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Program Report

Political Economy

Alberto Alesina*

The NBER's Political Economy Program was created in 2006 and has flourished and expanded in a variety of directions since then, reflecting the rapidly growing interest of the profession in this area. Early on, this field was focused on issues that could be strictly defined at the connection of politics and economics. For instance, widely studied issues included the effect of elections on the economy and vice versa (political business cycles); the effect of corruption and inefficient bureaucracies; the role of the quality of institutions for long-term development; and the effects of lobbying pressures. Of course, these topics are still at the core of the field, but the most remarkable development in this area is the extension of political economics, broadly defined, to new areas. For example, many authors have studied the role of culture in determining economic choices, and the relationship between culture and institutional development. This topic has been so active that the program now has a group specifically focusing on it, directed by Alberto Bisin of New York University and Paola Giuliano of University of California, Los Angeles. Other "new" or especially active topics include: the role of the press and the determinants of its (lack of) freedom; the effects of ethnic and religious fragmentation with both new measurements and new implications for economic choices; exploration of "behavioral" (that is psychologically driven rather than rationally driven) effects applied to political action; the study of the determinants of wars; and the analysis of potential gender and race discrimination.

Political economy has even expanded methodologically. In addition to "standard" theory and regression analysis, we have seen the use of randomized trials which are common in development economics, as well as experiments in labs; new survey data have been collected; and historical research on original sources has been quite common. The coverage in terms of countries also has been very broad: from Afghanistan to Russia, China, Africa, Europe, and of course the United States. One common theme links

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this literature together, however: that in order to understand the world around us, we need to go beyond the assumption of "homo economicus" maximizing his welfare in isolation in an institution-free world.

Given the size and diversity of the work produced by this group, it is impossible to review every paper or even every topic touched upon. I therefore select a few of the main themes, with an apology to all the authors whose work I have not mentioned in this report.

Diversity

Diversity (measured by ethnicity, language, religion, genetic makeup, and birthplace) can have positive or negative effects. On the one hand, diversity may increase productivity because of the complementarity of different skills. On the other hand, it may bring about lack of communication, difficulty in running a polity, conflict, or even civil wars. One may think of a sort of inverted U-curve: too little or too much diversity may be "bad" while an intermediate level may be productive. Research by Quamrul Ashraf and Oded Galor[1], and Johann Harnoss, Hillel Rapoport, and me[2], implies this point. The former authors measure diversity in terms of genetic makeup and argue that more successful countries historically have been those with an intermediate level of diversity. The latter work measures diversity by birthplace and shows that some diversity is positively correlated with development and productivity in a cross-section of countries.

The negative effects of diversity are especially obvious in the case of Africa. In that continent, former colonizers left behind illogical borders, which split or merge various ethnicities in ways that have nothing to do with the aspiration of local populations. The result has been failed states, slow development, civil wars, and more. Many papers have documented various aspects of this phenomenon (Stelios Michalopoulos and Elias Papaioannou[3], and William Easterly, Janina Matuszeski, and me[4]). As Nathan Nunn and Leonard Wantchekon[5] point out, slave trade in Africa has increased mistrust among competing ethnic groups. Raphael Franck and Ilia Rainer[6] have also studied favoritism and mistrust among African ethnic groups. Patrick Francois, Rainer, and Francesco Trebbi[7] study the allocation of political power among ethnic groups, providing a carefully constructed new

dataset, while Robin Burgess et al.[8] document ethnic-based politics in Kenya.

Ethnic and religious diversity is not unique to Africa. Abhijit Banerjee and Rohini Pande[9], and Kaivan Munshi and Mark Rosenzweig[10] document the negative effect of politics based upon ethnic identity in India. Christian Dippel[11] discusses the effects of forced cohabitation of different tribes in Native American reservations.

Diversity may have different effects in different scenarios. One additional critical variable is the level of segregation. Ekaterina Zhuravskaya and I[12] present a new dataset on segregation in all countries in the world, and show that the latter is negatively related to trust and the quality of institutions. Elizabeth Ananat and Ebonya Washington[13] show that in the United States, racial segregation has a negative effect on the efficacy of black representatives.

Another dimension that interacts with ethnic fragmentation is income inequality. Michalopoulos, Papaioannou, and I[14] provide a new measure of income differences across ethnicities in all countries and find a strong negative correlation between this variable and development. That is, the negative effects of ethnic diversity are exacerbated when they are correlated with income differences. A case in point is of course the United States, where racial tensions are exacerbated because poverty is higher among minorities.

An important and policy relevant question is what happens when individuals of different ethnic groups are forced to interact more closely than they would normally do. Yann Algan et al.[15] use random allocations in Parisian housing complexes to show that more diverse condominiums are more poorly run and show more decay and less concern for public goods. David Clingingsmith, Asim Ijaz Khwaja, and Michael Kremer[16] study the Muslim pilgrimage to Mecca, using the fact that in Pakistan some pilgrims are randomly chosen for support for the trips, while others are left out. By means of interviews before and after the pilgrimage, they show striking results: those who go to Mecca show more understanding after the trip and more openness to other cultures which they met there, but no decrease in hostility towards non-Muslims. Eliana La Ferrara et al.[17] study random assignment in dorms in a South African University. Bisin et al.[18] study how minorities may "fight" integration to preserve their identity. Jon Eguia[19] discusses how discrimination may foster or reduce assimilation of minorities.

