cannot look nearly as far forward as he did. But I am seeking

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to speak in the same spirit. At a moment of substantial cyclical distress, at a moment of financial preoccupation, I would like to look to the broader technological forces that are operating and that will shape the structure of our economy and how people live over the long term.

I think of my horizon as being more like a generation than the century that Keynes spoke of. At one level, by the way, Keynes did pretty well. He predicted that incomes in the industrialized world would rise eightfold between 1930 and 2030 and they've risen a little more than sixfold so far, so he's looking pretty good on that prediction. But Keynes also got some things wrong. He predicted that as incomes rose eightfold, the workweek would fall to 15 or 20 hours. The reason he got that wrong is something that I hadn't previously reflected on.

When I took introductory economics, a big feature of the textbook was the backward bending labor supply curve, where it was explained that past a certain point, the income effect took over from the substitution effect and so the labor supply curve bent backwards. This does not get much attention in textbooks today. The reason is that people with higher wages now work more hours than people with lower wages. The time series tracks the cross section. Over time, as we have all gotten richer, the number of hours worked for many people has risen.

Keynes missed many other things. He missed that there was a developing world and an industrialized world, for example. And he missed entirely issues relating to the distribution of income, either within countries or across countries. This too contributes to my desire to speak about one generation rather than more.

I believe in a much more anecdotal way than Dale Jorgenson, who has quantified it to an extraordinary degree, that the defining feature of economic growth in this era is the set of changes that are associated with information technology. The single example I find most striking is the self-driving automobile. Automobiles have now been driven from California to New York, stopping at red lights, accelerating, going through green lights, accelerating through yellow lights without being touched by a human hand. And if one thinks about almost any aspect of economic activity, it either has been, is being, or quite possibly will be revolutionized by the application of information technology. In my friend Marc Andreessen's phrase, software is eating the economy.

I am told that there exist software programs that can grade at least some kinds of student papers with more reliability relative to human beings than human beings can grade essays relative to other human beings. Larry Katz has famously remarked that computers do not do empathy, but there have existed for many years computer programs that actually do a credible job of providing psychotherapy. In response to confessionals, they prompt with responses like: “Tell me a little bit more about what’s distressing you. That must have been very hard for you. Can you explain a little more fully?” On at least some occasions these programs have been an important source of solace.

In Heathrow Airport, you now check out of the newsstands without passing a human being. Increasing amounts of surgery are done remotely. Think of an industry that a group like this has a particular attachment to — the publishing industry. It is perhaps prototypical of where things are going.

First there were bookstores, then there were superstores, then there was Amazon, and now there are the Kindle and e-books. And at every stage it was better to be a reader, better to be an author, and worse to be an ordinary person involved in the intermediation between the authors and the readers.

This set of developments is going to be the defining economic feature of our era, and we are seeing its consequences in many aspects. When I was an MIT undergraduate in the early 1970s, a young economics student was exposed to the debate about automation. There were two factions in those debates. There were the stupid Luddite people, who mostly were outside of economics departments, and there were the smart progressive people, who at that time were personified by Bob Solow. The stupid people thought that automation was going to make all the jobs go away and there wasn’t going to be any work to do. And the smart people understood that when more was produced, there would be more income and therefore there would be more demand. It wasn’t possible that all the jobs would go away, so automation was a blessing. I was

taught that the smart people were right.

Until a few years ago, I didn’t think this was a very complicated subject; the Luddites were wrong and the believers in technology and technological progress were right. I’m not so completely certain now. I have done the simplest of statistical exercises, plotting the non-employment rate for men 25 to 54 and then adjusting for trend and cycle and extrapolating. Not, I hasten to say, because they’re the most important group in our society (and they are, by the way, a group of which I am no longer a part), but only because they are a group where there is the strongest prevailing social expectation that they will be working.

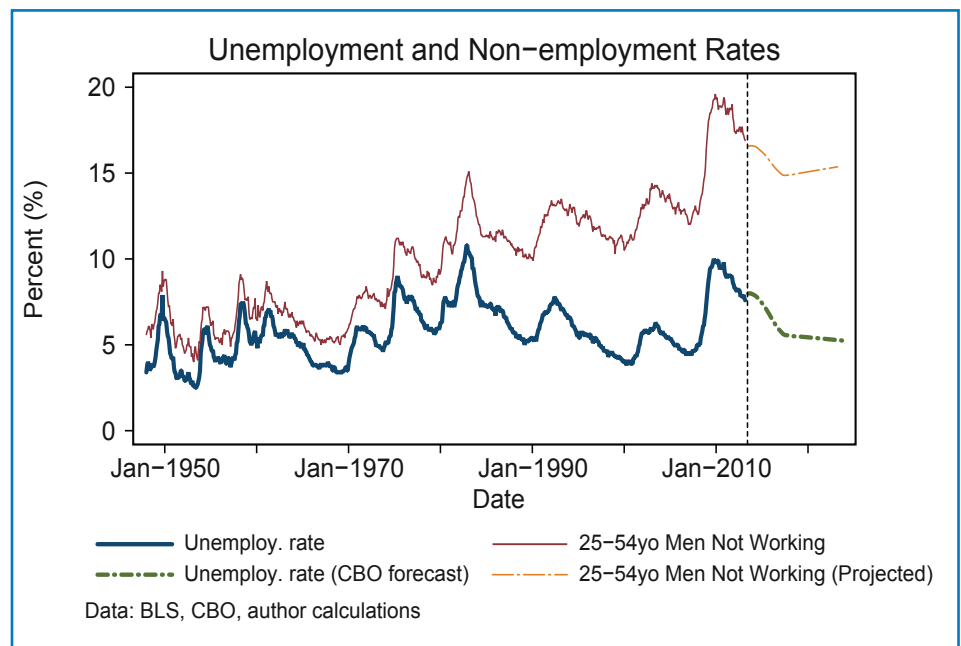
What you see is that in a secular sense, going back a long time, the fraction of them who are not working once one takes the cycle out has been increasing. I summarize this by saying that in the 1950s and 60s, one in 20 men between the age of 25 and 54 was not working. If you do a simple extrapolation based on trend and cycle to the period a decade from now, between one in six and one in seven men between the age of 25 and 54 will not be working.

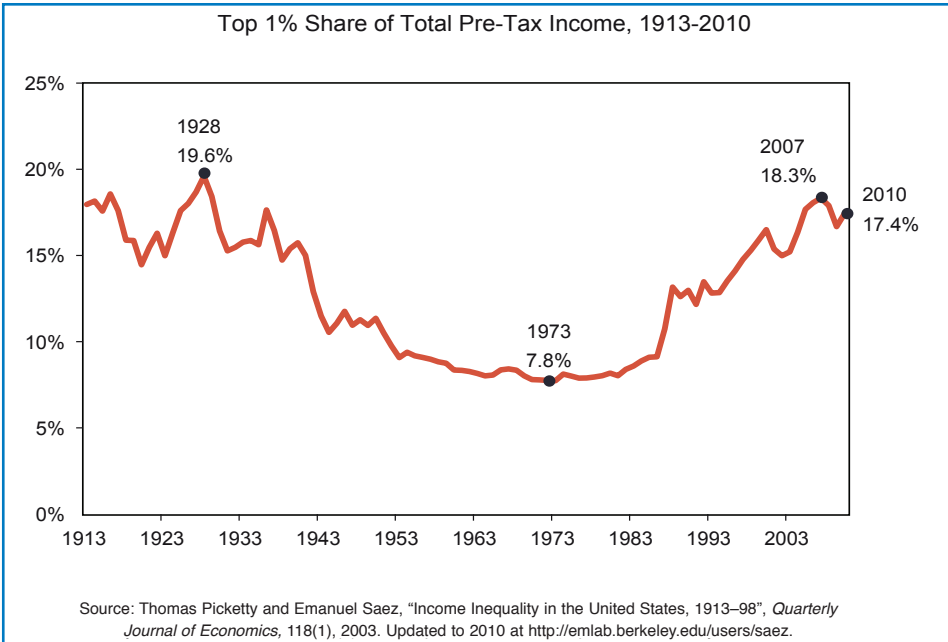
And as you would expect, these patterns are substantially more pronounced if you are less educated. They are substantially more pronounced if you are

in a disadvantaged group than if you are in an advantaged group. This is associated with what is also a defining feature of our time. In the United States today a higher fraction of the workforce receives disability insurance than does *production work* in manufacturing. (Many workers in the manufacturing sector are not production workers.)

These phenomena are related. No one could give a Feldstein lecture without recognizing the possibility that a social insurance program had a distorting disincentive effect and that is certainly the case with respect to disability insurance. But I think it is also fair to say that the evolution and growth of disability insurance is substantially driven also by the technological and social changes that are leading to a smaller fraction of the workforce working.

At the same time, as has famously and repeatedly been noted, the share of income going to the top one percent of our population has steadily increased. One can debate how to treat capital gains. One can debate whether to talk about individuals or about family units. There are a hundred aspects of the numbers that one can debate, but I think it will be difficult to escape the conclusion that the very top group in our society is receiving about ten percent more of the total income than





they were a generation ago, that that is the equivalent of \$10,000 per household unit for everyone else, and that it represents a substantial portion of median family income.

At the same time the profit share in total income has been rising. This is a subject dear to my heart because it dates back to the first paper that I was privileged to publish, a paper with Marty in 1977. Marty and I wrote a paper entitled, "Is the Rate of Profit Falling?" And we managed to look at the data and conclude that the rate of profit was not falling. That is a reflection of the fact that we were looking at the rate of return, not the profit share, and had a variety of refinements that are not there.

It is also a reflection, no doubt, of Marty's prescience. He knew that the rate of profit would not be falling. So, I am glad to have answered the question, "Is the rate of profit falling?" in the negative in 1977. And there's a question as to whether our paper is due for a sequel, perhaps entitled, "Is the Rate of Profit Rising?" because it does seem to be rising in recent years.

What is a way of thinking about all of this? I've come to a very simple "metaphor" (I hesitate to dignify this thought with the word "model"). We are used to thinking of production functions. Output

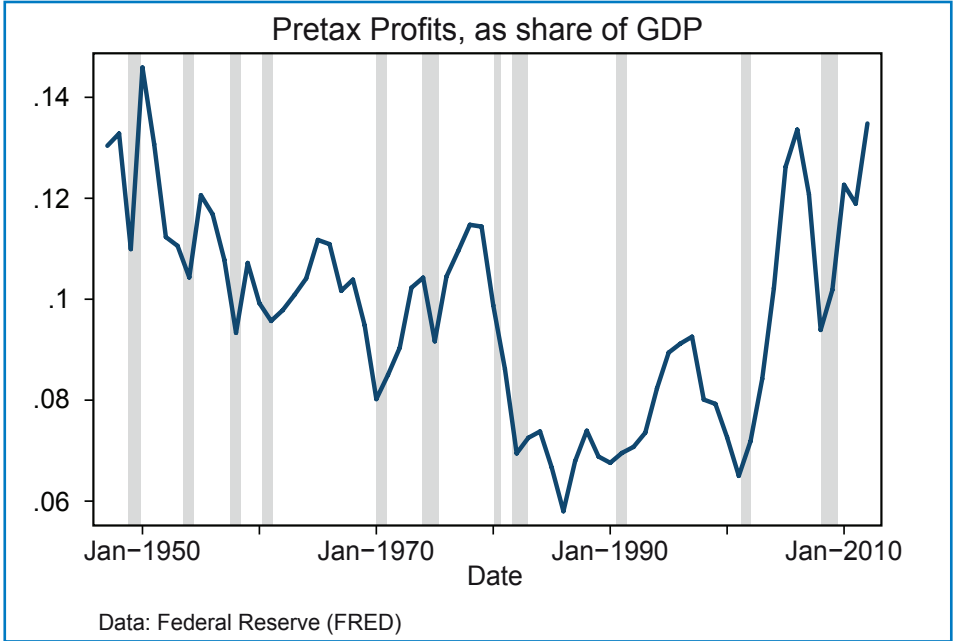
is a function of capital and labor. Capital augments labor: it raises the productivity of labor. If there are only two factors, they have to be complements. If there's more capital, the wage has to rise. Now imagine that capital can be put to one of two uses. It can be put to the use in the production function that we are accustomed to thinking about or it can be used to substitute for labor. That is, you can take some of the stock of machines and, by designing them appropriately, you can have them do

exactly what labor did before. I am suggesting replacing the production function $Y = F(K, L)$

with $Y = F(\beta K, L + \lambda(1-\beta)K)$.

In this setting one unit of capital is the equivalent of λ units of labor. A moment's thought will reveal that capital will be deployed in these two uses to the point where their marginal productivity is the same, and that will determine what share of the capital stock is used in the customary way and what share is used to substitute for labor.

If you reflect on this a bit longer, you'll realize that three things happen. One, the availability of capital that substitutes for labor augments production opportunities. You can always choose not to use it. So, the level of output has to rise. Second, when capital is reallocated to substituting for labor, the stock of effective labor rises and the stock of conventional capital falls, and so wage rates fall. Third, the capital share, understood to include the total return to capital of both varieties, rises. That's just a corollary of output rising and wages falling. This pattern is similar to what we have seen take place. I suspect that this reflects the nature of the technical changes that we have seen: increasingly they take the form of capital that effectively substitutes for labor.



Now one could augment this story in various ways. If one augmented the production function to include entrepreneurs, for example, it would not be difficult to address the rising share of income going to the top one percent of the population. My conjecture is that for the next generation we are likely to see this process continue, both because of the very substantial scope for current levels of computing power to support capital-labor substitution on a larger scale, and because of the scope for increased computational power to make possible capital-labor substitution of a kind that we have not seen to date.

The likely consequence? Increased levels of output but at the same time growing pressure on wages. Given the observation I noted earlier, this will greatly pressure the income distribution. Not only will divergent wages increase inequality but the supply response will magnify these effects. It may well be that, given the possibilities for substitution, some categories of labor will not be able to earn a subsistence income.

I think this description captures a very important aspect of what may play out over the next generation. But there is a second aspect that I think is also profoundly important—the reality that a sector’s great success in spurring productivity can make it less and less important economically. This is something that was first pointed up for me by Bill Nordhaus, who demonstrated that not quite at the pace of Moore’s Law, but at something close, the illumination sector of our economy has enjoyed great productivity growth. There’s only one problem. Most of us actually want it to be dark at night and there would be no particular advantage to this room being substantially more brightly lit. And so, vast productivity growth in illumination has been associated with the substantial shrinkage of the illumination sector, at least as measured by the share of employment in it. Candle making was an important occupation and an important industry in the 1800s. The production of light is no longer a defining aspect of economic activity today.

I believe phenomena of this type are

going to be very important for understanding the evolution of our economies going forward. The obvious example, of course, is agriculture where today less than one percent of the population produces enough food for all of us and much more. Headed in this direction also, potentially, is manufacturing. The most recent data I’ve been able to find, which are about five years old, suggest that in China a smaller fraction of the workforce is engaged in manufacturing employment today than was in 1990, despite the tremendous progress and gains in competitiveness that the Chinese manufacturing sector has enjoyed. It is the same story as above: rapid productivity growth associated with inelastic demand leads to fewer and fewer people being engaged in the activity.

The extent to which differential productivity growth characterizes our economy is, I think, sometimes underappreciated. The Bureau of Labor Statistics normalizes the consumer price indices at 100 in the period 1982 to 1984. Below are some recent values of the Consumer Price Index (CPI) for 2012.

Television sets at five stand out. That is obviously a reflection of a rather energetic hedonic effort by the Bureau of Labor Statistics. One suspects that equally energetic hedonic efforts are not applied to every consumer price. But nonetheless, the simple fact is that the relative price of toys and a college education has changed by a factor of ten in a generation. The relative price of durable goods or clothing as a category and all goods has changed by a factor of almost two in a generation.

This table provides a somewhat different perspective on the common and valid observation that real wages have stagnated

in the United States. The observation that real wages are stagnant reflects wages measured in terms of the overall consumer price index. But this obscures the truth that real wages measured in terms of different goods have behaved very differently.

In those parts of the economy that are well modeled by the introductory economics textbook treatment of widgets—firms producing a thing with workers with increasing marginal costs in a somewhat competitive industry, such as durables, clothes, and cars—we’ve seen continuing, very substantial growth in real wages as measured by the purchasing power of things that our economy produces. The reason that real wages in aggregate have stagnated is that much of what people buy are things where there are issues of fundamental scarcity: energy, the land under the houses we buy, and goods and services that are produced in complicated, heavily public-sector-inflected ways. Medical care and educational services are examples of the latter category.

Where production has taken place in the classic way we teach, productivity growth has continued. There has been progress. Real wages measured in those terms have increased substantially. It’s just that a larger and larger share of our econ-

Good or Service	September 2012 CPI Value (1982–4 = 100)
College Tuition and Fees	706
Medical Care Services	445
Medical Care	419
Services	272
Energy	258
Food	234
All Items	231
Housing	223
Transportation	224
Apparel	127
Durables	112
Toys	53
Televisions	5

Source: Bureau of Labor Statistics

omy is in sectors that are not well thought of as widgets produced by competitive firms. They are sectors where property rights, scarcities, intellectual property, and the like are of fundamental importance.

This is a way of thinking about a question that has always, and to some extent continues, to puzzle me — what I think of as the paradox of alternative dystopias. On the one hand there is the Peter Thiel-Robert Gordon dystopia that holds that we used to make rapid productivity growth progress and we no longer do. And look — real wages and median family income have been relatively stagnant for a long time. On the other hand there is the Erik Brynjolfsson-Mark Andreessen-Kurt Vonnegut dystopia that holds that machines are going to displace labor and so there are going to be very few jobs left for regular people. It seems like they can't both be true, that it can't both be that machines have the capacity to displace all the labor and that there is no capacity to enjoy rapid productivity growth.

Perhaps the resolution lies in the fact that a great deal of productivity growth can take place but it is in a sense self-limiting by demand. A larger share of the economy will inevitably migrate to those remaining residual sectors where the capacity to generate rapid productivity growth is low.