Culture

The NBER's "Economics of Culture and Institutions" meetings began in 2010. Papers presented at these meetings have covered a broad range of topics related to the persistence of culture, its evolution over time, its interaction with institutions, and its macroeconomic implications.

In order to be relevant, cultural traits have to be reasonably persistent over time. Luigi Guiso, Paola Sapienza, and Luigi Zingales[20] study the historical origin of differences in social capital in Italy, tracing it back to differences in the culture of independence fostered by the free city-states experience in the North of Italy at the turn of the first millennium. Nico Voigtländer and Hans-Joachim Voth[21] find continuity of Anti-Semitism at the local level over more than half a millennium. Alesina, Giuliano, Nunn, and I[22] link differences in agricultural technologies of pre-industrial societies to actual differences in female labor force participation, and more generally to beliefs about the role of women in the society. David Atkin[23] shows how culture can be relevant in shaping nutrition patterns among Indian immigrants.

Culture is not exogenous; its interaction with institutions is particularly relevant. Differences in cultural organizations (the presence of the clan versus the city) are at the origin of differences in social, moral, and institutional developments in China versus Europe. Avner Greif and Guido Tabellini[24] argue that in China, clans were the locus of cooperation among kin, motivated by limited morality and informal institutions. In Europe, cities became the locus of cooperation among non-kin motivated by generalized morality and formal institutions. The institutional differences in turn reinforced the original organizational forms. These effects persist today. Daron Acemoglu and Matthew Jackson[25] study the interaction between history and "cooperation" in a more general way. The authors first characterize the (extreme) case under which history completely drives equilibrium, leading to social norms of high or low cooperation. In intermediate cases, the impact of history is potentially countered by leaders, whose actions are visible to future agents. Leaders can influence expectations of future agents and overturn social norms of low cooperation. These authors further show that, in equilibrium and not completely driven by history, there is a pattern of "reversion" to the original initial state of low/high cooperation. The interaction between culture and institutions can give rise to different waves of democratization. Davide Ticchi, Thierry Verdier, and Andrea Vindigni[26] develop a model in which parents invest resources in order to transmit their own political values to their children.

Many papers have investigated the relevance of the family in the transmission of culture (as in the paper by Bisin and Verdier[27]). Recent developments in the literature show how differences in teaching practices can help and reinforce the transmission of cultural values. Algan, Pierre Cahuc, and Andrei Shleifer[28] show that teaching practices (such as teachers lecturing versus students working on projects together) exert a substantial influence on student's beliefs about cooperation, both with each other and with teachers. In developing countries, institutions like microfinance are relevant in building up social capital. Benjamin Feigenberg, Erica Marie Field, and Pande[29] exploit random variation in the meeting frequency of microfinance groups during their first loan cycle to show that more frequent meeting is associated with long-run increases in social contact and lower default.

Cultural differences broadly defined can have important macroeconomic impacts: intergenerational differences

in the transmission of risk preferences influence the probability of the younger generation to become entrepreneurial. Matthias Doepke and Fabrizio Zilibotti[30] show that this has strong implications for economic growth because risk-taking entrepreneurs are essential for endogenous technological innovation. Ashraf and Galor[31] argue that variations in the interplay between cultural assimilation and cultural diffusion have played a significant role in giving rise to differential patterns of economic development across the globe. Societies that were geographically vulnerable to cultural diffusion benefited from enhanced assimilation, lower cultural diversity, and thus more intense accumulation of society-specific human capital, becoming competitive during the agricultural stage of development.

Culture, as measured by differences in social capital, also can improve aggregate productivity through facilitating greater firm decentralization. Nicholas Bloom and Raffaella Sadun[32] show that firms located in high trust regions are more likely to decentralize, even after controlling for country dummies.

Institutions, Institutional Change, and Human Capital

The discussion about cultural and institutional development is related in part to an active debate regarding whether "institutions" cause long-term development or whether human capital and culture (as we saw above) are the true driving forces, so that "good" institutions could not have a significant effect without human capital. In the last several years, Acemoglu and James Robinson (alone and with coauthors) have made a strong argument in favor on the institutionalism view. For example, their paper (with Davide Cantoni and Simon Johnson[33]) describes the effects of the institutional reform imposed by Napoleonic invasions in central Europe. By comparing regions that were or were not invaded by Napoleon, they are able to study the effects of exogenously imposed institutional change. They find that the new and improved institutions for commerce and economic freedom created a positive effect, although after a long delay. Torsten Persson and Tabellini[34] argue that the weak result linking democracy to growth is due to a poor definition of the former. They show that a measure of "democratic capital", that is how long in the past a country has been a democracy, is positively correlated with growth.

On the human capital side, Edward Glaeser, Giacomo Ponzetto, and Shleifer[35] argue that for a democracy to function, it needs participation of its citizens. The latter can come about only with a certain level of human capital. Thus democracy needs education. Nicola Gennaioli et al.[36] argue that different regional development is explained most strongly by different levels of human capital, holding constant national institutions. Wantchekon, Natalijia Novta, and Marko Klansja[37] suggest that what led to development in certain parts of colonial Africa were not initial institutions brought by colonialists, but the diffusion of human capital. Using data on China, Gerard Padro-i-Miquel, Nancy Qian, and Yang Yao[38] argue that some minimum level of ethnic homogeneity is necessary for democratic institutions to work properly. The importance of information to make democracy work is emphasized by a field experiment in India by Banerjee et al.[39] Filipe Campante and Davin Chor[40] show that when human capital and education become inconsistent with the level of political freedom, insurgencies erupt, as the Arab Spring has shown. On the other hand, Leonardo Bursztyn and Lucas Coffman[41] document the difficulty of building human capital via public policies in poor regions of Brazil.