Let me close with a final observation — a projection. To the right is the BLS's projection of where job growth is going to come from over the next decade.

What stands out as by far the largest industry is healthcare and social assistance, clearly public-sector inflected. Other important growth sectors are state and local government, construction (in part something that takes place in the public sector), and educational services. I bet that when BLS next updates this, the projections on growth in retail trade, transportation and warehousing, and wholesale trade are going to have come considerably down given the trends that are underway.

As a society, we are going to need to come to grips over the next couple of decades with what has been called Moynihan's Corollary to Baumol's Law.

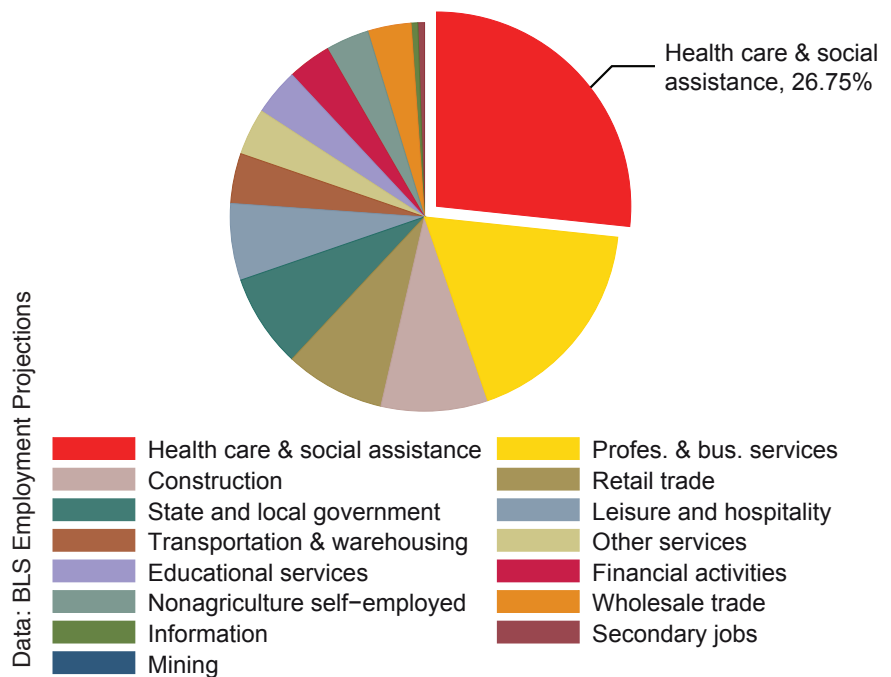
Baumol's Law is the set of observations surrounding productivity growth in some but not all sectors, which I have sought to discuss. Moynihan's Corollary is the propensity for the slow-growing sectors to end up in the public sector.

It is conventional to discuss the future of the public sector in terms of the past of the public sector, to suggest that the United States historically has some threshold of revenue generated or public spending that is in the range of 20 percent of GDP, and that those are norms that should carry us forward. One of the first things I learned from Marty, the observation that the distortion associated with taxes rises not with the tax rate but with the square of the tax rate, suggests a certain caution about the expansion of the public sector. Yet if one thinks about the 100-to-1 relative price change between television sets and goods of that kind that are dominantly produced in the private sector, and goods like healthcare and education, in which the public sector's role is substantially greater, one has to admit that it is not entirely apparent that the past should necessarily be a guide for the future with respect to the scale of the public sector.

Whether the expansion of those sectors as a share of the economy necessitates a growing share of the public sector in the economy, or whether the share of health-care and education that takes place in the public sector should decline will be a matter of great public debate. As a country, and not without controversy, we do not seem to be moving toward a smaller public role in healthcare. Nor do other countries in the world. But that will, perhaps, change over time.

In conclusion, I invite you to consider how the prodigious change associated with information technology that may be qualitatively different from past technological change may have defining implications for our economy going forward. If I have caused you to reflect on the fact that very substantial relative price changes are likely to be associated with dramatic changes in the structure of employment, the nature of economic activity, and the relative importance of the widget-producing firm in our economy, and to consider the implications this will have for the future of the subject with which I began my career in economics under Marty's tutelage, public economics, then I will have served my purpose this afternoon.

Employment Growth by Industry, projection 2010–2020



The Economics of Obesity

John Cawley*

During the past three decades in the United States, many indicators of population health such as life expectancy, the prevalence of smoking, and drug and alcohol use among youths improved significantly.¹ In stark contrast to these trends, over the same period the United States also experienced a doubling of the prevalence of obesity, which is defined as a body mass index (BMI) of greater than or equal to thirty, which corresponds to a weight of 221 pounds for someone six feet tall. As of 2009 to 2010, more than one-third of adult Americans are obese.² The United States is not alone; many countries worldwide have experienced a significant increase in obesity, and the World Health Organization estimates that 2.8 million people die each year as a result of excess weight.³

This has led to considerable debate about the causes and consequences of obesity and what can be done to prevent and treat it. Answering these questions is complicated because in many cases researchers cannot conduct randomized experiments: it would be unethical to experimentally manipulate individuals' weight. For this reason the empirical methods of economics, particularly the attention to issues of selection and omitted variables, are especially useful for identifying causal effects.

My primary research interest is the

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economics of risky health behaviors, in particular the economics of obesity. In a series of studies, my co-authors and I have investigated the economic causes and consequences of obesity and evaluated policies and programs to improve diets and increase physical activity. This research summary provides an overview of several recent projects and findings. A broader review of the economics of risky health behaviors that I co-authored with Christopher Ruhm is also available.⁴

Measurement and Trends

An important limitation of BMI, the standard measure of fatness in epidemiology, is that it does not distinguish fat from lean mass: it simply measures weight for height. A study that I conducted with Richard Burkhauser⁵ found that BMI, relative to more accurate measures of fatness such as percentage of body fat, misclassifies substantial percentages of individuals as obese and non-obese. BMI tends to be less accurate at classifying men (among whom there is more variation in muscularity) than women. The use of BMI also results in biased estimates of health disparities; the black-white gap in obesity among women is only half as large if one defines obesity using percentage of body fat rather than BMI. Moreover, the timing of the rise in obesity is sensitive to the measure of fatness used; Richard Burkhauser, Max Schmeiser and I find that if one uses skinfold thickness rather than BMI to define obesity then the rise in obesity becomes apparent 10 to 20 years earlier, which suggests that more gradual or long-run influences may be responsible.⁶ It also suggests that the rise in BMI

might have been detected earlier, and public health responses initiated sooner, if epidemiological surveillance had not relied so exclusively on BMI. Although many social science datasets continue to collect only self-reported weight and height, some innovative surveys such as the Health and Retirement Study (HRS) and the Household, Income and Labour Dynamics in Australia (HILDA) Survey are collecting additional measures of fatness such as waist circumference.

Economic Causes and Consequences of Obesity

Many theories have been advanced to explain the rise in obesity. To measure the extent to which income affects obesity, John Moran, Kosali Simon, and I exploit the natural experiment of the Social Security Benefits Notch.⁷ The Notch is the result of a legislative accident that created variation in retirement income that was large, unanticipated, and beyond the control of the individual, making it a suitable instrument. We estimate models of instrumental variables (IV) using data from the National Health Interview Survey and find little evidence that income affects weight. The small effects are precisely estimated: for a permanent \$1,000 increase in Social Security income (in 2006 dollars) our confidence intervals rule out a change in weight of more than 1.4 pounds in either direction for men or women.

Understanding the consequences of obesity is important for evaluating calls for government intervention and for measuring the cost-effectiveness of treatment and prevention programs. One important

potential consequence of obesity is higher medical care costs. Fat releases hormones that lead to insulin resistance and damage the cardiovascular system, with the result that obesity is associated with a wide variety of health conditions such as diabetes, heart disease, and cancer. Previous studies estimated the correlation of obesity with medical care costs, which is difficult to interpret because weight may be correlated with important unobserved factors (such as socioeconomic status) and there may be reverse causality (an expensive back injury may lead to weight gain). To estimate the causal effect of obesity on medical care costs, Chad Meyerhoefer and I exploit the heritable component of weight as a natural experiment.⁸ The identifying assumption is that the similarity in weight of biological relatives is caused by genetics rather than shared environment, an assumption that is supported by a large number of studies in genetics. We estimate the IV model using data from the Medical Expenditure Panel Survey, and the results indicate that obesity raises medical costs by \$2,741 per obese individual (in 2005 dollars). This is higher than the non-IV estimate because the IV method corrects for both the endogeneity of weight and reporting error in weight. Medical costs are much greater for those whose weight places them well above the threshold for obesity than for those who are only slightly obese. Thus obesity is a heterogeneous category, with much of the medical costs occurring among a small percentage of individuals with extremely high BMI. The results imply that obesity-attributable medical costs for non-institutionalized adults in the United States totaled \$190.2 billion in 2005, or 20.6 percent of national health expenditures. These estimates suggest that the magnitude of the obesity-related externalities imposed through public and private health insurance is greater than previously appreciated, and that historically the cost-effectiveness of methods of preventing and treating obesity may have been underestimated.

Given the effect of obesity on health, one would expect obese individuals to experience worse labor market outcomes

than non-obese individuals. To estimate the effect of weight on wages, I estimate models of instrumental variables that exploit the heritable component of weight as a natural experiment using data from the National Longitudinal Survey of Youth (NLSY) 1979 Cohort.⁹ I find that weight lowers wages for white females: an increase in weight of two standard deviations (roughly 64 pounds) is associated with 9 percent lower wages. In general, the labor market consequences of obesity are greater for women than for men, and greater for white females than for other females. Based on the NLSY data, it is impossible to say whether the labor market consequences of obesity are the result of relatively worse health impairing productivity, or to employer discrimination, but other studies suggest that discrimination plays an important role.

Some occupations and industries are more affected by employee obesity than others. For the military, fitness is an important job requirement and thus rising obesity is a particular concern. Johanna Catherine Maclean and I examine data from the National Health and Nutrition Examination Surveys and find that the percentage of age-eligible civilians who exceed the U.S. Army's weight-for-height requirements more than doubled for men and tripled for women between 1959 and 2008.¹⁰ Excess weight is now the primary reason that applicants to the military are rejected, and a coalition of retired generals and admirals has called obesity a threat to military readiness.

Policies to Prevent or Reduce Obesity

There are a staggering number of policies and programs to prevent and reduce obesity, and an important contribution that economists can make is to evaluate these programs' effectiveness. For example, the Centers for Disease Control, the American Academy of Pediatrics, and the Institute of Medicine have called for increases in physical education (PE) for school children, despite a lack of evidence that it has any impact on youth weight. To assess how PE affects youth physical

activity and obesity, Meyerhoefer, David Newhouse and I exploit variation across states in PE requirements.¹¹ To minimize the risks of policy endogeneity or unobserved heterogeneity biasing the results, we control for a host of state characteristics, such as the prevalence of adult obesity, the socioeconomic status of residents, and resources provided to public schools. Using data on high school students from the Youth Risk Behavior Surveillance System (YRBSS) we find that increasing PE requirements increases physical activity among girls (not boys) but has no detectable effect on weight.

To complement that study of high school students, Meyerhoefer, David Frisvold and I estimate the impact of PE on elementary school children using data from the Early Childhood Longitudinal Study, Kindergarten Cohort (ECLS-K).¹² The results of the IV model that exploits variation over states and time in PE requirements indicate that an additional 60 minutes per week spent in PE reduces the probability of obesity in fifth graders by 4.8 percentage points. There is no significant effect in earlier grades, which could be attributable to differences in PE curriculum, variation of the treatment effect with age, or to several states instituting substantial PE requirements before the fifth grade wave, increasing the power of the instrument. Taken together, the results suggest that increasing PE requirements increases physical activity and decreases the risk of obesity for certain subgroups, but not for all students. However, the limitations of BMI are relevant here. The YRBSS and ECLS-K datasets contain only height and weight, but no information about body composition. It is possible that increased PE requirements increase muscle mass and decrease fat mass, with little net effect on weight.

An innovative approach is to offer obese individuals financial rewards for weight loss. Insurance companies may face lower claims and employers may experience lower job absenteeism and higher productivity if their enrollees or employees lose weight; as a result, these organizations are increasingly seeking a win-win solution by offering overweight

individuals financial rewards for weight loss. In addition, people with time-inconsistent preferences may be willing to put their own money at risk, hoping that loss aversion will provide them with incentives to lose weight in order to get the money back. To evaluate the effectiveness of these approaches, Joshua Price and I examine outcomes in a workplace wellness program that offers financial rewards and deposit contracts for employee weight loss.¹³ Interesting features of this program include its large sample size (2,635 workers across 24 work sites) and long duration (one year). We find that attrition in this program is high: 42.9 percent dropped out by the end of the first quarter, and 68.0 percent by the end of the year-long program. We find modest results in the program. Those offered financial rewards for weight loss have no higher year-end weight loss than those in the control group, and those who make deposit contracts have year-end weight loss that is roughly two pounds greater than that of the control group after adjusting for attrition. An important next step is to determine the optimal structure of such programs, such as the most cost-effective size of financial reward, what should be rewarded (loss of pounds, loss of fat, increase in physical activity), the optimal number and timing of measurements of progress, whether group challenges can be designed to create beneficial peer effects, and how to avoid creating incentives for the use of unhealthy methods of weight loss.

Discouraged by failed attempts at weight loss through dieting and exercise, substantial percentages of Americans have taken over-the-counter (OTC) weight loss products. There is very little, if any, evidence suggesting that these products are effective, and some have potentially fatal side effects. Rosemary Avery, Matthew Eisenberg and I study the impact of exposure to advertising on the probability of consuming such products using data from the Simmons National Consumer Survey merged with data on magazine and television advertising.¹⁴ We measure the extent to which advertisements are deceptive using detailed guidelines developed by

the Federal Trade Commission for this specific market. To address the targeting of ads, we control for each magazine read and each television show watched, and we identify the effect of exposure to advertising using changes over time in the number of ads within individual magazines and shows. We find little evidence that advertising of OTC weight loss products expands the size of the market. Instead, advertising seems to be a way to battle for market share.

Future Directions

Given the scarcity and low quality of data on calories consumed and calories expended, it may never be possible to affirm with any degree of certainty the percentage of the rise in obesity attributable to specific factors. However, it will continue to be important to exploit natural experiments in order to determine the extent to which economic variables such as food prices, income, and technological change affect the risk of obesity, and to estimate the various economic consequences of obesity. Measuring the effectiveness, and calculating the cost-effectiveness, of anti-obesity programs and policies will help ensure that the public and private sectors get the biggest “bang for the buck” from their expenditures on obesity prevention and treatment.

¹ See, for example, *Centers for Disease Control, “Deaths: Final Data for 2007,” National Vital Statistics Reports, 58(19) (2010) pp. 1–17; L.D. Johnston, P.M. O’Malley, J.G. Bachman, and J.E. Schulenberg, Monitoring the Future: National Results on Adolescent Drug Use, Overview of Key Findings, 2010. Ann Arbor: Institute for Social Research, The University of Michigan, 2011.*

² *K.M. Flegal, M.D. Carroll, B.K. Kit, and C.L. Ogden. “Prevalence of obesity and trends in the distribution of body mass index among U.S. adults, 1999–2010.” Journal of the American Medical Association, 307(5) (2012), pp. E1–E7.*

³ *World Health Organization, Global Status Report on Noncommunicable*

Diseases, 2010, Geneva: World Health Organization, 2011.

⁴ *J. Cawley and C. Ruhm, “The Economics of Risky Health Behaviors.” NBER Working Paper No. 17081, May 2011, and published as chapter 3 in Handbook of Health Economics, Volume 2, T.G. McGuire, M.V. Pauly, and P.P. Barros, eds., New York: Elsevier, 2012, pp. 95–199.*

⁵ *J. Cawley and R.V. Burkhauser, “Beyond BMI: The Value of More Accurate Measures of Fatness and Obesity in Social Science Research,” NBER Working Paper No. 12291, June 2006, published in Journal of Health Economics, 27(2) (2008), pp. 519–29.*

⁶ *R.V. Burkhauser, J. Cawley, and M. Schmeiser. “Differences in the U.S. Trends in the Prevalence of Obesity Based on Body Mass Index and Skinfold Thickness,” NBER Working Paper No. 15005, May 2009, published in Economics and Human Biology, 7(3) (2009), pp. 307–18.*

⁷ *J. Cawley, J.R. Moran, and K.I. Simon. “The Impact of Income on the Weight of Elderly Americans,” NBER Working Paper No. 14104, June 2008, published in Health Economics, 19(8) (2010), pp. 979–93.*

⁸ *J. Cawley and C. Meyerhoefer. “The Medical Care Costs of Obesity: An Instrumental Variables Approach,” NBER Working Paper No. 16467, October 2010, published in the Journal of Health Economics, 31(1) (2012), pp. 219–30.*

⁹ *J. Cawley, “Body Weight and Women’s Labor Market Outcomes,” NBER Working Paper No. 7841, published as “The Impact of Obesity on Wages,” Journal of Human Resources, 39(2) (2004), pp. 451–74.*

¹⁰ *J. Cawley and J.C. Maclean, “Unfit for Service: The Implications of Rising Obesity for U.S. Military Recruitment,” NBER Working Paper No. 16408, September 2010, published in Health Economics, 21(11) (2012), pp. 1348–66.*

¹¹ *J. Cawley, C.D. Meyerhoefer, and D. Newhouse, “The Impact of State Physical Education Requirements on Youth Physical Activity and Overweight,” NBER Working Paper No. 11411, June 2005, published in Health Economics, 16(12) (2007), pp. 1287–301.*

¹² J. Cawley, D. Frisvold, and C. Meyerhoefer, "The Impact of Physical Education on Obesity among Elementary School Children," NBER Working Paper No. 18341, August 2012, published in the *Journal of Health Economics*, 32(4) (2013), pp. 743-55.