Obviously, neither institutions nor human capital are fundamentally exogenous: something else has to explain why certain countries acquired good institutions and/or good human capital. So, a different and perhaps better way of posing the question is, which one moves more slowly: institutional change, human capital accumulation, or — to refer to the previous discussion — cultural traits? And, what forces explain such slower or faster evolutions?

Politics and Elections in the United States

Obviously a central topic in the area of political economics remains the study of elections, their determinants and consequences. Most, but not all, of the papers in this area have been about U.S. elections.

David Rothschild and Justin Wolfers[42] examine the prediction of the outcomes of Presidential elections in the United States. Normally, forecasts are based on the answers to the question: "Who will you vote for?" These authors show that a better predictor of elections is the answer to the question: "Who do you think is going to win the election?" The reason is simple but powerful: the second question prompts the respondent to think about how other voters besides him will vote. Brian Knight and Nathan Schiff[43] document the effect of "momentum" in the dynamics of primary election in the United States — a point also raised in a different context by Yosh Halberstam and Pablo Montagnes[44]. Adam Merovitz and Kenneth Shotts[45] study the role of signaling in elections.

Seth Stephens-Davidowitz[46] measures the role of "racism" in the share of votes received by President Obama. He proposes a new measure of "racism" based upon a Google search for racial slurs in different voting districts, and finds a significant effect on President Obama's share of votes. Thus, race appears to matter in American elections. The effect of race on U.S. elections also is documented by Ananat and Washington[47], and Elizabeth Cascio and Washington study the effect of the Voting Rights Act on state funds.[48]

Paola Conconi et al.[49] study the effect of votes on gun control regulation in cases of close elections, showing that congressmen are more likely to vote pro-gun when they face close races. In terms of their efficacy, state-based gun laws are evaluated by Knight[50], who shows that the traffic of guns circumvents state prohibitions. Conconi, Giovanni Facchini, and Maurizio Zanardi[51] study electoral incentives on voting for-or-against Trade Reforms in the U.S. Congress. Marianne Bertrand, Matilde Bombardini, and

Trebbi[52] investigate the function of lobbying in the United States, and Gergely Ujhelyi[53] studies the working of state bureaucracies.

The recent financial crisis has revived interest in the political economy of financial markets. For instance, Sumit Agarwal et al.[54] study the inconsistent behavior of regulators, which has increased confusion in markets because state-versus-federal regulations have not been well coordinated. Deniz Igan, Prachi Mishra, and Thierry Tressel[55] also investigate lobbying during the financial crisis.

Conclusion

Other topics covered in the Political Economy Program include the role of the press in determining political outcomes and the determination of press freedom[56]; the determinants of international and civil wars[57]; the effect of corruption and public procurements[58]; and the political economy of fiscal policy in the context of the European crisis[59]; gender issues[60]. In summary, the field of Political Economy, and the NBER Program in this field, are both thriving.

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Research Summaries

What Determines International Wages and Prices?

Mario Crucini*

Introduction

Wages and salaries are by far the predominant source of purchasing power for all but the wealthiest individuals in society. The real wage -- that is, the ratio of one's nominal wage to the unit cost of a basket of goods and services one chooses to consume -- is thus strongly positively associated with the health and welfare of individuals and their families. When goods and labor markets are perfectly competitive, and devoid of barriers to trade or factor mobility, identical goods or workers should command the same market price no matter where the good is sold or the worker is employed. That absence of barriers to trade and factor mobility ensures that arbitrage in goods and labor markets maintains equality of prices and wages.

As it turns out, even within countries, identical workers are not necessarily paid the same nominal wage, nor do they face common market prices of goods and services and consume identical consumption baskets. Therefore, considerable research has been devoted to measuring wage and prices differences and exploring the broader economic implications of those differences.

My collaborative empirical and theoretical research focuses on retail prices of individual goods and services in local currency units (as opposed to index numbers that comprise the subindexes of the CPI) and on the use of cities as the spatial unit of account (as opposed to national averages). The cross-sectional differences in price deviations by good and location allow us to identify more of the underlying microeconomic structure of commodity and labor markets and to sustain a richer and more empirically robust class of economic theories.

Long-run Wage and Price Dispersion, the "Penn-Effect"

My early work with Christopher Telmer and Marios Zachariadis studies retail prices of thousands of goods and services across European capital cities at five-year intervals between 1975 and 1990.[1] The underlying data for international price comparisons for this period come from Eurostat, the statistical agency of the European Union, which coordinated the price survey and asked each National Statistical Agency (NSA) to match the exact brand, make, and model of each item across cities. The Eurostat approach was intended to depart from the method used by NSAs to construct domestic CPI indexes, whereby market prices are weighted to reflect domestic consumption patterns. The CPI methodology violates the premise of identical baskets needed to assess the purchasing power parity hypothesis — that is, equality of the cost of a common and broad basket of retail goods and services across coun-

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tries. The Eurostat methodology satisfies the research criteria.