¹³ J. Cawley and J.A. Price, "Outcomes in a Program that Offers Financial

Rewards for Weight Loss," NBER Working Paper No. 14987, May 2009, and published as chapter 4 in *Economic Aspects of Obesity*, M. Grossman and N. Mocan, eds., Chicago, IL: University of Chicago Press, 2011, pp. 91-126. See also J. Cawley and J.A. Price, "A Case Study of a Workplace Wellness Program That Offers Financial Incentives

for Weight Loss," *Journal of Health Economics*, 32(5) (2013), pp. 794-803.

¹⁴ J. Cawley, R.J. Avery, and M. Eisenberg, "The Effect of Deceptive Advertising on Consumption of the Advertised Good and its Substitutes: The Case of Over-the-Counter Weight Loss Products," NBER Working Paper No. 18863, March 2013.

Public Sector Retirement Plans

Robert Clark*

Public sector pension plans and retiree health plans have been front page news during the past decade. While the popular press has focused almost exclusively on the underfunding of these plans, economic research has examined how these plans affect state and local budgets, intergenerational equity, and the behavior of public employees. Public employees account for 14 percent of the labor force and employee benefits comprise about 35 percent of the employment cost of public employees.¹ Thus, a clear understanding of the cost and benefits of pension and health plans is central to understanding this sector of the U.S. economy. Along with colleagues, I have examined the labor market effects of public pension plans and retiree health plans. The following describes my research on primary pension plans, retiree health plans, and supplemental retirement plans offered by state and local governments to their employees.

Public Pension Plans

I began my research on public pension plans through a study of the his-

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torical origins of retirement plans in the United States. In order to consider current retirement policies, it is important to understand when public sector retirement plans were established, why they were made more generous in the last quarter of the twentieth century, and what human resource objectives they are trying to achieve. The earliest retirement plans can be found in the public sector, dating at least from the early Roman Empire. The first public pension plans in North America were those established in the English colonies which provided benefits for the members of their local militias. During the earliest stages of the Revolutionary War, the Continental Congress established a retirement plan for its naval officers and enlisted sailors. The plan was funded primarily from booty seized on the open seas. (Later a plan was created for the Continental Army.) The history of the Navy Pension Fund offers an interesting narrative of the management of early pension funds, including periodic benefit increases, which ultimately led to the fund's exhaustion and a subsequent U.S. Treasury bailout. This fund was revived and prospered during the Civil War and was eventually rolled into the federal government's pension system for Union veterans and later military plans for "regular" army and navy personnel. At the local level, larger municipali-

ties established pension plans for their police officers, firefighters, and teachers during the late nineteenth century.²

By the first decade of the twentieth century, a few states offered plans for public school teachers, but the first pensions for general (that is, non-teacher) state employees were established in the 1910s; however, only after the enactment of Social Security did most states begin to establish retirement plans for their employees, with the last state plan being implemented in the 1960s. Initially, employer-provided pension plans were the only retirement plans available to public employees, because public employees were excluded from the Social Security system until the 1950s. Through the middle of the century, except for several of the country's larger cities, local teacher plans were consolidated into state-managed plans, and in about half of the states, teacher plans merged with plans covering general state employees. By the 1970s, public sector plans had matured and covered most full-time state and local employees.

These early public sector plans were almost exclusively defined benefit plans, providing life annuities to retired public employees. The last quarter of the twentieth century saw public employers increasing the generosity of their plans³ by: increasing the multiplier for benefits

per year of service, reducing retirement ages, reducing vesting periods, and adding cost-of-living adjustments to retirement benefits.⁴ To some extent, today's funding problems are based on these decisions to increase benefits without providing adequate revenue to support them.

Private sector employers began offering pension plans on a wide scale later than the public sector, though, like the public sector, most of the early plans were defined benefit plans. After the passage of the Employee Retirement Income Security Act (ERISA) in 1974, retirement plans in the private sector began a long-term movement away from defined benefit plans toward defined contribution plans.⁵ Public sector plans were not subject to ERISA, and government employers continued to offer defined benefit plans. However, since 2000 one third of the states have altered their plan structures by adopting defined contribution plans, cash balance plans or hybrid plans, either as replacements for traditional defined benefit plans or as options that new employees can select.

There is a long history of economic research examining the effects of pension plans in general, but relatively few studies examine the effects of public sector plans. In part because of the lack of research on public retirement plans, along with several collaborators I helped to organize NBER research projects in 2010 and 2012 that explored various issues involving retirement plans and retiree health insurance offered by state and local governments.⁶ As part of the first project, Melinda Morrill and I examine the initial actuarial reports on retiree health insurance of all 50 states.⁷ Our survey shows that all states offered their retirees access to some form of retiree health insurance, although there are significant differences in the generosity of these plans across the states. Some states provide this insurance and pay the entire premium for their retirees, while some states merely offer retirees the opportunity to remain in the state plan if the individual pays the entire premium. Given this range of generosity, the unfunded liability associated with these plans varies substantially across the states.

As part of the second project, Morrill, David Vanderweide, and I examine the decisions of public employees who terminate employment but have not yet met the age and service requirements to begin their pension benefits.⁸ In general, employees at termination have the option of requesting a lump sum distribution of their pension or leaving their funds in the system. Our analysis finds that in the public sector the lump sum distribution amount is not typically equivalent to the present discounted value of the annuity payments, as it is in the private sector. Thus, although there is a considerable literature examining pension participants that finds workers have a preference for lump sums, when considering public sector workers, a very different pattern is observed. In this study, we find no such preference for lump sum distributions among public employees in North Carolina. Terminated workers tend to leave their accounts open even when the lump sum has a higher present value, suggesting an important role for framing, inertia, and defaults.

Retiree Health Insurance

Compared to the literature on pension plans, much less is known about the development of retiree health plans, how they are financed, and their effects on employee behavior. Employers began to extend health coverage to retirees on a large scale after the implementation of Medicare.⁹ While coverage in the private sector has been declining rapidly, incidence of retiree health insurance remains very high in the public sector. In 2004, the Governmental Accounting Standards Board issued a ruling requiring public employers to report their unfunded liabilities associated with the promise of health insurance in retirement. Prior to this time, very little was known about the magnitude of these liabilities.

Even though retiree health plans are an expensive component of employee compensation in the public sector, there is relatively little research on the impact of these programs on employee behavior. To address this need for research, Joseph

Newhouse and I organized an NBER research project in 2013 examining the economic effects of retiree health plans in the public sector.¹⁰

I contributed two papers to this project. One, co-authored with Olivia Mitchell, estimates the effect of coverage by retiree health insurance on individual saving.¹¹ There is a long literature by economists estimating the impact of employer pensions, Social Security, and Medicare coverage on personal saving but our paper is the first examination of the impact of retiree health insurance on saving and wealth accumulation. We find that public sector workers aged 50 and over covered by retiree health insurance had accumulated \$70,000 to \$100,000 less in net wealth than comparable private sector employees without retiree health insurance. Thus, workers expecting that their employer will subsidize their health insurance in retirement tend to save less.

In a second paper, Morrill, Vanderweide, and I examine the impact of policy changes on the choice of health plans by retirees in North Carolina.¹² All retirees receiving a pension were eligible to remain in the state health plan at no premium. Retirees had a choice between two plans with one plan (Standard Plan) being more generous than the other (Basic Plan). Retirees could select either plan, but if they wanted to add dependents to their plan both the retiree and the dependent had to be in the same plan with the retiree paying the full cost of his dependents' coverage. In 2009, 93 percent of retirees were in the more generous Standard Plan. Over a four-year period, non-Medicare-eligible retirees were subjected to changes in the default plan, introduction of a Comprehensive Wellness Initiative (CWI), the elimination of the CWI, and the introduction of a premium for enrollment in the Standard Plan.

Statistical analysis shows that these policy changes significantly altered enrollments in the two plans. The results indicate that the policy initiatives caused retirees to change to the less generous health plan, thus shifting costs from the state to these retirees. The evidence suggests a

strong role for defaults in retiree health plan choices. The findings suggest that plan sponsors can effectively move retirees from one plan to another through the use of plan characteristics and requirements. We are now engaged in a similar project examining how active workers responded to similar changes and the introduction of a new consumer-driven health plan.

Supplemental Retirement Plans and Financial Education

Many public sector employees are offered the opportunity to enroll in supplemental retirement saving plans. State and local employers can sponsor 401(k) and 457 plans while schools, universities, and health care organizations can also establish 403(b) plans for their employees. Very little is known about the participation and contribution rates of public employees in these plans. However, it does appear that public employers are much less likely to offer employer matches to these plans or to have adopted automatic enrollment or auto-escalation policies relative to private sector employers.¹³ The current state of supplemental plans raises important questions about the factors that prompt public employers to offer one of these plan types over another, and why some employers offer two or three different retirement saving plans.

In the educational sector, management of 403(b) plans appears to be inefficient and likely inhibits wealth accumulation by teachers. David Richardson and I find that states that allow all interested vendors to offer investment options to 403(b) plan participants had higher administrative fees and were more likely to include other fees, such as front-end fees and surrender charges for similar investment products.¹⁴ Emma Hanson and I review 403(b) plans in all 50 states and find that in over two-thirds of the states, 403(b) plans were managed at the school district level. In most cases, there was little or no oversight of the vendors or restrictions on their fees.¹⁵

As states reform their primary pension plans and reduce the generosity of retiree health plans, supplemental retire-

ment saving plans will become increasingly important for public sector employees. Future public employees will assume more responsibility for their retirement income. The importance of financial literacy and the need to understand sometimes complicated retirement plans will increase over time. In papers with Steven Allen, Morrill, and Jennifer Maki, I examine the role of employer-provided retirement planning programs,¹⁶ financial literacy programs,¹⁷ and the success of informational “nudges”¹⁸ in retirement planning. Our analysis shows that these types of programs have been successful in enhancing financial literacy, increasing the knowledge of retirement benefits, altering saving behavior, and modifying retirement plans.

¹ Information on employment from the Bureau of Labor Statistics, August 2013, <http://www.bls.gov/news.release/empsit.t17.htm>

² This discussion is based on R.L. Clark, L.A. Craig, and J.W. Wilson, *A History of Public Sector Pensions in the United States*, Philadelphia: University of Pennsylvania Press, 2003.

³ R.L. Clark and L.A. Craig, “Determinants of the Generosity of Pension Plans for Public School Teachers, 1982–2006,” *Journal of Pension Economics and Finance*, 10(1) (January 2011), pp. 99–118. This paper reports that the typical career teacher retiring in 1982 had a replacement rate of 50 percent of their final average salary while for a similar teacher retiring in 2006 benefit increases had raised the replacement rate to 56 percent.

⁴ R.L. Clark, L.A. Craig, and J. Sabelhaus, *State and Local Retirement Plans in the United States*, Northampton, MA: Edward Elgar Publishing, 2011.

⁵ R. L. Clark and A.A. McDermed, *The Choice of Pension Plans in a Changing Regulatory Environment*, Washington: American Enterprise Institute, 1990.

⁶ Jeffrey Brown and Joshua Rauh were co-directors of these projects. A summary of the first project can be found in J.R. Brown, R.L. Clark, and J.D. Rauh, “The

Economics of State and Local Public Pensions,” NBER Working Paper No. 16792, February 2011, and *Journal of Pension Economics and Finance*, 10(2) (April 2011), pp. 161–72. The list of research studies that were conducted as part of the second project can be found at <http://conference.nber.org/confer/2012/SLP/summary.html>

⁷ R.L. Clark and M.S. Morrill, *Retiree Health Plans in the Public Sector: Is There a Funding Crisis?* Northampton, MA: Edward Elgar Publishing, 2010. Also see R.L. Clark and M.S. Morrill, “The Funding Status of Retiree Health Plans in the Public Sector,” NBER Working Paper No. 16450, October 2010, and *Journal of Pension Economics and Finance*, 10(2) (April 2011), pp. 291–314.

⁸ R.L. Clark, M.S. Morrill, and D. Vanderweide, “Defined Benefit Pension Plan Distribution Decisions by Public Sector Employees,” NBER Working Paper No. 18488, October 2012, and forthcoming in the *Journal of Public Economics*.

⁹ In the private sector, coverage was generally limited to large companies, unionized firms, and of course, only employers who offered health insurance to active workers. In 1989, the Financial Accounting Standards Board required firms to determine the unfunded liability associated with the promise of health insurance to retirees. Subsequent to this new accounting policy, coverage in the private sector began to decline. Other factors influencing this decline were the rise in the ratio of retirees to active workers, the increase in medical cost that outpaced the general rate of inflation, and Medicare policy changes.

¹⁰ Joseph Newhouse and I were co-directors of this project. The list of research studies can be found at <http://conference.nber.org/confer/2013/SLHP13/summary.html>

¹¹ R.L. Clark and O.S. Mitchell, “How Does Retiree Health Insurance Influence Public Sector Employee Saving?” NBER Working Paper No. 19511, October 2013.

¹² R.L. Clark, M.S. Morrill, and D.Vanderweide, “The Effects of Retiree Health Insurance Plan Characteristics on

Retirees' Choice and Employers' Costs, NBER Working Paper No. 19566, October 2013.

¹³ R.L. Clark and J.M. Franzel, "Adopting Automatic Enrollment in the Public Sector: A Case Study," *Government Finance Review*, 27(1) (February 2011), pp. 42–8.

¹⁴ R.L. Clark and D.P. Richardson, "Who Is Watching the Door? How Controlling Provider Access Can Improve Teacher K-12 Retirement Outcomes," *Research Dialogue*, November 2010,

https://www.tiaa-crefinstitute.org/public/institute/research/dialogue/rd_98.html.

¹⁵ R.L. Clark and E. Hanson, "403(b) Plans for Public School Teachers: How They Are Monitored and Regulated in Each State," *Research Dialogue*, No. 107 (March 2013), TIAA-CREF Institute, <https://www.tiaa-crefinstitute.org/public/pdf/institute/research/dialogue/107b.pdf>

¹⁶ S.G. Allen, R.L. Clark, J.A. Maki, and M.S. Morrill, "Golden Years or Financial Fears? Decision Making After Retirement Seminars," NBER Working Paper No.

19231, July 2013.

¹⁷ R.L. Clark, M.S. Morrill, and S.G. Allen, "The Role of Financial Literacy in Determining Retirement Plans," NBER Working Paper No. 16612, December 2012, and *Economic Inquiry*, 50(4) (October 2012), pp. 851–66.

¹⁸ R.L. Clark, J.A. Maki, and M.S. Morrill, "Can Simple Informational Nudges Increase Employee Participation in a 401(k) Plan?" NBER Working Paper No. 19591, October 2013, and *forthcoming in the Southern Economic Journal*.

High-Skilled Immigration, Domestic Innovation, and Global Exchanges

William Kerr*

High-skilled immigrants account for about 25 percent of the workers in the most innovative and entrepreneurial U.S. industries, and they are responsible for a roughly similar share of output measures like patents or firm starts. Immigrants have also accounted for the majority of the growth in the U.S. scientific workforce since the 1990s. The magnitudes of these contributions make understanding the economic consequences of immigration an important research priority.

In this piece, I summarize the major themes that have emerged from my work on high-skilled immigration. I start by describing the construction of the ethnic patenting records that I use in most of my studies. I then outline projects that have considered the economic consequences of high-skilled immigrants for the United States. The last part of this research summary focuses on the outbound economic

consequences of high-skilled emigration for the home countries of those who move to the United States.

Developing Data

While the substantial role of immigrants in U.S. technological development has long been recognized, data constraints have posed a significant challenge for research. Some datasets, like the decennial Censuses, provide rich cross-sectional accounts but limited longitudinal variation. Others, such as the Current Population Survey, provide better longitudinal detail but less cross-sectional heterogeneity. Moreover, it has been especially difficult to collect data on the role of high-skilled immigrants in research-oriented firms and universities.

Most of my work on high-skilled immigrants builds off the assignment of probable ethnicities to individuals who appear in U.S. patent records. The United States Patent and Trademark Office (USPTO) publishes all the patents it grants, which have exceeded 200,000 grants in recent years. Every patent must list at least one inventor, and patents are allowed multiple inventors.

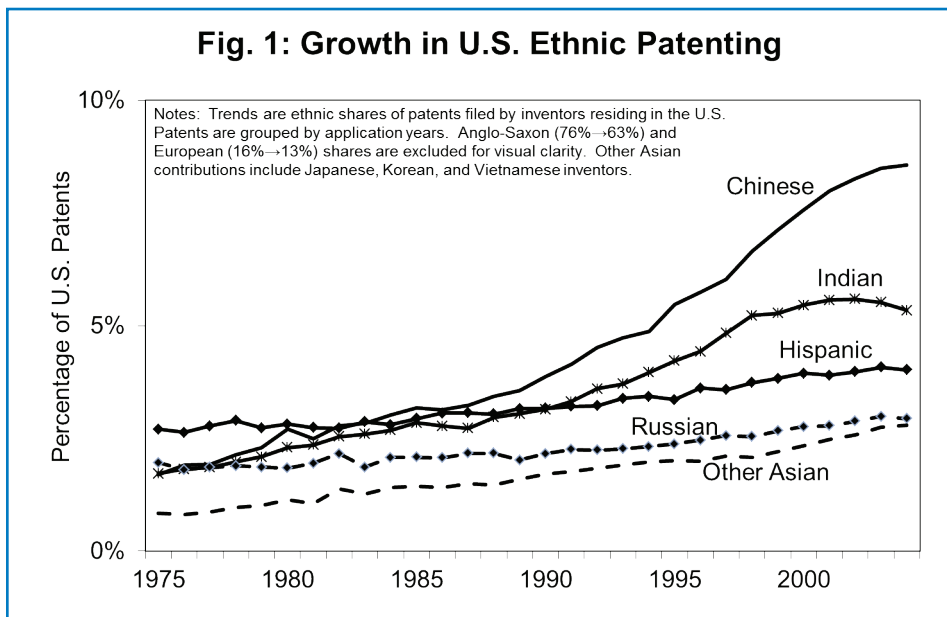
Several features of patent litigation make it advisable to correctly list the identities of those truly doing the innovative work when filing for a patent, and through the assignment of patents, this inventor role can be separated from ownership of the property rights to the patent.