Average price difference across goods, relative to the EU mean price, ranged from a high of 21.9 percent for Denmark to a low of -25.4 percent for Portugal in 1990. In other words, if Danes shopped in Portugal, they would save 47.3 percent of their expenditure relative to shopping at home. Conversely, if these price differences reflect arbitrage costs in goods markets, then the costs would need to be enormous relative to shipping costs.

After adjusting for differences in the Value Added Tax (VAT), the gap drops to 39.5 percent. We attribute part of the large remaining price level difference across Denmark and Portugal to the fact that they are at opposite ends of the EU income distribution, Denmark with the second highest per capita income after Luxembourg, and Portugal with the lowest (the theoretical rationale for this correlation is elaborated below).

We also indirectly examine the role of trade costs using an index of tradability, finding that goods and services that enter to a greater extent into EU trade volumes relative to production volumes tend to have lower geographic price dispersion. For example, going from the least traded sector (such as a haircut) to the most traded sector (unleaded gasoline), EU price dispersion drops from 43 percent to 12 percent.

The strong positive correlation between income levels and price levels is known as the "Penn Effect" in acknowledgement of the seminal work of Irving Kravis, Alan Heston, and Robert Summers who initiated the International Comparison of Prices Program (ICP) in the 1960s at the University of Pennsylvania and first documented the correlation.

Hakan Yilmazkuday and I conducted the first systematic investigation of the "Penn Effect," integrated across microeconomic and macroeconomic levels.[2] Figure 1 presents a scatterplot of prices of many individual goods and services versus a single wage rate (hourly wage paid to domestic help) in more than 100 capital cities of the world. Each dot represents the price of a single retail good and hourly wage for domestic help in a particular city. All the prices and wages are expressed in percentage deviations from their worldwide averages and then averaged over the years 1990 to 2005 to focus on the long-run differences associated with the "Penn Effect." The vertical lines reflect that fact that one city wage measure is paired with the entire price distribution of that same city. The open circle is the consumption expenditure weighted average price deviation for that city. These data come from the Economist Intelligence Unit Worldwide Cost of Living Survey, which includes the familiar Big Mac prices and approximately 300 other retail prices.

The slope of the estimated line through the scatter is 0.54, which means a doubling of the nominal wage is associated with only about a 50 percent increase in the price of the basket of goods. Alternatively, a doubling of the nominal wage is associated with a 50 percent increase in the real wage, or real purchasing power. Why is this?

In an earlier joint paper, we developed a model of trade across cities with each city possessing a manufacturing and retail sector. We show that the slope coefficient in this regression identifies the average (across goods in the price survey) cost share of local (retail) inputs in the production of final consumer goods and services.[3] The economic logic of this is straightforward and more general than the specific model we articulate.

The same argument helps us to understand the heterogeneity across goods, once it is recognized that retail items have different cost shares of local and traded inputs. For example, we would expect haircuts and wages of domestic help to be perfectly correlated, a slope of one in the Figure, because arbitrage across these two low skilled occupations keeps the relative wage across them equalized in each location, and there are no traded inputs of consequence in the provision of haircuts. At the opposite extreme, if the

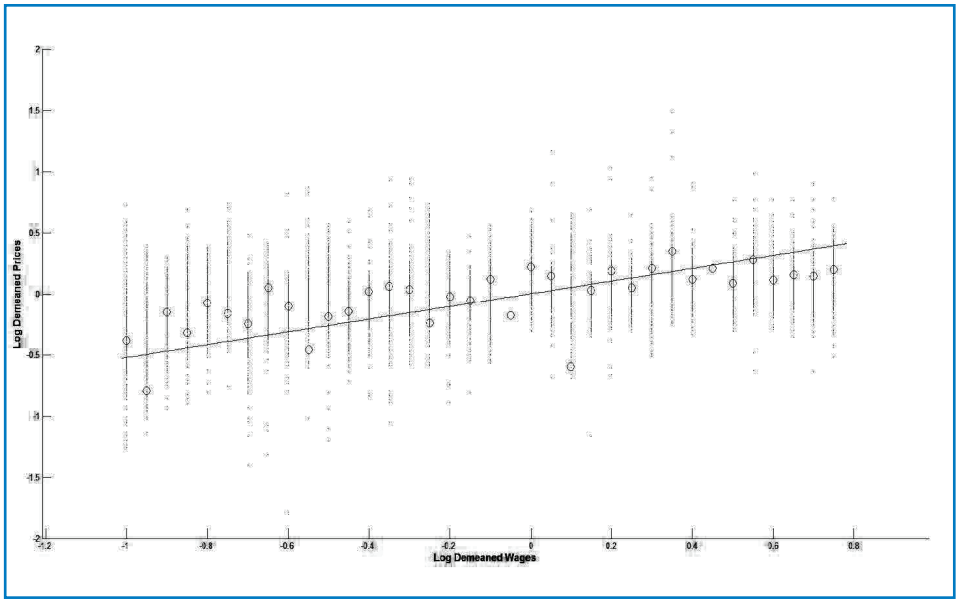

Figure 1 – Long run deviations from the Law of One Price and Purchasing Power Parity. Each point is the average (over the years 1990 to 2005) of the deviation of the price of a good or service from the world average. The open circles are consumption expenditure weighted averages of these deviations across goods (PPP). The estimated line through the scatter has a slope of 0.54. Source: Crucini and Yilmazkuday (2013), see endnote 2.

item is purely traded, involving no local inputs, then the correlation of the price with local wages should be zero. That is, while barriers to trade would generate price deviations across locations, these are not expected to be correlated with wages across these locations. In practice there are no retail items satisfying the strict definition, involving no cost from the manufacturer to the final consumer beyond a shipping cost. Gasoline sold at the retail level comes closest: it has a cost share of local inputs of about 0.19 based on U.S. National Income and Product Accounts data, giving rise to a modest positive slope for this highly traded commodity.