I use the names of inventors to assign their probable ethnicities. This procedure exploits the fact that individuals with surnames of Gupta or Desai are likely to be Indian, Wang or Ming are likely to be Chinese, and Martinez or Rodriguez are likely to be Hispanic. Name matching procedures have been developed to provide probabilistic ethnicities for virtually all inventors in the USPTO system. The name approach is comparatively stronger at separating among Asian ethnic groups than among European or Hispanic names. This approach does not isolate immigration status directly for multiple reasons, but it does provide an indirect measure that proves useful in research.

The appeal of this approach is that it permits assignment of ethnicities to individual patent records. With this granularity, the USPTO records can be aggregated in many ways, for example by

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Fig. 1: Growth in U.S. Ethnic Patenting



year, by city, by very detailed technology codes, and by institution. Moreover, the patent data include a wealth of information, so one can, for example, study citations that patents make to other patents for evidence of ethnic networks in knowledge flow. One can also use measures developed in the technological change literature (such as patent originality scores) to compare inventor contributions across ethnicities.

Figure 1 shows the tremendous increase in the ethnic contribution of U.S. inventors over the last 30 years, focusing only on inventors residing in the United States at the time of their work. The contribution of Chinese and Indian ethnic inventors displays exceptional growth, increasing from under 2 percent each to 9 percent and 6 percent respectively. Ethnic contributions are disproportionately concentrated in high-tech fields, and Figure 2 shows the Chinese and Indian inventor shares for several noteworthy companies. The data underlying Figures 1 and 2 are the basis for most of my research on high-skilled immigration in the U.S. economy.

Domestic Inbound Consequences

One portion of my work uses the USPTO data to examine how high-

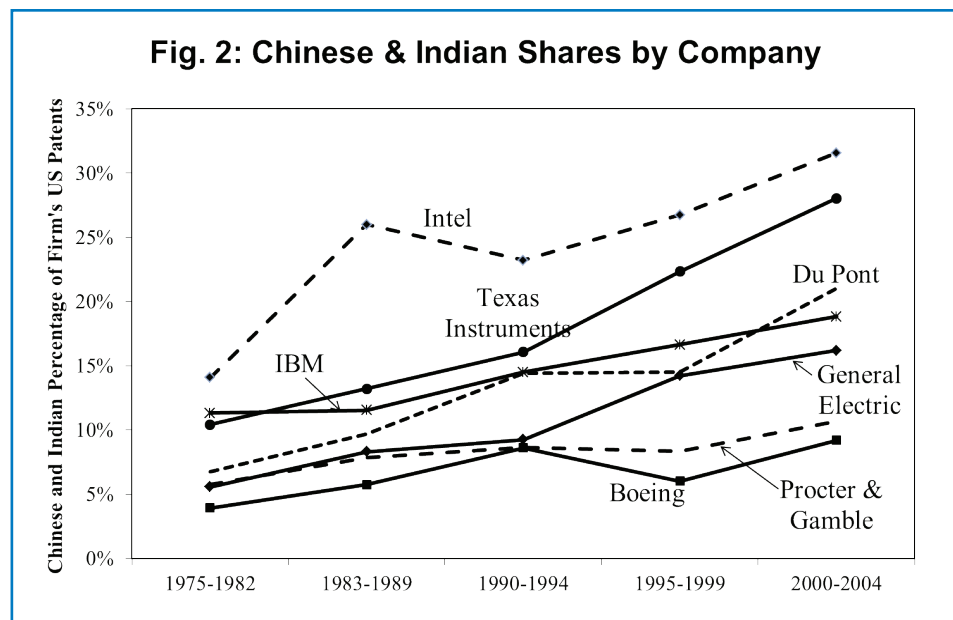
skilled immigration affects the rate of U.S. technology development and its spatial allocation. One project with William Lincoln examines how immigration policy influences the rate of U.S. innovation through changes in the supply of potential inventors to the economy.¹ We focus on the H-1B visa program that is the primary visa category for temporary workers entering the United States for employment in high-skilled occupations related to science and engineering. The U.S. national cap on new H-1B admissions has fluctuated substantially over the last

two decades, and the program is a point of significant controversy in the public debate over immigration. Proponents and detractors disagree about how important H-1B admissions are for U.S. technology advancement and whether native workers are displaced by immigrants.

We study how changes in H-1B admissions impact the growth and character of U.S. invention. Our central analysis exploits differences across cities in their dependence on immigrants for their science and engineering workforce. Dependent cities experience substantially stronger growth in Indian and Chinese ethnic inventions when H-1B admission rates are higher. We do not find evidence of adverse effects for inventors with Anglo-Saxon names, which are our proxy for native U.S. workers. If anything, the project suggests that native invention may grow slightly when the number of immigrant scientists and engineers is increasing in a city. Aggregating across ethnic groups, total U.S. invention increases by a small amount in the short run with higher H-1B admissions. This increase is primarily through the direct contributions of immigrant inventors.

These results are important for understanding the consequences of more flexible immigration policies for high-skilled workers. In contrast to the demand side of innovation—where entrepreneurial innovation responds

Fig. 2: Chinese & Indian Shares by Company



to market needs and growth in market sizes — this supply side of innovation is less understood. It can be very challenging for workers to move across occupations and industries, especially in knowledge-intensive sectors. The heavy U.S. dependence on immigrants for its scientific workforce makes immigration policy an important supply-side determinant of U.S. innovation, as it governs the entry of workers who can perform key tasks in innovation-intensive industries.

A subsequent project, also using cross-city variation, considers the degree to which immigrants aid the efficient reallocation of inventors toward areas where breakthrough inventions occur.² Urban economists have long discussed cases in which innovation shifts to be near the source of the next great mousetrap, for example, the quick shift of semiconductors from Boston to Silicon Valley and the rapid rise of Micron Technology, Inc. in Boise, Idaho. As part of a broader effort to quantify this effect, this project showed the substantial degree to which immigrant inventors lead the shifts across space to new industrial clusters. This greater mobility results partly from immigrant inventors being more mobile than native workers, but it is particularly connected to the fact that initial location decisions upon moving to the United States can be easily shaped.

More recent work has turned to uniting the ethnic patenting data with administrative data on the employment structures of U.S. firms. From a conceptual perspective, this integration is very important since most forms of high-skilled immigration are 1) done through firms that sponsor visas, and 2) have many non-market aspects to their allocation. Examples of the latter are the regulated supply of new high-skilled immigrants by the government, their allocation to firms without a pricing mechanism, and the tied employer-employee relationships that follow. Given that firms effectively conduct much of the selection of U.S. high-skilled immigrants, it is imperative to understand better how they utilize the visas.³

In projects with Lincoln and Sari

Pekkala Kerr, we link the ethnic patenting dataset to the U.S. Census Bureau's Longitudinal Employer Household Database.⁴ This is a very exciting research platform because the employer-employee data allow us to follow individuals and firms over time. Moreover, the data directly identify the immigrant status of employees, which is particularly powerful in combination with the ethnic patenting data.

Our key paper analyzes how fluctuations in the H-1B program impact the hiring of different groups of workers. We explore the idea that high-skilled immigration allows dependent firms to keep their workforces younger. Advocates against the H-1B program voice this concern, arguing anecdotally that the program is used in high-tech firms for labor cost minimization by displacing older and more expensive workers. While the vast majority of H-1B workers are under the age of 40, this proposed relationship has not been rigorously examined.

We find evidence that increased employment of high-skilled immigrants in the firm links to younger workforces. Whereas younger native groups expand their employment in step with immigrants, there are very limited adjustments regarding the employment of older natives. As a consequence, the share of older workers in the firm declines, both in total and among native workers only. On the other hand, it is important to note that absolute declines in older worker employment are not observed. We consider some differences in effects by occupation, and we discuss how our results reflect a blend of cost minimization and access to scarce skills. These findings describe a pattern of substitution and complementarity between immigrants and natives that could not have been discerned with prior techniques and data.

Overall, the development of new employer-employee data offers great promise for expanding our understanding of the immigration process from both empirical and theoretical perspectives. The literature on international trade, for example, has benefited signifi-

cantly in recent years from greater consideration of the role of the firm, and I believe a similar outgrowth will occur for high-skilled immigration research in coming years.

Home-Country Consequences of High-Skilled Emigration

The studies described above analyze how immigrants influence U.S. innovation. My research also considers the relationships that high-skilled immigrants in the United States maintain with their home countries. Case studies of Silicon Valley depict powerful ethnic business networks that transfer knowledge and technology across countries, but the broader strength and generality of these networks have been rarely tested.

My initial research on this question establishes some key macroeconomic relationships using country-industry data in combination with the ethnic patenting series.⁵ This work quantifies how a larger ethnic scientific community in the United States aids the transfer of new technologies to the home country. This transfer is strong enough to show up in manufacturing output and productivity data for the home country, and it is also evident in trade patterns.⁶ At several points, my work has used the Immigration Reform Act of 1990, which differentially affected high-skilled immigration from countries based upon how general quota changes interacted with country size, to tease out causal relationships.

Understanding the channels behind this technology transfer has been the subject of subsequent work. One channel is clearly inventor-to-inventor communication. Ethnic networks are evident in global patent citations, where overseas inventors display a 50 percent higher citation rate for members of their own ethnicity working in the United States, conditional on technology area and similar controls. This ethnic transfer is particularly powerful in the first five years after a new discovery is made, and it is no longer present after technologies have been around for ten years as a result of wide-

spread diffusion.

My work with C. Fritz Foley also establishes that foreign direct investment (FDI) is an important mechanism and introduces again the theme of understanding the role of firms in these global linkages.⁷ We match the ethnic patenting data to confidential data on the foreign activities of U.S. multinationals collected by the Bureau of Economic Analysis. This platform allows us to see how growth in a firm's ethnic scientific workforce in the United States relates to FDI placement, both in total and also in activities specifically related to R&D and patenting. We find that within-firm growth in the number of U.S.-based inventors of a particular ethnicity translates into higher FDI placement by that firm in countries associated with that ethnic group. This effect is particularly strong for location decisions related to innovation. Our results suggest that employing innovators of a certain ethnicity increases some aspects of the competitiveness of U.S. multinational firms in countries associated with that ethnicity.

Another project with Ejaz Ghani and Christopher Stanton examines the outsourcing channel using contract-level data from oDesk, the world's largest online platform for outsourcing.⁸ oDesk links firms and workers from many countries; India is the largest destination country on oDesk in terms of outsourcing. We study the role of the ethnic Indian diaspora worldwide in sending contracts to India and in influencing the traits of these contracts. An important finding from this work is that while tools like oDesk minimize many of the frictions that dias-

pora connections have historically overcome (such as information asymmetries and reputation-based contracts), the diaspora makes effective use of these tools and their role even strengthens with familiarity with the platform. This suggests that the importance of ethnic networks for international exchanges is unlikely to decline, and may even increase, with the advent of online platforms and related reductions in transportation and communication costs.

Overall, these studies find that larger high-skilled immigrant populations in the United States from a given country provide partial access to U.S. resources and opportunities for those who live in that country. This resource assembly through ethnic and professional networks complements resource assembly through spatial proximity in industrial clusters. It contrasts with traditional economic models where, for example, technology diffusion occurs instantaneously or declines uniformly with geographic distance.

¹ W.R. Kerr and W.F. Lincoln, "The Supply Side of Innovation: H-1B Visa Reforms and U.S. Ethnic Invention," NBER Working Paper No. 15768, February 2010, and *Journal of Labor Economics*, 28(3) (July 2010), pp. 473–508.

² W.R. Kerr, "Breakthrough Inventions and Migrating Clusters of Innovation," NBER Working Paper No. 15443, October 2009, and *Journal of Urban Economics*, 67(1) (January 2010), pp. 46–60.

³ These issues are further elaborated upon in W.R. Kerr, "U.S. High-

Skilled Immigration, Innovation, and Entrepreneurship: Empirical Approaches and Evidence," NBER Working Paper No. 19377, August 2013. *Under these conditions, it is not surprising that firms lobby extensively about immigration. We use the high-skilled immigration lens to study lobbying in W.R. Kerr, W.F. Lincoln, and P. Mishra, "The Dynamics of Firm Lobbying," NBER Working Paper No. 17577, November 2011, and forthcoming in the American Economic Journal: Economic Policy.*

⁴ S.P. Kerr, W.R. Kerr, and W.F. Lincoln, "Skilled Immigration and the Employment Structures of U.S. Firms," NBER Working Paper No. 19658, November 2013; S.P. Kerr and W.R. Kerr, "Immigration and Employer Transitions for STEM Workers," *American Economic Review*, 103(3) (May 2013), pp. 193–7.

⁵ W.R. Kerr, "Ethnic Scientific Communities and International Technology Diffusion," *Review of Economics and Statistics*, 90(3) (August 2008), pp. 518–37.

⁶ W.R. Kerr, "Heterogeneous Technology Diffusion and Ricardian Trade Patterns," NBER Working Paper No. 19657, November 2013.

⁷ C.F. Foley and W.R. Kerr, "Ethnic Innovation and U.S. Multinational Firm Activity," NBER Working Paper No. 17336, August 2011, and *Management Science* (2013).

⁸ E. Ghani, W.R. Kerr, and C.T. Stanton, "Diasporas and Outsourcing: Evidence from oDesk and India," NBER Working Paper No. 18474, October 2012, and forthcoming in *Management Science*.

The Chinese Economic Experience, 1978 to Today

Nancy Qian*

One of the most striking phenomena in the past three decades is China's economic liberalization and rapid growth. This has directly affected the lives of its 1.3 billion people, not to mention the millions living within the boundaries of its trading partners. Thus, the Chinese growth experience is of first-order importance for understanding today's economy and can provide useful insights for development in other contexts. My research uses a variety of empirical strategies to study the underlying mechanisms of the Chinese growth phenomenon.

The first theme of my research is demographic change, which is one of the most salient features of the Chinese economy. Several striking facts include the following: 1) total fertility declined rapidly from approximately 2.7 births in the 1970s to 1.9 births per woman by the 1980s, 2) sex ratios at birth increased from approximately 105 males per every 100 females in 1970 to 120 in 2000, and 3) the cohort of prime age adults during the reform era was born or grew up during a famine that killed over 30 million people. I show that these demographic features are outcomes of both government policy and economic change, and have significant consequences for the Chinese economy today.

I first conduct several studies to show that rising sex ratios are related to economic policy and development. When the government increased the relative procurement price of cash crops in 1979 in an effort to diversify agricultural production, and allowed households to make decisions on production in the "Household Responsibility Reform," it raised the relative price of female labor in regions that

produce tea. Women have comparative advantage in producing this crop. I compare the sex ratios of cohorts born before and after the reform, between regions that have geo-climatic conditions for tea production and regions that do not, and find that the increase in the relative price of tea led to an increase in the survival rates of female children. This is consistent with parents valuing productive children or with an increase in the bargaining power of mothers if they have less preference for sons than fathers have. The results also imply that rising sex ratios are in part attributable to changes in the gender wage gap, which has been rising steadily since China moved away from a command economy that did not differentiate wages of men and women to a market economy where wages are more closely tied to the marginal product of labor.¹

I also study variation in the enforcement of family planning policies in rural China and estimate that the policy-driven reduction in fertility increased the fraction of girls in the population by as much as 10 percentage points in some regions.² Another important contribution to rising sex ratios is the introduction of sex-selective abortion, which began in the 1980s in China. Using the legalization of abortion (when prenatal sex-detection was already available) in Taiwan as an exogenous increase in the accessibility of sex-selective abortion, I show that sex-selective abortion significantly increases sex ratios at birth. However, my results also show that banning sex-selective abortion in a context with strong preferences for sons can have the serious adverse consequence of lowering the survival rates of girls who are born.³ Together, these studies show that economic and family planning policies, as well as advances in medical technology, have contributed significantly to the rise in sex ratios in China.

Second, I study the effects of family planning restrictions on urban fertility

and use it as a source of exogenous variation for studying the contribution of fertility to China's very high household saving rates, which reached between 35 and 40 percent in 2008. I show that the introduction of policies to restrict fertility that began in the early 1970s reduced the average number of children from around two to around one child per household. Households restricted to one child save much more than those with more children. The policy-induced fertility changes can explain one-third of the increase in urban household saving rates. The reduction in fertility increases savings mostly for households without sons. The results are consistent with the reliance of parents on children, and particularly on sons, for old age support.

Moving beyond this evidence, I explore how a change in aggregate fertility will affect household savings, recognizing that rising fertility will reduce the capital-labor ratio and therefore increase interest rates. I find that these general equilibrium forces can offset up to two-thirds of the partial equilibrium negative relationship between fertility and savings. Thus, abandoning the One Child Policy will likely lead to moderate declines in urban household saving rates.⁴

Institutional change is the second theme of my research on China. In particular, I have studied the role of formal and informal institutions in affecting economic performance in rural China. Drawing on my interest in demographic shocks, I first study the causes and long-term consequences of the Great Famine in China, which killed at least 30 million individuals in 1959–61. I show that aggregate production during the famine was very high and unlike famines in market economies, the Great Famine was more severe in regions that produced more food per capita. Neither the pursuit of Great Leap Forward policies nor political radicalism, which have been the

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focus of much of the existing literature on famine, can explain these patterns. I use historical evidence to show that the famine was an outcome of a moderate fall in production of between 13 and 18 percent (relative to 1958) across regions, and the centrally planned procurement policy that garnered from each region a fixed amount which was set based on past harvests. I use archival sources to document that the inflexible policy was implemented to resolve the problem of peasants and local bureaucrats, neither being residual claimants of production, being incentivized to misreport true production. This procurement policy could not respond to shocks in a timely manner, and its operation explains 40 to 45 percent of the mortality during the famine. These findings illustrate the vulnerability to shocks of a system that does not allow laborers to be residual claimants to production.⁵ I also find that in addition to resulting in millions of deaths, the famine had long-run adverse effects on millions of survivors. In particular, exposure to the famine in utero or during early childhood caused stunting and reduced educational attainment, and reduced labor supply 30 years afterward.⁶ These results suggest that providing for famine survivors could constitute a significant portion of public expenditures for the recently created rural social security system.