According to our model, what is not explained by differences in local input costs across cities can be attributed to trade costs, estimated as a function of distance and a border-effect, as in the paper by Charles Engel and John Rogers.[4] For the typical retail item, trade costs contribute to distribution costs comparably to international price deviations, while varying in relative importance as we move from gasoline to haircuts as described earlier. In contrast, after aggregation to the price level, local costs account for the lion's share of international price dispersion, because trade costs largely average out across goods.

This evidence suggests that in the long-run, the efficiency gains brought about by international trade in goods are broadly shared and reduce the cost of traded inputs globally. In contrast, the difference in the distribution and retailing costs of those goods is largely born by consumers in the location of the final sale.

Stepping a bit beyond the existing analysis, the fact that the share of services in consumption is growing relative to goods suggests that markets actually may be becoming more segmented over time despite significant reductions in official and natural barriers to trade in goods. This makes the study of the prices and efficiencies of services — including education, medicine, infrastructure, and distribution services — even more compelling going forward.

Time- Series Variation in Relative Wages and Prices

The long-run deviations depicted in Figure 1 are only part of the story. The time-series variation around these long-run averages is economically significant and remains poorly understood. To appreciate this, it is instructive to engage in a thought experiment and some casual empiricism. Since the collapse of the Bretton Woods system of fixed nominal exchange rates, most national currencies are traded in centralized financial markets. The relative value of currencies or nominal exchange rates varies continuously over time. The magnitudes of the daily changes are not trivial; changes of a single percentage point in a single day are not uncommon. Also, retail prices typically remain fixed for days, weeks, or even months, depending on the item. Because the nominal exchange rate is used to convert domestic and foreign prices into comparable units, it must be true that changes in the nominal exchange rate translate into changes in real exchange rates, the relative prices of goods and services when expressed in common currency. The same is true of relative wages. The implications of these changes in international relative prices and relative wages often depend on their duration or, put differently, how persistent the deviations are.

While it is true that few, if any, international retail prices respond immediately to developments in foreign exchange markets, it is instructive to examine how international relative prices fluctuate over time. For example, we can contrast a highly traded good, such as an apple, with a non-traded service, such as a haircut (Figure 2). The lines depicted in these charts are price of apples and haircuts in common currency units relative to the mean across locations. The figures focus on U.S.-Canada city pairs from the EIU data.

Obviously, the Law of One Price (LOP) fails in both of these markets. There are price deviations across these markets at each point in time and on

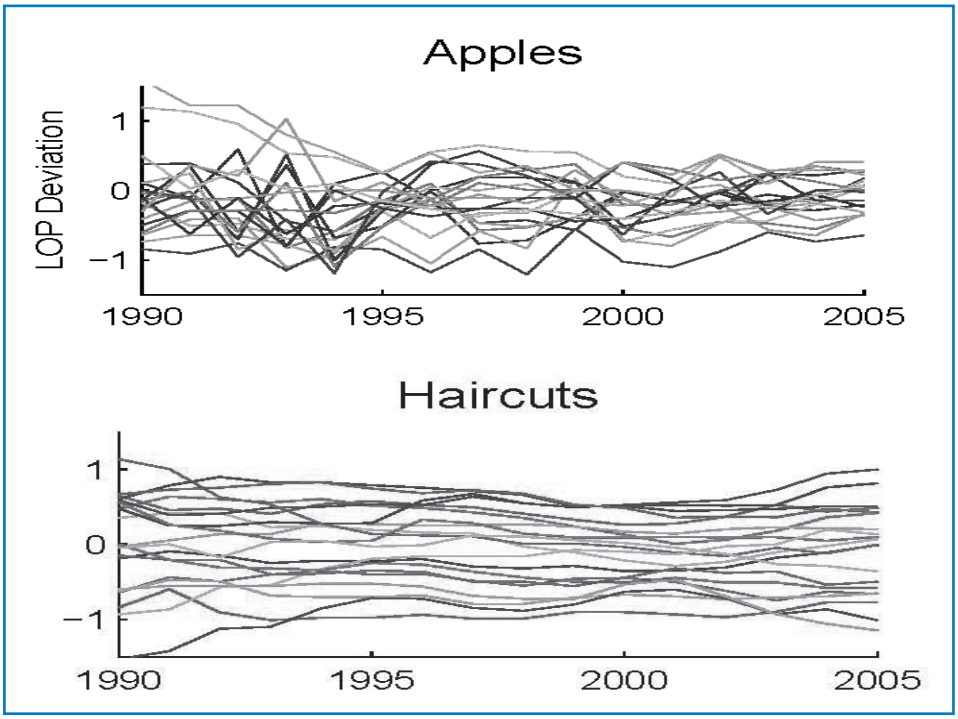

Figure 2 – Common currency relative prices of apples and haircuts, annually from 1990 to 2005. Each line is the price of an apple or haircut in a particular North American city relative to the North American average price of an apple or haircut. Source: Crucini and Telmer (2012).[5]

average over time (that is, in the long run). The deviations of apple prices across the cities of North America appear both more volatile and less persistent than the haircut prices. That is, when haircut prices are found to be high in one city relative to another in a particular year, one should expect this to be true on average over time. In contrast, the lines in the apple figure cross each other and the zero line indicating changes in the ranking of markets in terms of relative apple prices. In this sense, the relative price of apples is less predictable than that of haircuts, and one way to summarize predictability is by measuring persistence over time (does a high relative price today lead one to expect a high relative price in the future?). The higher persistence of price deviations in the case of haircuts relative to apples is consistent with the greater arbitrage costs in the case of haircuts than apples.

Mototsugu Shintani and I estimate good-specific persistence of LOP deviations for more than 250 goods and services (including apples and haircuts) across hundreds of international city pairs, including city pairs within the same country.[6] For OECD city pairs, the median half-life of LOP deviations is 19 months, well below the Purchasing Price Parity (PPP) consensus range of three to five years in studies using aggregate CPI data. Dividing the sample into goods and services, the median half-life is 24 months for services and 18 months for goods. These findings are broadly consistent with the contrast provided by apples and haircuts in Figure 2.

Starting in the 1960s, international macroeconomists adopted a two-sector trade model with one sector featuring non-traded services and the other traded goods. The prices of goods were treated as satisfying the LOP; PPP deviations were assumed to arise only from non-traded services. These assumptions were based more on intuition than hard measurement of relative prices and they collapsed under scrutiny by Charles Engel when he claimed to have shown that non-traded goods accounted for none of the variability in relative price levels.[7] Subsequent to this finding, virtually all macroeconomic models of nominal price level adjustment embody the assumption that all goods adjust to nominal exchange rates with a lag and at the same rate. In other words, when the dollar depreciates relative to the Euro by 10 percent over the course of a month, all goods are assumed to become more expensive in the United States relative to Europe, whether they are traded or not.

In joint work with Anthony Landry, I revisit Engel's variance decomposition using microeconomic data and show the similarity of real exchange rate behavior across traded and non-traded sub-indexes of the CPI is more a reflection of the inadequacies of the CPI data for the purpose at hand than deficiencies of the underlying economic theory.[8] Just as my work with Yilmazkuday finds long-run international price dispersion is rising in the cost share of non-traded inputs, my work with Landry finds that the contribution of local costs to the time-series variability of international relative prices is rising in this same cost share. Continuing with our earlier example, in moving from gasoline to haircuts, the contribution of local inputs (significantly, relative wage costs in retail) to time-series variability of the relative price of the final good increases from 30 percent to 91 percent. As Engel acknowledges, the CPI sub-indexes are poorly suited to identifying these differences. For example, the so-called traded category, food, includes both groceries and restaurant meals. According to U.S. NIPA data, the cost share of local inputs is about 0.30 for groceries and 0.75 for restaurant meals. Averaging the two sub-indexes to construct a food price sub-index completely obscures this difference. Not surprisingly, what results is a relative price that is driven roughly equally by local and traded input relative prices.

Having established heterogeneity in the variance of relative prices in the cross-section, I explore the structural sources of variability with coauthors Mototsugu Shintani and Takayuki Tsuruga.[9] In particular, we weigh in on a long-standing debate originating with Michael Mussa who emphasized the role of sticky prices and nominal shocks in accounting for real exchange rate variability and Alan Stockman who emphasized flexible prices and real shocks. Using a Calvo time-dependent pricing framework to encompass the two approaches, we demonstrate that the variance of real exchange rates is increasing in the frequency of price changes in the presence of real shocks and decreasing in the frequency of price changes in the presence of nominal shocks, exactly as Mussa and Stockman had argued. Given the observed frequency of price changes in the microeconomic data, our theoretical model predicts a real exchange rate volatility curve. The empirical shape the curve takes in practice depends on the relative importance of real and nominal shocks across goods.

Consider our two stark empirical examples to elucidate the thrust of the debate. Gasoline prices are not nominally rigid. For this reason, nominal exchange rate changes pass through quickly to the retail prices of gasoline. The same is true of the response of gasoline prices to changes in world demand and supply of oil. However, the composition of energy differs across locations, even within countries, so the real exchange rate for utilities will be volatile and persistent as the relative prices of different fuels changes. For example, as the United States increases its production of natural gas relative to crude petroleum, the relative price of utilities across regions changes, based on differences in regional energy composition (the Northeast relies more on heating oil and the West relies more on natural gas, for example). Now consider a haircut: haircut prices typically are posted on menus that change infrequently. Consequently, the relative price of haircuts across locations within a country is very stable in local currency. This implies that in the presence of floating nominal exchange rates,

the international relative price of haircuts will move closely with the nominal exchange rate and thus be dominated by nominal shocks.

Exploiting a cross-section of 66 sectors across the United States and Austria, Belgium, France, and Spain, we estimate what we call the "exchange rate volatility curve," which relates the conditional variance of real exchange rates to the infrequency of observed price changes, sector-by-sector. The curve is mostly downward sloping reflecting the dominance of real shocks in accounting for the variance of the international relative prices of most goods. At the one-month horizon, the role of nominal shocks is 40.6 percent when all goods and country pairs are pooled. However, the value drops to less than 15 percent at a horizon of one year.