In the Village Democracy Project, I collect the *Village Democracy Survey* (VDS, 2008)⁷ to document the history of rural political and economic reform and economic performance of the post-Mao era. This unique survey relies on historical administrative records kept by village governments and is nearly nationally representative; it includes over 200 villages in 29 provinces. It is the first attempt to systematically document the political economy of rural China.

A key focus of the VDS is to understand the timing and the detailed implementation of elections for the village committee, which governs village life alongside the Communist party branch. These elections were introduced by the central government to address the difficulty of monitoring local government

performance, which had become particularly pronounced after the economic decentralization of the early reform era led to greater heterogeneity in economic and social conditions across regions. In particular, the central government was concerned about the low provision of local public goods, and rising corruption and income inequality. The timing of the introduction of elections was staggered across counties, but now has been fully rolled out.

I find that the introduction of village committee elections shifted the accountability of the local government to the upper government exclusively (that is, the Communist Party) to both the upper government and citizens.⁸ The introduction of elections increased public good provision, reduced corruption, and reduced income inequality within villages. The increase in spending on public goods was entirely driven by an increase in the amount of taxes paid by villagers. Thus, the results suggest that increased accountability increases the government's capacity to finance public goods because it increases the willingness of voters to pay taxes.⁹ This finding goes against the conventional wisdom that democratically elected leaders are typically less able to finance public goods investment because of the short-term consumption demands of their constituents. From the perspective of the central government, local elections had mixed effects. While they probably increased citizen satisfaction with the regime, they also reduced local government enforcement of unpopular central policies such as family planning policies or permanent land expropriation of village land for uses such as highway construction and city expansion.¹⁰

I also investigate the importance of informal institutions and social capital in the provision of public goods. Robert Putnam and other political scientists have long argued that high social capital is a key determinant of successful democracies because social capital facilitates collective action. In the context of rural elections, the interaction effect of social capital and elections is not obvious ex ante. On the one hand, social capital

can complement the introduction of elections in increasing public good provision because high social capital reduces free riding, and because citizen monitoring of the elected politician is itself a public good. On the other hand, since both elections and social capital serve to aggregate the preferences of citizens, they can be complementary institutions. I measure a village's social capital in rural China with a proxy variable: the presence in the village of temples that are open to all villagers (as opposed to family- or religion-specific groups). I collected a second wave of the VDS in 2011 to document the presence, history, management, and financing of these temples. The data show that they are mainly citizen-managed and citizen-financed, and that their presence changes slowly over time. I find that elections lead to larger increases in public good spending in villages with temples than in villages without temples after controlling for a large number of correlates such as religiosity and population distribution.¹¹ Finally, I also examine how the effects of the introduction of elections vary with religious fragmentation across villages. I find that elections improve public goods more in less fragmented villages. To the extent that fragmentation reduces social capital, this is again consistent with the notion that social capital facilitates establishment of democratic institutions.¹²

In urban China, I explore the effect of institutional changes in the state sector on the wage structure. During the 1980s and 1990s, the state untied access to urban housing from working for the state sector. Using old newspapers from library archives, I determine the time of the reform in different Chinese cities and then use this information to show that the reform dramatically increased the labor supply in the private sector as workers who formerly had to work for the state in order to have any housing now moved into the private sector. Then, using this as an exogenous shock on the private labor supply, I estimate the labor demand elasticity for the private sector. I find that the increase in labor supply caused moderate reductions in wages that lasted for several years. The persistence of the wage decline

suggests that it takes time for other factors of production that complement labor to flow into the private sector. This suggests that large sudden shifts of labor into the private sector, for example as a result of downsizing of state-owned enterprises, could cause significant wage losses for private sector workers in the short and medium run.¹³

Finally, I study the importance of institutions that restrict factor mobility on growth through a quasi-experimental study about the effects of access to transportation infrastructure on GDP and growth during the reform era. To address the endogeneity of a region's proximity to transportation infrastructure, I exploit the fact that major modern infrastructure is found along railroads that were originally built by foreign powers for the purpose of quickly deploying foreign troops from ports to historically important cities. The fact that ports were places that were not otherwise important to China historically means that distance in a straight line between the ports and historical cities is unlikely to be correlated with the growth potential of regions along the line. I find that access to transportation infrastructure provides little added benefit for growth during economic liberalization. I argue that this is likely because of the immobility of the factors of production in China, caused by policies such as the *hukou* system which severely restricts labor migration. These results suggest that it is difficult to take advantage of the benefits of infrastructure if other restrictions

of factor mobility are in place.¹⁴

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² N. Qian, "Quantity-Quality and the One Child Policy: The Only-Child Disadvantage in School Enrollment in Rural China," NBER Working Paper No. 14973, May 2009.

³ M.-J. Lin, N. Qian, and J.-T. Liu, "More Women Missing, Fewer Girls Dying: The Impact of Abortion on Sex Ratios at Birth and Excess Female Mortality in Taiwan," NBER Working Paper No. 14541, December 2008. *Forthcoming in the Journal of the European Economic Association.*

⁴ A. Banerjee, X. Meng, T. Porzio, and N. Qian, "Fertility and Household Savings: Evidence from a General Equilibrium Model and Micro Data from Urban China," Yale University Working Paper, 2013.

⁵ X. Meng, N. Qian, and P. Yared, "The Institutional Causes of China's Great Famine, 1959–61," NBER Working Paper No. 16361, September 2010.

⁶ X. Meng and N. Qian, "The Long Term Consequences of Famine on Survivors: Evidence from a Unique Natural Experiment Using China's Great Famine," NBER Working Paper No. 14917, April 2009.

⁷ *The Village Democracy Survey* is collected by Nancy Qian, Gerard Padró i Miquel, and Yang Yao, http://www.econ.yale.edu/~nq3/NANCYS_Yale_Website/styled-4/styled-5/index.html.

⁸ M. Martinez-Bravo, G. Padró i Miquel, N. Qian, and Y. Yao, "Do Local Elections in Non-Democracies Increase Accountability? Evidence from Rural China," NBER Working Paper No. 16948, April 2011.

⁹ M. Martinez-Bravo, G. Padró i Miquel, N. Qian, and Y. Yao, "The Effects of Democratization on Public Goods and Redistribution: Evidence from China," NBER Working Paper No. 18101, May 2012.

¹⁰ M. Martinez-Bravo et al., 2011, *op. cit.*

¹¹ G. Padró i Miquel, N. Qian, Y. Xu, and Y. Yao, "Making Democracy Work: The Effect of Social Capital on Elections and Public Goods in China," Mimeo, Yale University.

¹² G. Padró i Miquel, N. Qian, and Y. Yao, "Social Fragmentation, Public Goods and Elections: Evidence from China," NBER Working Paper No. 18633, December 2012.

¹³ L. Iyer, X. Meng, N. Qian, and X. Zhao, "The General Equilibrium Effect of China's Urban Housing Reforms on the Wage Structure," Mimeo, Yale University.

¹⁴ A. Banerjee, E. Duflo, and N. Qian, "On the Road: Access to Transportation Infrastructure and Economic Growth in China," NBER Working Paper No. 17897, March 2012.

NBER Profile: *John Cawley*



John Cawley is a Research Associate in the NBER's Programs on Health Economics and Health Care, and a Professor in the Departments of Policy Analysis and Management, and Economics, at Cornell University. He co-directs Cornell's Institute on Health Economics, Health Behaviors and Disparities.

Cawley's research concerns the economics of risky health behaviors, with a focus on the economic causes and consequences of obesity and economic approaches to obesity prevention and treatment. He serves on the editorial board of *Health Economics*, is the former co-editor-in-chief of *Economics & Human Biology*,

and edited the *Oxford Handbook of the Social Science of Obesity*.

Cawley received his A.B. in Economics from Harvard College in 1993 and his Ph.D. in Economics from the University of Chicago in 1999. Before joining Cornell, he spent two years as a Robert Wood Johnson Foundation Scholar in Health Policy Research at the University of Michigan.

Cawley lives in Ithaca, New York with his wife (and colleague) Rachel Dunifon and their two sons. In his spare time, he enjoys watching hour-long TV dramas with his wife and trying not to cheer too loudly at his sons' soccer games.

NBER Profile: *Robert Clark*

Robert Clark is a Research Associate in the NBER's Aging Program and the Zelnak Professor of Economics in the Poole College of Management, North Carolina State University. Clark's research interests include labor market effects of state and local retirement plans, financial literacy and retirement decisions, the importance of employer pensions in the private sector, the role of supplemental retirement plans in retirement saving, and the economic responses to pop-

ulation aging in Japan. Clark received his B.A. from Millsaps College and an M.A. and Ph.D. in economics from Duke University.

Clark lives in Cary, North Carolina with his wife Mary Kathryn; however they spend their summers at their home at the base of the Grand Tetons in Jackson, Wyoming. He enjoys long hikes through the canyons and observing the moose, elk, bears, deer, and fox he encounters on the trails or as they visit his yard.



NBER Profile: *William Kerr*



William Kerr is a Faculty Research Fellow in the NBER's Program on Productivity, Innovation, and Entrepreneurship. He is an Associate Professor at Harvard Business School.

Kerr's research focuses on entrepreneurship and innovation. One research strand examines the role of immigrant scientists and entrepreneurs in U.S. technology development and commercialization, as well as the subsequent diffusion of new innovations to the immigrants' home countries. A second research strand considers agglomeration and entrepreneurship, with special interest in how government policies aid or hinder the entry of new firms, cluster formation, and growth. A final interest area is entrepreneur-

ial finance and angel investments.

Kerr is the co-editor of the *Journal of Economic Geography* and a Research Fellow of the Bank of Finland. He received his Ph.D. in Economics from MIT and his B.S. in Systems Engineering from the University of Virginia. Kerr has worked with firms and governments worldwide on projects related to innovation and entrepreneurship, especially around telecommunication market deregulation.

Kerr and his family live in Lincoln, Massachusetts. They enjoy outdoor sports and trail running, are active members of their local church, and maintain close ties with his wife's home country of Finland. Kerr grew up in Alabama and remains a passionate college football fan.

NBER Profile: *Nancy Qian*

Nancy Qian is a Faculty Research Fellow in the NBER's Programs on Children and Development Economics, and an Associate Professor of Economics at Yale University, where she teaches development economics. She is a native of Shanghai, China and holds a Ph.D. in Economics from MIT. Before coming to Yale, Nancy taught at Brown University and was a post-doctoral fellow at Harvard University, in the Harvard Academy Scholars program. She is an Alfred P. Sloan Research Fellow and has been honored with the Kiel Institute's Global Excellence Award. She is an Associate Editor of the *Journal of Development Economics* and has consulted for development agencies such as The World Bank and the Global Development

Network.

Nancy's research focuses on three core issues in development economics: the role of demography, the impact of economic growth, and the influence of institutions. She has studied topics that include the economic determinants of "missing women," the effects of family size on school enrollment, the effect of agricultural productivity shocks on population and urbanization in the historical context of the Columbian Exchange, the relationship between fertility and saving rates in China, and the institutional causes of famine in China and the U.S.S.R.

Nancy is married, enjoys cooking, people-watching, reading, art, photography, tennis, surfing very small waves, and watching movie and sitcom marathons.



Conferences

Tax Policy and the Economy

NBER Research Associate Jeffrey Brown of University of Illinois, Urbana-Champaign organized an NBER conference on “Tax Policy and the Economy” which took place in Washington on October 3, 2013. These papers were discussed:

- **Douglas Shackelford**, University of North Carolina, Chapel Hill and NBER, and **Kevin Markle**, Dartmouth College, “The Impact of Headquarter and Subsidiary Locations on Multinationals’ Effective Tax Rates”
- **Annette Alstadsæter**, University of Oslo; **Wojciech Kopczuk**, Columbia University and NBER; and **Kjetil Telle**, Statistics Norway, “Are Closely-Held Firms Tax Shelters?”
- **Christopher Knittel**, MIT and NBER, “The Political Economy of Gasoline Taxes: Lessons from the Oil Embargo”
- **David Albouy**, University of Illinois, Urbana-Champaign and NBER, and **Andrew Hanson**, Marquette University, “Tax Benefits to Housing and Inefficiencies in Location and Consumption”
- **Joshua Rauh** and **Jules van Binsbergen**, Stanford University and NBER; and **Robert Novy-Marx**, University of Rochester and NBER, “Financial Valuation of PBGC Insurance with Market-Implied Default Probabilities”

Summaries of these papers may be found at: <http://www.nber.org/confer/2013/TPE13/summary.html>

The Health Transition: A Conference in Memory of Robert Fogel

An NBER Conference “The Health Transition: A Conference in Memory of Robert Fogel,” organized by NBER Research Associate Dora Costa of the University of California, Los Angeles, took place in Chicago on October 4, 2013. These papers were discussed:

- **Hoyt Bleakley**, University of Chicago and NBER; **Dora Costa**; and **Adriana Lleras-Muney**, University of California-Los Angeles and NBER, “Health, Education and Income in the United States, 1820–2000” (NBER Working Paper No. 19162)
- **Bernard Harris**, University of Strathclyde, “Food for Thought: Comparing Estimates of Food Availability in the UK, 1700–1914”
- **Tommy Bengtsson**, Lund University, “The Mortality Transition in Sweden: Diet or Disease?”
- **James Heckman**, University of Chicago and NBER; **John Eric Humphries**, University of Chicago; and **Gregory Veramendi**, Arizona State University, “The Effects of Educational Choices on Labor Market and Health Outcomes”
- **Jay Olshansky**, University of Illinois, Chicago, “The Future Course of Longevity and Health in the U.S.”

Summaries of these papers are available at: <http://www.nber.org/confer/2013/CS13/summary.html>

Hospital Organization and Productivity

The NBER held a conference on “Hospital Organization and Productivity” on October 4 and 5, 2013. The organizers were NBER Research Associates Amitabh Chandra and David Cutler of Harvard University, Research Associate Robert Huckman of Harvard Business School, and Elizabeth Martinez of the Massachusetts General Hospital. The following papers were discussed:

- **Julia Adler-Milstein**, University of Michigan; **Kirstin Woody Scott**, Harvard University; and **Ashish Jha**, Harvard School of Public Health, “Leveraging Electronic Health Records to Improve Hospital Performance: The Role of Management”
- **Elizabeth Munnich**, University of Louisville, and **Stephen Parente**, University of Minnesota, “Costs and Benefits of Competing Health Care Providers: Trade-Offs in the Outpatient Surgery Market”
- **Caroline Carlin**, Medica Research Institute; and **Roger Feldman** and **Bryan Dowd**, University of Minnesota, “The Impact of Provider Consolidation on Price: Horizontal Integration and Tied Purchasing”
- **David Cook**, **Jeffrey Thompson**, **Elizabeth Habermann**, **Sue Visscher**, **William Bertschinger**, **Joseph Dearani**, **Veronique Roger**, and **Bijan Borah**, Mayo Clinic College of Medicine, “Disruption of the Solution Shop as a Hospital Organizational Structure: Outcomes, Cost, and Cultural Change: A Mayo Clinic Case Study”
- **Laurence Baker**, **Kate Bundorf**, and **Daniel Kessler**, Stanford University and NBER, “The Effects of Vertical Integration on Hospital Prices, Spending, and Volume”
- **Kate Ho**, Columbia University and NBER, and **Ariel Pakes**, Harvard University and NBER, “Hospital Choices, Hospital Prices and Financial Incentives to Physicians” (NBER Working Paper No. 19333)
- **David Meltzer**, University of Chicago and NBER, and **Greg Ruhnke**, University of Chicago, “Reducing Hospital Costs by Reorganizing Physician Staffing: Design and Implementation of a CMMI Innovation Challenge Award to Study Comprehensive Care Physicians”
- **Nicholas Bloom**, Stanford University and NBER; **Raffaella Sadun**, Harvard University and NBER; and **John Van Reenen**, London School of Economics and NBER, “Does Management Matter in Healthcare?”