How integrated are international markets? The answer depends on the market in question, the locations under examination, and the historical period. There are also some important interactions, such as the fact that retail goods by their very nature are combinations of traded goods and local services. Market integration ranges from largely complete in the case of primary commodities, such as oil, to barely begun, as in the cases of education and medical care. My research points to the necessity of microeconomic price data at the level of cities to address both microeconomic and macroeconomic facets of wage and price determination. The Center for International Price Research has a large and growing number of archives of international price data, posted along with references to papers that use them.[10]

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Subsidies for Health Products

Pascaline Dupas*

Adoption of health products could lessen the burden of infectious disease in developing countries. In a series of studies using experimental data from Kenya, my colleagues and I have explored the role of subsidies in both short- and long-run adoption of such products, and studied how subsidies might be targeted.

Full Subsidies Increase Adoption in Both the Short and Long Run

Three studies examine the role of subsidies in the adoption of preventative health technologies. Subsidies for such products can be justified in two ways: first, because the diseases they prevent are often infectious, these technologies generate public health benefits. Second, people may be more likely to know the health effectiveness of a product if they or others around them have had an opportunity to try it out cheaply in the past.

For subsidies to successfully generate such health and learning effects, households need to make effective use of the products they receive at a highly subsidized price. However, they may not do so for two reasons. First, households that are unwilling to pay a high monetary price for a product also may be unwilling to pay the non-monetary costs associated with daily use of the product, or may not actually need the product at all. In other words, indiscriminate subsidies may undermine the screening or allocative effect of prices. Second, subsidies could reduce the potential for psychological effects associated with paying for a product, such as a "sunk cost" effect in which people, having paid for a product, feel compelled to use it.

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In a first study, Jessica Cohen and I use a two-stage randomized design to estimate the distinct roles of the screening and psychological sunk-cost effects in the use of long-lasting anti-malarial bed nets in rural Kenya.[1] These nets cost $7, and they prevent bites from malaria-carrying mosquitoes while sleeping. We randomize the price at which prenatal clinics offered nets to pregnant women, who are particularly vulnerable to malaria. The clinics charged either nothing (free distribution), or 15, 30, or 60 U.S. cents. A random subset of women who had purchased a net for either 30 or 60 cents subsequently received a surprise rebate. We find that the rate at which pregnant women used the net (measured through home observation visits two months later) was relatively high (60 percent) and was completely independent of the price they paid for the net, either initially or after the surprise rebate. In other words, there is no evidence of either a screening or sunk-cost effect of prices in that context. On the other hand, our take-up results show that demand is very sensitive to price: the likelihood that pregnant women acquired a net fell from 99 to 39 percent when price increased from zero to 60 cents. Thus the effect of the subsidy on coverage, and hence its potential for public health outcomes, decreases very rapidly as the subsidy level declines.

In a second study conducted on a sample of households with school-aged children, also in Kenya, I find that demand becomes slightly less price sensitive if subsidies are in the form of vouchers that households have three months to redeem at local retail shops. Overall price remains the primary driver of demand, with the purchase rate dropping from 73 percent when the price is $0.60 to around 33 percent when the price reaches $1.50 (still an 80 percent subsidy) and to 6 percent when the price reaches $3.50 (corresponding to a 50 percent subsidy). Various marketing strategies (for example, making the morbidity burden or treatment costs salient, targeting mothers, or eliciting verbal commitments to invest in the product) fail to change the slope of the demand curve.[2] Here again, the price paid does not matter for usage. In fact, home observation visits show that the usage of bed nets acquired through a subsidized voucher was extremely high, rising from 60 percent at a three-month follow-up to over 90 percent after one year, and thus across all price groups, including recipients of fully subsidized net.

The results observed for bed nets do not appear highly specific. Nava Ashraf, James Berry, and Jesse Shapiro study the use of water purification products in Zambia; their two-stage design preceded the one I use with Cohen, and they find no evidence of use-inducing sunk-cost effects. However, they do find some evidence of a screening effect of prices.[3] Jennifer Meredith, Jonathan Robinson, Sarah Walker, and Bruce Wydick work with three products in four countries — rubber shoes to prevent worm infections, soap, and vitamins in Kenya, Uganda, Guatemala, and India — and find that demand is very sensitive to price in all contexts. Neither health information nor gender targeting helps increase demand at higher prices, but people use the products no matter the price they paid.[4]

Given these results, and the fact that mass distribution is cheaper than setting up a partial subsidy scheme through vouchers, full subsidies appear necessary if one wants to see adoption of bed nets to reach the coverage levels targeted by the international community. But how long can subsidies be in place? Can a once-off subsidy be enough to trigger learning and to generate sustained adoption? Or is there a risk that people are unwilling to pay for a product they once received for free? This could hap-

pen if people, when they see a product being introduced for free, come to feel entitled to receive this product for free (that is, they would "anchor" around the subsidized price). To gauge the relative importance of these effects, I look at the long-run effects of temporary subsidies on adoption of these products.[5] That study had two phases: in phase 1, taking data from study 2 described above, households were randomly assigned a price for a bed net, ranging from zero to $3.80. In phase 2 a year later, all households faced the same price of $2.30. By comparing the take-up rate of the second, uniformly-priced bed net across phase-1 price groups, I can test whether being exposed to a large or full subsidy in Phase 1 (which, as discussed above, considerably increases adoption in Phase 1) reduces or enhances willingness to pay for the bed net a year later. I find that it enhances it, suggesting the presence of a positive learning effect which dominates any potential anchoring effect. Interestingly, the learning effect trickles down to others in the community: households facing a positive price in the first year are more likely to purchase a bed net when the density of households around them who received a free or highly subsidized bed net is greater. Once bed net ownership is widespread, though, the transmission risk starts to decrease and the returns to private investments decrease: accordingly, those who have more subsidized neighbors in year one are less likely to invest in year two.