Summaries of these papers are available at: <http://www.nber.org/confer/2013/HOPf13/summary.html>

Lessons from the Financial Crisis for Monetary Policy

NBER Research Associate Mark Gertler of New York University organized a conference on “Lessons from the Financial Crisis for Monetary Policy” which took place in Boston on October 18 and 19, 2013. The following papers were discussed:

- **Aloísio Araújo** and **Susan Schommer**, Instituto Nacional de Matemática Pura e Aplicada; and **Michael Woodford**, Columbia University and NBER, “Conventional and Unconventional Monetary Policy with Endogenous Collateral Constraints”
- **Mark Gertler**, and **Peter Karadi**, European Central Bank, “Monetary Policy Surprises, Credit Costs, and Economic Activity”
- **Simon Gilchrist**, Boston University and NBER; and **David López-Salido** and **Egon Zakrajšek**, Federal Reserve Board, “Monetary Policy and Real Borrowing Costs at the ZLB”

- **Lars Svensson**, Stockholm University and NBER, “Forward Guidance as a Monetary Policy Tool in Theory and Practice: The Swedish Experience”
- **Lawrence Christiano** and **Martin Eichenbaum**, Northwestern University and NBER; and **Mathias Trabandt**, Federal Reserve Board, “Understanding the Great Recession”
- **Olivier Coibion**, University of Texas, Austin and NBER, and **Yuriy Gorodnichenko**, University of California, Berkeley and NBER, “Is the Phillips Curve Alive and Well After All? Inflation Expectations and the Missing Disinflation”
- **Jordi Galí**, CREI and NBER, and **Luca Gambetti**, Universitat Autònoma de Barcelona, “The Effects of Monetary Policy on Asset Price Bubbles: Some Evidence”
- **Markus Brunnermeier**, Princeton University and NBER, and **Yuliy Sannikov**, Princeton University, “Capital Controls: Growth versus Stability”

Summaries of these papers may be found at: <http://www.nber.org/confer/2013/FCMPf13/summary.html>

Measuring and Modeling Health Care Costs

The NBER hosted a Conference on Research in Income and Wealth (CRIW) meeting in Washington on “Measuring and Modeling Health Care Costs” on October 18 and 19, 2013. The organizers were Ana Aizcorbe of the Bureau of Economic Analysis, Colin Baker of the National Institutes of Health, and NBER Research Associates Ernst Berndt of MIT and David Cutler of Harvard University. The following papers were discussed:

- **Hitoshi Shigeoka**, Simon Fraser University, “The Effect of Patient Cost Sharing on Utilization, Health, and Risk Protection”
- **Colin Baker**; and **Ralph Bradley**, Bureau of Labor Statistics, “The Simultaneous Effects of Obesity, Insurance Choice, and Medical Visit Choice on Healthcare Costs”
- **Frank Lichtenberg**, Columbia University and NBER, “The Impact of Biomedical Knowledge Accumulation on Mortality: A Bibliometric Analysis of Cancer Data”
- **Brian Chansky**, **Corby Garner**, and **Ronjoy Raichoudhary**, Bureau of Labor Statistics, “Measuring Output and Productivity in Private Hospitals”
- **Jacob Glazer**, Boston University; **Thomas McGuire**, Harvard University and NBER; and **Julie Shi**, Harvard University, “Risk Adjustment of Health Plan Payments to Correct Inefficient Plan Choice from Adverse Selection”
- **Paul Schreyer**, OECD, and **Matilde Mas**, Instituto Valenciano de Investigaciones Económicas (IVIE) and University of Valencia, “Measuring Health Services in the National Accounts: An International Perspective”
- **Pinar Karaca-Mandic**, University of Minnesota and NBER; **Jean Abraham** and **Roger Feldman**, University of Minnesota; and **Kosali Simon**, Indiana University and NBER, “Going into the Affordable Care Act: Measuring the Size, Structure and Performance of the Individual and Small Group Markets for Health Insurance”
- **Armando Franco**, University of California, Berkeley; **Dana Goldman**, University of Southern California and NBER; **Adam Leive**, University of Pennsylvania; and **Daniel McFadden**, University of California, Berkeley and NBER, “A Cautionary Tale in Comparative Effectiveness Research: Pitfalls and Perils of Observational Data Analysis”

- **Murray Aitken** and **Michael Kleinrock**, IMS Institute for Healthcare Informatics; **Ernst Berndt**; **Barry Bosworth**, Brookings Institution; **Iain Cockburn**, Boston University and NBER; **Richard Frank**, Harvard University and NBER; and **Bradley Shapiro**, MIT, “The Regulation of Prescription Drug Competition and Market Responses: Patterns in Prices and Sales Following Loss of Exclusivity” (NBER Working Paper No. 19487)
- **Didem Bernard** and **Thomas Selden**, Agency for Healthcare Research and Quality; and **Yuriy Pylypchuk**, Georgetown Public Policy Institute, “The Distribution of Public Spending for Health Care in the United States in 2010”
- **Rena Conti**, University of Chicago, and **Ernst Berndt**, “Firm Entry, Exit and Price Competition in the Market for Multisource Specialty Drugs, 2006–2012”
- **Chris Stomberg**, Bates White Economic Consulting, “Drug Shortages, Pricing, and Reimbursement”
- **Anne Hall** and **Tina Highfill**, Bureau of Economic Analysis, “Calculating Disease-Based Medical Care Expenditure Indexes for Medicare Beneficiaries: A Comparison of Method and Data Choices”
- **David Cutler**, “A Health Account for the Elderly”
- **Abe Dunn** and **Eli Liebman**, Bureau of Economic Analysis; and **Adam Shapiro**, Federal Reserve Bank of San Francisco, “Defining Disease Episodes and the Effects on the Components of Expenditure Growth”
- **Laurence Baker** and **Kate Bundorf**, Stanford University and NBER; and **Anne Royalty**, Indiana University, “Measuring Physician Practice Competition Using Medicare Data”

Summaries of these papers may be found at: <http://www.nber.org/confer/2013/CRIWf13/summary.html>

Sovereign Debt and Financial Crisis

The NBER held a conference on “Sovereign Debt and Financial Crisis” in Cambridge on October 18 and 19, 2013. The organizers were NBER Research Associates Sebnem Kalemli-Ozcan of the University of Maryland, and Carmen Reinhart and Kenneth Rogoff of Harvard University. The following papers were discussed:

- **Òscar Jordà**, Federal Reserve Bank of San Francisco; **Moritz Schularick**, University of Bonn; and **Alan Taylor**, University of California, Davis and NBER, “Sovereigns versus Banks: Credit, Crises, and Consequences” (NBER Working Paper No. 19506)
- **Jack Favilukis**, London School of Economics; and **Sydney Ludvigson** and **Stijn Van Nieuwerburgh**, New York University and NBER, “Foreign Ownership of U.S. Safe Assets: Good or Bad?”
- **Galina Hale**, Federal Reserve Bank of San Francisco, and **Maurice Obstfeld**, University of California, Berkeley and NBER, “The Euro and the Geography of International Debt Flows”
- **Fabrizio Balassone**, **Maura Francese**, and **Angelo Pace**, Bank of Italy, “Economic Performance in a High Debt Country: The Case of Italy”
- **Graciela Kaminsky**, George Washington University and NBER, and **Pablo Vega-García**, George Washington University, “Varieties of Sovereign Crises: Latin America, 1820–1931”
- **Mark Aguiar**, Princeton University and NBER; **Manuel Amador**, University of Minnesota and NBER; and **Emmanuel Farhi** and **Gita Gopinath**, Harvard University and NBER, “Coordination and Crisis in Monetary Unions”

- **Pablo D’Erasmus**, Federal Reserve Bank of Philadelphia and University of Maryland, and **Enrique Mendoza**, University of Pennsylvania and NBER, “Distributional Incentives in an Equilibrium Model of Domestic Sovereign Default” (NBER Working Paper No. 19477)
- **Yusuf Soner Baskaya**, Central Bank of Turkey, and **Sebnem Kalemli-Ozcan**, “Are Government Bonds Bad for Banks? Evidence from a Rare Fiscal Shock”
- **Carmen Reinhart**; **Vincent Reinhart**, American Enterprise Institute; and **Kenneth Rogoff**, “Debt Hangovers”
- **Cristina Arellano**, Federal Reserve Bank of Minneapolis; **Xavier Mateos-Planas**, Queen Mary University of London; and **José-Víctor Ríos-Rull**, University of Minnesota and NBER, “Partial Default”

Summaries of these papers are available at: <http://www.nber.org/confer/2013/SDf13/summary.html>

High Skill Immigration in the Global Economy

An NBER Conference on “High Skill Immigration in the Global Economy” organized by NBER Faculty Research Fellow William Kerr of Harvard University and Research Associate Sarah Turner of the University of Virginia was held in Cambridge on October 25, 2013. The following papers were discussed:

- **Petra Moser**, Stanford University and NBER; **Alessandra Voena**, University of Chicago and NBER; and **Fabian Waldinger**, University of Warwick, “German-Jewish Émigrés and U.S. Invention”
- **William Kerr**, “Heterogeneous Technology Diffusion and Ricardian Trade Patterns”
- **Ajay Agrawal**, University of Toronto and NBER; **John McHale**, National University of Ireland; and **Alexander Oettl**, Georgia Institute of Technology, “Does a Decline in Star Immigration Help or Harm U.S. Science?”
- **Shulamit Kahn**, Boston University, and **Megan MacGarvie**, Boston University and NBER, “Do Return Requirements Increase International Knowledge Diffusion?”
- **Sarah Turner**, “College in the States: Foreign Student Demand and Higher Education Supply in the U.S.”
- **Alberto Alesina**, Harvard University and NBER; **Johann Harnoss**, University of Lille; and **Hillel Rapoport**, Bar Ilan University, “Birthplace Diversity and Economic Prosperity” (NBER Working Paper No. 18699)

Summaries of these papers are available at: <http://www.nber.org/confer/2013/HSIf13/summary.html>

Economics of Commodity Markets

An NBER conference on the “Economics of Commodity Markets” organized by NBER Research Associates Kenneth Singleton of Stanford University and Wei Xiong of Princeton University was held in Cambridge on October 25 and 26, 2013. The following papers were discussed:

- **Suman Banerjee**, Nanyang Business School, and **Ravi Jagannathan**, Northwestern University and NBER, “Destabilizing Commodity Market Speculation”
- **John Birge** and **Ignacia Mercadal**, University of Chicago; **Ali Hortaçsu**, University of Chicago and NBER; and **Michael Pavlin**, Wilfrid Laurier University, “The Role of Financial Players in Electricity Markets: An Empirical Analysis of MISO”
- **Eugenio Bobenrieth**, Pontificia Universidad Católica de Chile; **Juan Bobenrieth**, Universidad del Bío-Bío; and **Brian Wright**, University of California, Berkeley, “Bubble Troubles? Rational Storage, Mean Reversion and Runs in Commodity Prices”
- **Alexander David**, University of Calgary, “Exploration Activity, Long Run Decisions, and Roll Returns in Energy Futures”
- **Wenjin Kang** and **Ke Tang**, Renmin University of China; and **Geert Rouwenhorst**, Yale University, “The Role of Hedgers and Speculators in Liquidity Provision to Commodity Futures Markets”
- **Yu-chin Chen**, University of Washington, and **Dongwon Lee**, University of California, Riverside, “What Makes a Commodity Currency?”
- **Domenico Ferraro** and **Pietro Peretto**, Duke University, “Commodity Prices, Long-Run Growth and Fiscal Vulnerability”
- **Martijn Boons** and **Frans de Roon**, Tilburg University; and **Marta Szymanowska**, RSM Erasmus University, “The Stock Market Price of Commodity Risk”
- **Gurdip Bakshi**, **Xiaohui Gao**, and **Alberto Rossi**, University of Maryland, “A Better Specified Asset Pricing Model to Explain the Cross-section and Time-series of Commodity Returns”
- **Anh Le**, University of North Carolina, Chapel Hill, and **Haoxiang Zhu**, MIT Sloan School of Management, “Risk Premia in Gold Lease Rates”
- **Robert Ready**, University of Rochester; **Nikolai Roussanov**, University of Pennsylvania and NBER; and **Colin Ward**, University of Pennsylvania, “Commodity Trade and the Carry Trade: A Tale of Two Countries” (NBER Working Paper No. 19371)

Summaries of these papers are available at <http://www.nber.org/confer/2013/CWf13/summary.html>

Personal Retirement Challenges

An NBER Conference on “Personal Retirement Challenges” took place in Cambridge on November 1, 2013. The organizers were Zvi Bodie of Boston University and Research Associates Andrew Lo and Robert Merton, both of MIT. These papers were discussed:

- **John Beshears, David Laibson, and Brigitte Madrian**, Harvard University and NBER; **James Choi**, Yale University and NBER; and **Stephen Zeldes**, Columbia University and NBER, “What Makes Annuitization More Appealing?” (NBER Working Paper No. 18575)
- **Lans Bovenberg**, Tilburg University, and **Roel Mehlkopf**, Ministry of Social Affairs, The Netherlands, “Variable Annuities in Pension Schemes with Risk Sharing: Valuation, Investment and Communication”
- **Veronika Pool** and **Irina Stefanescu**, Indiana University; and **Clemens Sialm**, University of Texas, Austin and NBER, “It Pays to Set the Menu: Mutual Fund Investment Options in 401(k) Plans” (NBER Working Paper No. 18764)
- **Ralph Koijen**, London Business School and NBER; **Stijn Van Nieuwerburgh**, New York University and NBER; and **Motohiro Yogo**, Federal Reserve Bank of Minneapolis, “Health and Mortality Delta: Assessing the Welfare Cost of Household Insurance Choice” (NBER Working Paper No. 17325)
- **Rik Dillingh** and **Henriëtte Prast**, University of Tilburg; **Mariacristina Rossi**, University of Turin; and **Maria Cesira Urzi Brancati**, University of Modena and Reggio Emilia, “The Psychology and Economics of Reverse Mortgage Attitudes: Evidence from the Netherlands”
- **Robert Novy-Marx**, University of Rochester and NBER, and **Joshua Rauh**, Stanford University and NBER, “Funding Soft Liabilities”

Summaries of these papers are available at: <http://www.nber.org/confer/2013/PRCf13/summary.html>

Changing Financing Market for Innovation and Entrepreneurship

The NBER held a conference on the “Changing Financing Market for Innovation and Entrepreneurship” in Half Moon Bay, California, on November 8 and 9, 2013. The organizers were NBER Research Associates Antoinette Schoar of MIT, Malcolm Baker and Josh Lerner of Harvard Business School, and Faculty Research Fellow David Sraer of Princeton University. The following papers were discussed:

- **Ajay Agrawal**, University of Toronto and NBER; **Christian Catalini**, MIT; and **Avi Goldfarb**, University of Toronto, “Crowdfunding’s Role in the Rate and Direction of Innovative Activity”
- **Thomas Hellmann**, University of British Columbia and NBER; and **Paul Schure** and **Dan Vo**, University of Victoria, “Angels and Venture Capitalists: Complements or Substitutes?”
- **Michael Ewens**, Carnegie Mellon University; **Ramana Nanda**, Harvard University; and **Matthew Rhodes-Kropf**, Harvard University and NBER, “Entrepreneurship and the Cost of Experimentation”
- **Thomas Chemmanur**, Boston College; **Tyler Hull**, Norwegian School of Economics; and **Karthik Krishnan**, Northeastern University, “Do Local and International Venture Capitalists Play Well Together? Venture Capital Investments and the Development of Venture Capital Markets”

- **Marco Da Rin** and **María Fabiana Penas**, Tilburg University, “Understanding Business Angel Networks”
- **Sen Chai** and **Willy Shih**, Harvard University, “From Bench to Product: Bridging Science and Technology through Academic-Industry Partnerships”
- **Ulf Axelson** and **Milan Martinovic**, London School of Economics, “European Venture Capital: Myths and Facts”

Summaries of these papers are available at: <http://www.nber.org/confer/2013/CFMf13/summary.html>

Enterprising America: Business, Banks, and Credit Markets in Historical Perspective

The NBER held a conference on “Enterprising America: Business, Banks, and Credit Markets in Historical Perspective” in Nashville on December 14, 2013. NBER Research Associates William Collins of Vanderbilt University and Robert Margo of Boston University organized the meeting. The following papers were discussed:

- **Naomi Lamoreaux**, Yale University and NBER, “Revisiting American Exceptionalism: Business Organizational Forms and Corporate Governance in Comparative Perspective”
- **Eric Hilt**, Wellesley College and NBER, “Corporate Governance and the Development of Manufacturing Enterprises in Nineteenth-century Massachusetts”
- **Robert Margo**, “Economies of Scale in Nineteenth Century American Manufacturing Revisited: A Resolution of the Entrepreneurial Labor Input Problem” (NBER Working Paper No. 19147)
- **Alan Olmstead**, University of California, Davis, and **Paul Rhode**, University of Michigan and NBER, “Were Antebellum Cotton Plantations Factories in the Field?”
- **Howard Bodenhorn**, Clemson University and NBER, and **Eugene White**, Rutgers University and NBER, “The Evolution of Bank Boards of Directors in New York, 1840–1950”
- **Jeremy Atack**, Vanderbilt University and NBER; **Peter Rousseau**, Vanderbilt University; and **Matthew Jaremski**, Colgate University and NBER, “Did Railroads Make Antebellum U.S. Banks More Sound? Linking Rail Locations with Bank Balance Sheets and Survival Rates”
- **Mary Hansen**, American University, “Differences in Sources of Credit by Sector: An Exploration of Bankruptcy Records from Mississippi, 1929–36”

Summaries of these papers may be found at: <http://www.nber.org/confer/2013/EAf13/summary.html>

NBER Researchers Win Nobel Prize in Economics

NBER Research Associates Lars Peter Hansen and Robert Shiller shared the 2013 Nobel Prize in Economics with Eugene Fama. Hansen is the David Rockefeller Distinguished Service Professor of Economics at the University of Chicago. He is a research associate in the NBER's Asset Pricing (AP) and Economic Fluctuations and Growth (EFG) programs. Shiller is the Sterling Professor of Economics at Yale University, a Research Associate in the NBER's AP, EFG, and Monetary Economics programs, and the co-director of the NBER's Behavioral Economics working group. Fama is the Robert McCormick Distinguished Service Professor of Finance at the University of Chicago Booth School of Business.

The award citation prepared by the

Prize Committee of the Royal Swedish Academy of Sciences highlighted the researchers' work on "the empirical analysis of asset prices." The background material that describes the prize citation, which may be found at http://www.nobelprize.org/nobel_prizes/economic-sciences/laureates/2013/popular-economicsciences2013.pdf, notes the critical role that asset prices play in influencing a wide range of economic behaviors, and then explains that "[a]lthough we do not yet fully understand how asset prices are determined, the research of the Laureates has revealed a number of important empirical regularities that are helping us to arrive at better explanations."

Hansen and Shiller join a long list of current and past NBER affiliates who

have received the Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel, which is often called the Nobel Prize in Economics. Past NBER-affiliated winners include: Alvin Roth, 2012; Thomas Sargent and Christopher Sims, 2011; Peter Diamond and Dale Mortensen, 2010; Paul Krugman, 2008; Edward Prescott and Finn Kydland, 2004; Robert Engle, 2003; George Akerlof and Joseph Stiglitz, 2001; James Heckman and Daniel McFadden, 2000; Robert Merton and Myron Scholes, 1997; Robert Lucas, Jr., 1995; Gary Becker, 1992; the late Robert Fogel, 1993; George Stigler, 1982; Theodore Schultz, 1979; Milton Friedman, 1976; and Simon Kuznets, 1971.

New Director Elected to NBER Board

At its September 2013 meeting, the NBER Board of Directors elected Richard L. Schmalensee as a new member, representing the Massachusetts Institute of Technology (MIT). Schmalensee, who received his S.B. and Ph.D. degrees in Economics from MIT, is the Howard W. Johnson Professor of Economics and Management, Emeritus, Professor of Economics, Emeritus, and Director of the MIT Center for Energy and Environmental Policy Research at the MIT Sloan School of Management. He

served as the John C Head III Dean of the MIT Sloan School of Management from 1998 through 2007, and was a member of the President's Council of Economic Advisers from 1989 through 1991. Schmalensee is a Fellow of the Econometric Society and the American Academy of Arts and Sciences, a member of the International Academy of Management and the National Commission on Energy Policy, and prior to his election to the NBER Board, he was a Research Associate in the NBER's

Programs on Industrial Organization and Energy and Environmental Economics. He has served on the executive committee of the American Economic Association, is a director of the International Securities Exchange and the International Data Group, and has served as a consultant to both corporations and government agencies.

The NBER Board of Directors also elected former board member Franklin M. Fisher to the rank of Director Emeritus.

NBER Researchers Entering Public Service in 2013

A number of NBER researchers were tapped for public policy positions in the past year. Several resigned from the NBER on account of their new affiliations. John Friedman, formerly a Faculty Research Fellow in the Public Economics, Health Care, and Aging Programs, resigned to join the National Economic Council, where he serves as a Special Assistant to the President for Economic Policy. He is on leave from the John F. Kennedy School of Government at Harvard University, where he is an Assistant Professor of Public Policy.

Research Associate Betsey Stevenson resigned from the NBER's Programs on Law and Economics and Labor Studies to join the President's Council of Economic Advisers (CEA). She is on leave from the University of Michigan, where she is an Associate Professor of Public Policy and Economics.

James Stock, formerly a Research Associate in the NBER's Programs on Monetary Economics, Economic Fluctuations and Growth, and Asset Pricing, has also been appointed to the CEA. He is on leave from Harvard University, where he is the Harold

Hitchings Burbank Professor of Political Economy.

In addition to the foregoing researchers who have resigned from the NBER, a number of other researchers have taken leave from the NBER to serve in various government positions.

Raghuram Rajan, a past Director of the NBER's Corporate Finance Program and a Research Associate in that program as well as the International Finance and Macroeconomics Program, has been appointed Governor of the Royal Bank of India. He is on leave from the University of Chicago Booth School of Business, where he serves as the Eric J. Gleacher Distinguished Service Professor of Finance.

Several other researchers are serving in Washington. They include: Research Associate Jon Faust of Johns Hopkins University, who is on leave as a special adviser at the Federal Reserve Board of Governors; Research Associate Martin Gaynor of Carnegie Mellon University who is the Director of the Bureau of Economics at the Federal Trade Commission; Research Associate Susan Helper of Case Western Reserve

University, who is the Chief Economist at the U.S. Department of Commerce; Research Associate Jennifer Hunt of Rutgers University, who is serving as the Chief Economist of the U.S. Department of Labor; Faculty Research Fellow Matthew Kotchen of Yale University, who is on leave as Deputy Assistant Secretary of Environment and Energy at the U.S. Department of the Treasury; Research Associate Aviv Nevo of Northwestern University, who is on leave as the Deputy Assistant Attorney General for Economic Analysis at the U.S. Department of Justice Antitrust Division; and Faculty Research Fellow Wesley Yin of Boston University, who is on leave as the Deputy Assistant Secretary of Microeconomic Analysis at the U.S. Department of the Treasury.

Finally, Research Associate Gary Richardson of the University of California, Irvine, is on leave as the Federal Reserve System Historian at the Federal Reserve Bank of Richmond.

A number of other past NBER affiliates also continue to serve in a variety of public policy positions.

Program and Working Group Meetings

Chinese Economy

The NBER's Working Group on the Chinese Economy met in Cambridge on October 4 and 5, 2013. Research Associate Hanming Fang of the University of Pennsylvania and Research Associate and Working Group Director Shang-Jin Wei of Columbia University organized the conference. The following papers were discussed:

- **Emi Nakamura** and **Jón Steinsson**, Columbia University and NBER; and **Miao Liu**, Columbia University, “Are Chinese Growth and Inflation Too Smooth? Evidence from Engel Curves”
- **Chunxin Jia** and **Yaping Wang**, Peking University; and **Wei Xiong**, Princeton University and NBER, “How Local and Foreign Investors React to Public News”
- **Erwin Bulte**, Wageningen University; **Lihe Xu**, Southwestern University of Finance and Economics, China; and **Xiaobo Zhang**, International Food Policy Research Institute, “Does Aid Promote or Hinder Industrial Development? Quake Lessons from China”
- **Ying Fan**, University of Michigan; **Jiandong Ju**, University of Oklahoma; and **Mo Xiao**, University of Arizona, “Losing to Win: Reputation Management of Online Sellers”
- **Kyle Handley**, University of Michigan, and **Nuno Limão**, University of Maryland and NBER, “Policy Uncertainty, Trade, and Welfare: Theory and Evidence for China and the U.S.” (NBER Working Paper No. 19376)
- **Raymond Fisman**, Columbia University and NBER, and **Yongxiang Wang**, University of Southern California, “The Mortality Cost of Political Connections”
- **Lin Ji**, Tsinghua University, and **Shang-Jin Wei**, “Learning from an Apparent Surprise: When Can Stronger Labor Protection Improve Productivity?”
- **Jing Cai**, University of Michigan, and **Changcheng Song**, National University of Singapore, “Do Hypothetical Experiences Affect Real Financial Decisions? Evidence from Insurance Take-Up”
- **Di Guo**, **Kun Jiang**, and **Chenggang Xu**, University of Hong Kong; and **Byung-Yeon Kim**, Seoul National University, “The Political Economy of Private Firms in China”
- **Chang-Tai Hsieh**, University of Chicago and NBER, and **Zheng Michael Song**, University of Chicago, “Grasp the Large, Let Go of the Small: The Transformation of the State Sector in China”

Summaries of these papers may be found at: <http://www.nber.org/confer/2013/CEf13/summary.html>

Behavioral Economics

The Behavioral Economics Working Group held a meeting in San Diego on October 24 and 25, 2013. Joseph Engelberg and Christopher Parsons of the University of California, San Diego organized the meeting. The following papers were discussed:

- **Clifford Asness** and **Andrea Frazzini**, AQR Capital Management; and **Lasse Pedersen**, Copenhagen Business School and NBER, “Quality Minus Junk”
- **Martin Cherkes** and **Charles Jones**, Columbia University; and **Chester Spatt**, Carnegie Mellon University and NBER, “A Solution to the Palm-3Com Spin-off Puzzles”
- **Chi Liao**, University of Toronto, “Risk Taking Begets Risk Taking: Evidence from Casino Openings and Investor Portfolios”
- **Francesco D’Acunto**, University of California, Berkeley, “Identity, Overconfidence and Investment Decisions”
- **Bing Han**, University of Toronto, and **David Hirshleifer**, University of California, Irvine, “Visibility Bias in the Transmission of Consumption Norms and Undersaving”
- **Lauren Cohen** and **Christopher Malloy**, Harvard University and NBER; and **Dong Lou**, London School of Economics, “Playing Favorites: How Firms Prevent the Revelation of Bad News” (NBER Working Paper No. 19429)
- **Mark Kamstra**, York University; **Lisa Kramer**, University of Toronto; **Maurice Levi**, University of British Columbia; and **Russ Wermers**, University of Maryland, College Park, “Seasonal Asset Allocation: Evidence from Mutual Fund Flows”
- **Harrison Hong**, Princeton University and NBER; **Hyun-Soo Choi**, Singapore Management University; **Jeffrey Kubik**, Syracuse University; and **Jeffrey Thompson**, Federal Reserve Board, “When Real Estate is the Only Game in Town”

Summaries of these papers may be found at: <http://www.nber.org/confer/2013/BEf13/summary.html>

Economic Fluctuations and Growth

The NBER’s Program on Economic Fluctuations and Growth met in Chicago on October 25, 2013. NBER Research Associates Martin Eichenbaum of Northwestern University and Erik Hurst of the University of Chicago organized the meeting. The following papers were discussed:

- **Gian Luca Clementi**, New York University and NBER, and **Berardino Palazzo**, Boston University, “Entry, Exit, Firm Dynamics, and Aggregate Fluctuations” (NBER Working Paper No. 19217)
- **Yuriy Gorodnichenko**, University of California, Berkeley and NBER, and **Michael Weber**, University of California, Berkeley, “Are Sticky Prices Costly? Evidence from the Stock Market” (NBER Working Paper No. 18860)
- **Andrew Atkeson** and **Pierre-Olivier Weill**, University of California, Los Angeles and NBER; and **Andrea Eisfeldt**, University of California, Los Angeles, “Measuring the Financial Soundness of U.S. Firms, 1926–2012” (NBER Working Paper No. 19204)

- **Leonid Kogan**, MIT and NBER; **Dimitris Papanikolaou**, Northwestern University and NBER; **Amit Seru**, University of Chicago and NBER; and **Noah Stoffman**, Indiana University, “Technological Innovation, Resource Allocation, and Growth” (NBER Working Paper No. 17769)
- **Jesús Fernández-Villaverde**, University of Pennsylvania and NBER; **Pablo Guerrón-Quintana**, Federal Reserve Bank of Philadelphia; **Keith Kuester**, University of Bonn; and **Juan Rubio-Ramírez**, Duke University, “Fiscal Volatility Shocks and Economic Activity” (NBER Working Paper No. 17317)
- **Emmanuel Farhi**, Harvard University and NBER, and **Iván Werning**, MIT and NBER, “Fiscal Multipliers: Liquidity Traps and Currency Unions” (NBER Working Paper No. 18381)

Summaries of these papers may be found at: <http://www.nber.org/confer/2013/EFGf13/summary.html>

International Finance and Macroeconomics

The NBER’s Program on International Finance and Macroeconomics met in Cambridge on October 25, 2013. Research Associates Charles Engel of the University of Wisconsin and Linda Tesar of the University of Michigan organized the program. The following papers were discussed:

- **Luis Catão** and **Gian Maria Milesi-Ferretti**, International Monetary Fund, “External Liabilities and Crises”
- **Javier Bianchi**, University of Wisconsin and NBER, “Efficient Bailouts?” (NBER Working Paper No. 18587)
- **Philippe Bacchetta**, University of Lausanne, and **Eric van Wincoop**, University of Virginia and NBER, “The Great Recession: A Self-Fulfilling Global Panic” (NBER Working Paper No. 19062)
- **Kristin Forbes**, MIT and NBER; **Marcel Fratzscher**, DIW Berlin and Humboldt University, Berlin; and **Roland Straub**, European Central Bank, “Capital Controls and Macroprudential Measures: What Are They Good For?”
- **Varadarajan Chari**, University of Minnesota and NBER; **Alessandro Dovis**, Pennsylvania State University; and **Patrick Kehoe**, Federal Reserve Bank of Minneapolis and NBER, “Rethinking Optimal Currency Areas”
- **Nicolas Coeurdacier**, Sciences Po and CEPR; **Hélène Rey**, London Business School and NBER; and **Pablo Winant**, Paris School of Economics, “Financial Integration and Growth in a Risky World”

Summaries of these papers are available at: <http://www.nber.org/confer/2013/IFMf13/summary.html>

Market Design

The NBER’s Working Group on Market Design, directed by NBER Research Associates Susan Athey of Stanford University and Parag Pathak of MIT, met at Stanford University on October 25 and 26, 2013. The following papers were discussed:

- **Eric Budish** and **John Shim**, University of Chicago; and **Peter Cramton**, University of Maryland, “The High-Frequency Trading Arms Race: Frequent Batch Auctions as a Market Design Response”
- **Nikhil Agarwal**, MIT, “An Empirical Model of the Medical Match”

- **Mark Satterthwaite**, Northwestern University; **Steven Williams**, University of Illinois, Urbana-Champaign; and **Konstantinos Zachariadis**, London School of Economics, “Optimality versus Practicality in Market Design: A Comparison of Two Double Auctions”
- **Bo Cowgill**, University of California, Berkeley, and **Eric Zitzewitz**, Dartmouth College and NBER, “Corporate Prediction Markets: Evidence from Google, Ford, and Firm X”
- **Yuichiro Kamada**, Harvard University, and **Fuhito Kojima**, Stanford University, “Efficient Matching Under Distributional Constraints: Theory and Applications”
- **Yeon-Koo Che**, Columbia University, and **Johannes Hörner**, Yale University, “Optimal Design for Social Learning”
- **Itai Ashlagi**, MIT; and **Yashodhan Kanoria** and **Jacob Leshno**, Columbia University, “Unbalanced Random Matching Markets”
- **Federico Echenique**, California Institute of Technology, and **M. Bumin Yenmez**, Carnegie Mellon University, “How to Control Controlled School Choice”
- **Hoyt Bleakley**, University of Chicago and NBER, and **Joseph Ferrie**, Northwestern University and NBER, “Land Openings on the Georgia Frontier and the Coase Theorem in the Short and Long Run”
- **Paul Asquith**, MIT and NBER; **Thom Covert**, Harvard University; and **Parag Pathak**, “The Effects of Mandatory Transparency in Financial Market Design: Evidence from the Corporate Bond Market” (NBER Working Paper No. 19417)
- **Nicole Immorlica** and **Gregory Stoddard**, Northwestern University; and **Vasilis Syrgkanis**, Cornell University, “Social Status and the Design of Optimal Badges”
- **Lawrence Ausubel**, University of Maryland, and **Oleg Baranov**, University of Colorado, Boulder, “The Combinatorial Clock Auction, Revealed Preference, and Iterative Pricing”

Summaries of these papers may be found at: <http://www.nber.org/confer/2013/MDf13/summary.html>

Monetary Economics

The NBER’s Monetary Economics Program met in Cambridge on November 1, 2013. Research Associates Frederic Mishkin and Michael Woodford of Columbia University organized the program. The following papers were discussed:

- **Alan Moreira**, Yale University, and **Alexi Savov**, New York University, “The Macroeconomics of Shadow Banking”
- **Emmanuel Farhi**, Harvard University and NBER, and **Iván Werning**, MIT and NBER, “A Theory of Macroprudential Policies in the Presence of Nominal Rigidities” (NBER Working Paper No. 19313)
- **Varadarajan Chari**, University of Minnesota and NBER; **Alessandro Dovis**, Pennsylvania State University; and **Patrick Kehoe**, Federal Reserve Bank of Minneapolis and NBER, “Rethinking Optimal Currency Areas”
- **Emi Nakamura** and **Jón Steinsson**, Columbia University and NBER, “High Frequency Identification of Monetary Non-Neutrality” (NBER Working Paper No. 19260)

- **Simon Gilchrist**, Boston University and NBER; **Raphael Schoenle**, Brandeis University; and **Jaе Sim** and **Egon Zakrajšek**, Federal Reserve Board, “Inflation Dynamics during the Financial Crisis”
- **Marco Del Negro** and **Marc Giannoni**, Federal Reserve Bank of New York; and **Frank Schorfheide**, University of Pennsylvania and NBER, “Inflation in the Great Recession and New Keynesian Models”

Summaries of these papers may be found at: <http://www.nber.org/confer/2013/MEf13/summary.html>

Public Economics

The NBER’s Program on Public Economics met at Stanford University on November 7 and 8, 2013. Program Co-director Amy Finkelstein of MIT and Research Associate Hilary Hoynes of the University of California, Berkeley organized the meeting. The following papers were discussed:

- **Liran Einav**, Stanford University and NBER; **Amy Finkelstein**; and **Paul Schrimpf**, University of British Columbia, “The Response of Drug Expenditure to Non-linear Contract Design: Evidence from Medicare Part D” (NBER Working Paper No. 19393)
- **Nathaniel Hendren**, Harvard University and NBER, “The Policy Elasticity” (NBER Working Paper No. 19177)
- **Wojciech Kopczuk**, Columbia University and NBER; **Justin Marion**, University of California, Santa Cruz; **Erich Muehlegger**, Harvard University and NBER; and **Joel Slemrod**, University of Michigan and NBER, “Do the Laws of Tax Incidence Hold? Point of Collection and the Pass-through of State Diesel Taxes” (NBER Working Paper No. 19410)
- **François Gerard**, Columbia University, and **Gustavo Gonzaga**, PUC-Rio, “Informal Labor and the Cost of Social Programs: Evidence from 15 Years of Unemployment Insurance in Brazil”
- **Hunt Allcott**, New York University and NBER, and **Dmitry Taubinsky**, Harvard University, “The Lightbulb Paradox: Evidence from Two Randomized Control Trials”
- **Ilyana Kuziemko**, Columbia University and NBER; **Katherine Meckel**, Columbia University; and **Maya Rossin-Slater**, University of California, Santa Barbara, “Do Insurers Risk-Select Against Each Other? Evidence from Medicaid and Implications for Health Reform” (NBER Working Paper No. 19198)

Summaries of these papers may be found at: <http://www.nber.org/confer/2013/PEf13/summary.html>

Asset Pricing

The NBER’s Program on Asset Pricing met at Stanford University on November 7 and 8, 2013. Research Associates John Cochrane and Lubos Pastor of the University of Chicago organized the meeting. The following papers were discussed:

- **Francesco Franzoni**, University of Lugano and Swiss Finance Institute, and **Martin Schmalz**, University of Michigan, “Fund Flows in Rational Markets”
- **Clifford Asness** and **Andrea Frazzini**, AQR Capital Management; and **Lasse Pedersen**, Copenhagen Business School and NBER, “Quality Minus Junk”

- **Hui Chen** and **Leonid Kogan**, MIT and NBER; and **Winston Wei Dou**, MIT, “Measuring the ‘Dark Matter’ in Asset Pricing Models”
- **Torben Andersen**, Northwestern University and NBER; **Nicola Fusari**, Johns Hopkins University; and **Viktor Todorov**, Northwestern University, “The Risk Premia Embedded in Index Options”
- **Robert Stambaugh**, University of Pennsylvania and NBER; **Jianfeng Yu**, University of Minnesota; and **Yu Yuan**, SAIF, “Arbitrage Asymmetry and the Idiosyncratic Volatility Puzzle” (NBER Working Paper No. 18560)
- **Adrien Verdelhan**, MIT and NBER, “The Share of Systematic Variation in Bilateral Exchange Rates”

Summaries of these papers may be found at: <http://www.nber.org/confer/2013/APf13/summary.html>

Corporate Finance

The NBER’s Program on Corporate Finance met at Stanford University on November 8, 2013. Research Associates Ulrike Malmendier of the University of California, Berkeley, Joshua Rauh of Stanford University, and Program Director Malcolm Baker of Harvard Business School organized the meeting. The following papers were discussed:

- **William Gornall**, Stanford University, and **Ilya Strebulaev**, Stanford University and NBER, “Financing as a Supply Chain: The Capital Structure of Banks and Borrowers”
- **Joan Farre-Mensa**, Harvard University, and **Alexander Ljungqvist**, New York University and NBER, “Do Measures of Financial Constraints Measure Financial Constraints?” (NBER Working Paper No. 19551)
- **Mark Garmaise**, University of California, Los Angeles, and **Gabriel Natividad**, New York University, “Does More Information Lead to More Financing? Local Information Shocks and Bank Credit”
- **Emily Breza**, Columbia Business School, and **Arun Chandrasekhar**, Stanford University, “Savings Monitors”
- **Peter Koudijs**, Stanford University and NBER, and **Hans-Joachim Voth**, Universitat Pompeu Fabra, “Leverage and Beliefs: Personal Experience and Risk Taking in Margin Lending”
- **Camelia Kuhnen**, Northwestern University, and **Paul Oyer**, Stanford University and NBER, “Exploration for Human Capital: Evidence from the MBA Labor Market”
- **Rainer Haselmann**, Bonn Graduate School of Economics; and **David Schoenherr** and **Vikrant Vig**, London Business School, “Lending in Social Networks”
- **Ing-Haw Cheng**, Dartmouth College; **Harrison Hong**, Princeton University and NBER; and **Kelly Shue**, University of Chicago, “Do Managers Do Good with Other People’s Money?” (NBER Working Paper No. 19432)

Summaries of these papers may be found at: <http://www.nber.org/confer/2013/CFf13/summary.html>

Education

The NBER's Program on Education, directed by Research Associate Caroline Hoxby of Stanford University, met in Chicago on November 14 and 15, 2013. The following papers were discussed:

- **Rosario Ballatore**, Bank of Italy; and **Margherita Fort** and **Andrea Ichino**, University of Bologna, “The Tower of Babel in the Classroom? Immigrants and Natives in Italian Schools”
- **Jason Cook** and **Richard Mansfield**, Cornell University, “Task-Specific Experience and Task-Specific Talent: Decomposing the Productivity of High School Teachers”
- **Peter Hinrichs**, Georgetown University, “An Empirical Analysis of Racial Segregation in Higher Education”
- **Steven Hemelt**, University of North Carolina, Chapel Hill, and **Kevin Stange**, University of Michigan and NBER, “The Effect of Marginal Price on Student Progress at Public Universities”
- **Scott Imberman**, Michigan State University and NBER, and **Michael Lovenheim**, Cornell University and NBER, “Does the Market Value Value-Added? Evidence from Housing Prices after a Public Release of School and Teacher Value-Added” (NBER Working Paper No. 19157)
- **Felipe Barrera-Osorio**, Harvard University; **David Blakeslee**, Columbia University; **Matthew Hoover**, RAND Corporation; **Leigh Linden** and **Stephen Ryan**, University of Texas, Austin and NBER; **Dhushyanth Raju**, The World Bank, “Leveraging the Private Sector to Improve Primary School Enrollment: Evidence from a Randomized Controlled Trial in Pakistan”
- **Catharine Hill**, Vassar College, “American Higher Education and Income Inequality”
- **Hanley Chiang**, **Melissa Clark**, and **Sheena McConnell**, Mathematica Policy Research, “Supplying Disadvantaged Schools with Effective Teachers: Experimental Evidence on Secondary Math Teachers from Teach For America”
- **Kristin Butcher**, Wellesley College and NBER; and **Patrick McEwan** and **Akila Weerapana**, Wellesley College, “The Great Deflation: A Quasi-Experimental Analysis of the Impact of an Anti-Grade Inflation Policy on Students and Instructors”
- **Karthik Muralidharan**, University of California, San Diego and NBER, and **Nishith Prakash**, University of Connecticut, “Cycling to School: Increasing Secondary School Enrollment for Girls in India” (NBER Working Paper No. 19305)
- **Kate Ambler**, University of Michigan; **Diego Aycinena**, Universidad Francisco Marroquín; and **Dean Yang**, University of Michigan and NBER, “Subsidizing Remittances for Education: A Field Experiment among Migrants from El Salvador”
- **Joshua Angrist**, MIT and NBER; **Erich Battistin**, University of Padua; and **Daniela Vuri**, University of Rome, “In a Small Moment: Cheating and Class Size in Italian Primary Schools”

Summaries of these papers may be found at: <http://www.nber.org/confer/2013/EDf13/summary.html>

Political Economy

The NBER's Program on Political Economy, directed by Research Associate Alberto Alesina of Harvard University, met in Cambridge on November 15, 2013. These papers were discussed:

- **Filipe Campante**, Harvard University and NBER, and **David Yanagizawa-Drott**, Harvard University, "Does Religion Affect Economic Growth and Happiness? Evidence from Ramadan"
- **Vincenzo Galasso**, Università della Svizzera Italiana, and **Tommaso Nannicini**, Università Bocconi, "Men Vote in Mars, Women Vote in Venus: A Survey Experiment in the Field"
- **Jesse Shapiro**, University of Chicago and NBER, "On the Limits of Expert Credibility: Theory and an Application to Climate Change"
- **Cemal Arbatli**, Higher School of Economics, Moscow; **Quamrul Ashraf**, Brown University; and **Oded Galor**, Brown University and NBER, "The Nature of Civil Conflict"
- **Scott Abramson** and **Carles Boix**, Princeton University, "The Roots of the Industrial Revolution: Political Institutions or (Socially Embedded) Know-How?"
- **James Alt**, Harvard University, and **David Dreyer Lassen**, University of Copenhagen, "Unemployment Expectations, Information, and Voting: Experimental and Administrative Micro-Evidence"

Summaries of these papers may be found at: <http://www.nber.org/confer/2013/POLf13/summary.html>

Market Microstructure

The NBER's Working Group on Market Microstructure met in Cambridge on December 6, 2013. The program was organized by Tarun Chordia of Emory University, Amit Goyal of the University of Lausanne and Swiss Finance Institute, Working Group Director (and Research Associate) Bruce Lehmann of the University of California, San Diego, Gideon Saar of Cornell University, and Avanidhar Subrahmanyam of the University of California, Los Angeles. The following papers were discussed:

- **Bastian von Beschwitz** and **Massimo Massa**, INSEAD; and **Donald Keim**, University of Pennsylvania, "Media-Driven High Frequency Trading: Evidence from News Analytics"
- **Songzi Du**, Simon Fraser University, and **Haoxiang Zhu**, MIT, "Dynamic Ex Post Equilibrium, Welfare, and Optimal Trading Frequency in Double Auctions"
- **Bart Zhou Yueshen**, Tinbergen Institute, "Queuing Uncertainty"
- **Chen Yao**, University of Warwick, and **Mao Ye**, University of Illinois, Urbana-Champaign, "Price Constraints, Speed Competition, and Liquidity"
- **Jonathan Brogaard**, University of Washington; **Björn Hagströmer** and **Lars Nordén**, Stockholm University School of Business; and **Ryan Riordan**, University of Ontario Institute of Technology, "Trading Fast and Slow: Colocation and Market Quality"
- **Sabrina Buti**, University of Toronto; **Francesco Consonni** and **Barbara Rindi**, Università Bocconi; and **Ingrid Werner**, Ohio State University, "Sub-Penny and Queue-Jumping"

Summaries of these papers may be found at: <http://www.nber.org/confer/2013/MMf13/summary.html>

Entrepreneurship

The NBER's Working Group on Entrepreneurship met in Cambridge on December 6, 2013. The program was organized by Working Group Director and Research Associate Antoinette Schoar of MIT and Research Associate Josh Lerner of Harvard Business School, who co-directs the NBER's Program on Productivity, Innovation, and Entrepreneurship. The following papers were discussed:

- **Shai Bernstein**, Stanford University; **Xavier Giroud**, MIT and NBER; and **Richard Townsend**, Dartmouth College and NBER, "The Impact of Venture Capital Monitoring: Evidence from a Natural Experiment"
- **Oriana Bandiera** and **Robin Burgess**, London School of Economics; **Narayan Das** and **Munshi Sulaiman**, BRAC; **Selim Gulesci**, Università Bocconi; and **Imran Rasul**, University College London, "Can Basic Entrepreneurship Transform the Economic Lives of the Poor?"
- **Michael Ewens**, Carnegie Mellon University, and **Matt Marx**, MIT, "Executive Turnover in Venture-backed Entrepreneurial Firms"
- **Arthur Korteweg**, Stanford University, and **Stefan Nagel**, University of Michigan and NBER, "Risk-Adjusting the Returns to Venture Capital" (NBER Working Paper No. 19347)
- **Sridhar Arcot** and **José Miguel Gaspar**, ESSEC Business School; **Zsuzsanna Fluck**, Michigan State University; and **Ulrich Hege**, HEC Paris, "Fund Managers under Pressure: Rationale and Determinants of Secondary Buyouts"
- **Aaron Chatterji**, Duke University; **Rui de Figueiredo, Jr.**, University of California, Berkeley; and **Evan Rawley**, Columbia University, "Learning on the Job? Entrepreneurial Spawning in the Asset Management Industry"
- **Thomas Noe**, Oxford University, "Blood and Money: Kin Altruism, Governance, and Inheritance in the Family Firm"

Summaries of these papers may be found at: <http://www.nber.org/confer/2013/ENTf13/summary.html>

Organizational Economics

The NBER's Working Group on Organizational Economics, directed by Research Associate Robert Gibbons of MIT, met in Cambridge on December 6 and 7, 2013. The following papers were discussed:

- **Roland Bénabou**, Princeton University and NBER, and **Jean Tirole**, Toulouse School of Economics, "Bonus Culture: Competitive Pay, Screening, and Multitasking" (NBER Working Paper No. 18936)
- **Kieron Meagher**, Australian National University, and **Rodney Strachan**, University of Queensland, "Evidence on the Non-linear Impact of Management"
- **Alessandro Bonatti**, MIT, and **Heikki Rantakari**, University of Southern California Marshall School of Business, "The Politics of Compromise"
- **Stephen Burks**, University of Minnesota, Morris; **Bo Cowgill**, University of California, Berkeley; **Mitchell Hoffman**, University of Toronto; and **Michael Housman**, Evolv, Inc., "The Facts About Referrals: Toward an Understanding of Employee Referral Networks"
- **Marina Halac** and **Andrea Prat**, Columbia University, "Managerial Attention and Worker Engagement"

- **Rui de Figueiredo, Jr.**, University of California, Berkeley; **Evan Rawley**, Columbia University; and **Orie Shelef**, Stanford University, “Bad Bets: Excessive Risk-Taking, Convex Incentives, and Performance”
- **Björn Bartling**, University of Zurich; and **Manuel Grieder** and **Christian Zehnder**, University of Lausanne, “Delegating Responsibility to the Market: How Competition Shapes Fairness Perceptions”
- **Arthur Campbell**, Yale University, “Political Capital”
- **Laura Alfaro**, Harvard Business School; **Paola Conconi**, ECARES, Université Libre de Bruxelles; **Harald Fadinger**, University of Vienna; and **Andrew Newman**, Boston University, “Do Prices Determine Vertical Integration? Evidence from Trade Policy” (NBER Working Paper No. 16118)
- **Ilya Segal**, Stanford University, and **Michael Whinston**, MIT and NBER, “Property Rights and the Efficiency of Bargaining”
- **Sandeep Baliga**, Northwestern University, and **Tomas Sjöström**, Rutgers University, “Coordination, Rent-Seeking, and Control”

Summaries of these papers are available at: <http://www.nber.org/confer/2013/OEf13/summary.html>

International Trade and Investment

The NBER’s Program on International Trade and Investment met in San Francisco on December 6 and 7, 2013. Program Director and Research Associate Robert Feenstra of the University of California, Davis organized the meeting. The following papers were discussed:

- **Marc Melitz**, Harvard University and NBER, and **Stephen Redding**, Princeton University and NBER, “Firm Heterogeneity and Aggregate Welfare” (NBER Working Paper No. 18919)
- **Robert Feenstra**, “Restoring the Product Variety and Pro-competitive Gains from Trade with Heterogeneous Firms and Bounded Productivity”
- **George Alessandria**, Federal Reserve Bank of Philadelphia; **Horag Choi**, Monash University; and **Kim Ruhl**, New York University, “Trade Adjustment Dynamics and the Welfare Gains from Trade”
- **Gordon Hanson** and **Marc-Andreas Muendler**, University of California, San Diego and NBER; and **Nelson Lind**, University of California, San Diego, “The Dynamics of Comparative Advantage: Hyperspecialization and Evanescence”
- **Andrew Bernard** and **Andreas Moxnes**, Dartmouth College and NBER; and **Karen Helene Ulltveit-Moe**, University of Oslo, “Two-sided Heterogeneity and Trade”
- **Natalia Ramondo**, University of California, San Diego; **Andrés Rodríguez-Clare**, University of California, Berkeley and NBER; and **Milagro Saborío-Rodríguez**, University of Costa Rica, “Trade, Domestic Frictions, and Scale Effects”
- **Gihoon Hong**, Indiana University, South Bend, and **John McLaren**, University of Virginia and NBER, “Are Immigrants a Shot in the Arm for the Local Economy?”
- **Volker Nocke**, University of Mannheim, and **Stephen Yeaple**, Pennsylvania State University and NBER, “Globalization and Multiproduct Firms” (NBER Working Paper No. 19409)

Summaries of these papers may be found at: <http://www.nber.org/confer/2013/ITIf13/summary.html>

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Globalization in an Age of Crisis: Multilateral Economic Cooperation in the Twenty-first Century

Globalization in an Age of Crisis: Multilateral Economic Cooperation in the Twenty-first Century, edited by Robert C. Feenstra and Alan M. Taylor, is available from the University of Chicago Press in December 2013.

Along with its painful economic costs, the financial crisis of 2008 raised concerns over the future of international policy making. As in recessions past, new policy initiatives emerged that leaned more toward protecting national interests rather than promoting international economic cooperation. Whether in fiscal or monetary policies, the control of currencies and capital flows, the regulation of finance, or the implementation of protectionist policies and barriers to trade, there has been an almost worldwide trend

toward the prioritizing of national economic security. But what are the underlying economic causes of this trend, and what can economic research reveal about the possible consequences?

This volume brings together research by policy makers and practitioners that examines the ways in which the global economic order could address the challenges of globalization that have arisen over the last two decades, and that have been intensified by the recent crisis. Chapters in this volume consider the critical linkages between various issues, including exchange rates, global imbalances, and financial regulation, and analyze the political and economic outcomes of past policies for what they might tell us about the future of global economic cooperation.

Robert C. Feenstra is Director of the NBER's Program on International Trade and Investment and a Research Associate in the NBER's Program on Productivity, Innovation, and Entrepreneurship, and holds the C. Bryan Cameron Distinguished Chair in International Economics at the University of California, Davis. Alan M. Taylor is a Research Associate in the NBER's Programs on International Finance and Macroeconomics, International Trade and Investment, and the Development of the American Economy. He is the Souder Family Professor of Arts and Sciences at the University of Virginia.

The price of this book is \$110.00 for a clothbound volume.

Well Worth Saving: How the New Deal Safeguarded Home Ownership

Well Worth Saving: How the New Deal Safeguarded Home Ownership, by Price Fishback, Jonathan Rose, and Kenneth Snowden, is the latest monograph in the NBER's series on Long-Term Factors in Economic Development.

The urgent demand for housing after World War I fueled a boom in residential construction that led to historic peaks in home ownership. Foreclosures at the time were rare, and when they did happen, lenders could quickly recoup their losses by selling into a strong market. But no mortgage system is equipped to deal with credit problems on the scale of the Great Depression. As foreclosures quintupled, it became clear that the mortgage system of the 1920s was not up to the task, and borrowers, lenders, and real estate professionals sought action at the federal level.

Well Worth Saving tells the story of the disastrous housing market during the Great Depression and the extent to which an immensely popular New Deal relief program, the Home Owners' Loan Corporation (HOLC), was able to stem foreclosures by buying distressed mortgages from lenders and refinancing them. Drawing on historical records and modern statistical tools, Price Fishback, Jonathan Rose, and Kenneth Snowden investigate important unanswered questions to provide an unparalleled view of the mortgage loan industry throughout the 1920s and early 1930s. Combining this with the stories of those involved, the book offers a clear understanding of the HOLC within the context of the housing market in which it operated, including an examination of how the incentives and behaviors at play throughout the crisis influenced the

effectiveness of policy.

More than eighty years after the start of the Great Depression, when politicians have called for similar programs to quell the current mortgage crisis, this accessible account of the HOLC holds invaluable lessons for our own time.

Price Fishback and Kenneth Snowden are Research Associates in the NBER's Program on the Development of the American Economy. Fishback is the Thomas R. Brown Professor of Economics at the University of Arizona. Snowden is an Associate Professor of Economics and Director of Graduate Studies at the University of North Carolina, Greensboro. Jonathan Rose is an economist with the Federal Reserve Board of Governors.

The price of the book is \$35.00 for a clothbound volume.

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