When Prices regain their Allocative Role: Medical Treatment

The studies discussed above find that price was not a good targeting mechanism to allocate malaria prevention tools (bed nets), and in fact that higher prices prevent positive spillovers on disease transmission associated with large bed net coverage. But in a study with Cohen and Simone Schaner using experimental data from the same region of Kenya, we find that price can be (to some extent) used as a targeting mechanism to allocate malaria treatment.[6] Targeting of malaria treatment is very important because of the negative spillovers that overuse of such treatments generates: it can delay or preclude proper treatment for the true cause of illness, waste scarce resources for malaria control, and may contribute to drug resistance among malaria parasites, making treatment of malaria harder in the long-run.

Price can be effective at targeting treatment when it's not effective at targeting prevention, because demand for treatment appears much less price-sensitive (especially among the poor) than demand for prevention. What's more, conditional on experiencing malaria-type symptoms, adults are much less likely to be malaria-positive than children. As with most treatments, though, the price per anti-malarial dose for adults (who need to take more pills) is higher than the price for children. Consequently, at a given price per pill, children (the key target for the subsidy) are on a flatter portion of the demand curve.

In addition to furthering our understanding of how price can be used to target health products in the developing world, a fourth study makes two contributions: 1) it highlights the trade-off inherent to subsidies for medications in environments with weak health system governance (which prevents conditioning the subsidy on a formal diagnostic); and 2) it points out that bundling subsidies for medications with subsidies for diagnostic tests has the potential to improve welfare impacts.

When Price is not an Effective Allocating Tool, what Allocation Mechanism can be used?

Two studies with Debopam Bhattacharya concern the question of how to efficiently allocate subsidized products. When budgets are such that only a small fraction of a target population can receive a given subsidy, but returns to the subsidy are heterogeneous across households (for example, some households can afford the product without the subsidy but others cannot), the eligibility rule used to decide who will receive the subsidy can have an important effect on the overall benefit arising from the subsidy program. We first consider the problem of allocating a fixed amount of treatment resources to a target population with the aim of maximizing the mean population outcome, and the dual problem of estimating the minimum cost of achieving a given mean outcome in the population by efficient targeting of the treatment.[7] We set-up an econometric framework for studying this problem and apply it to the design of welfare-maximizing allocation of subsidies for bed nets. Using the same data as in study 2 described above, we estimate that a government that can afford to distribute bed net subsidies to only 50 percent of its target population can, if using an allocation rule based on multiple covariates, increase bed net coverage by 17 to 20 percentage points relative to random allocation.

Bhattacharya, Shin Kanaya, and I then develop a method for estimating the predicted aggregate effect of a given subsidy-targeting rule, taking into account the spillover effects that one household's subsidization has on neighboring households' outcomes; and for estimating the error incurred in prediction due to ignoring the spillovers.[8] A key requirement of the method we propose is the availability of data to estimate the magnitude and shape of spillovers. In our application, we (here again) exploit data from one of the experimental Kenya studies discussed above, in which a subsidy for anti-malarial bed nets was assigned randomly across households. We show that ignoring treatment externalities in the estimation of aggregate policy impacts can yield large bias and, importantly, that the sign of this bias cannot be inferred solely from the sign of the externality. For example, when individual bed net use is increasing in neighborhood subsidy rates, as in our application, intuitive reasoning might suggest that ignoring this externality would lead to underestimation of the aggregate impact of

a targeted bed net subsidy program. However, this intuition is flawed and the correct answer depends on whether the average neighborhood subsidy rate under the proposed subsidy program would be higher or lower than the average neighborhood subsidy rate observed in the data used to estimate the parameters of interest.

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Ideology in the News Media

Matthew Gentzkow* and Jesse M. Shapiro**

In many traditional models of politics, such as the pioneering work of Anthony Downs, voters lack private incentives to become informed.[1] The news media therefore play a crucial role in any democracy, amortizing the costs of gathering and filtering news across many citizens, lowering the costs of acquiring political information, and strengthening private incentives to become informed.

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Their Profiles appear later in this issue.

Democracy might function poorly without the news media, but the special role of the media in providing information relevant to voting and other political decisions also endows it with significant power to shape how events are perceived. Anecdotal evidence suggests that the news media do, indeed, exercise significant discretion in how they present events. Consider, for example, the following three reports on a December 2, 2003 battle in the Iraqi city of Samarra:[2]

Fox News: "In one of the deadliest reported firefights in Iraq since the fall of Saddam Hussein's regime, U.S. forces killed at least 54 Iraqis and captured eight others while fending off simultaneous convoy ambushes."

New York Times: "American commanders vowed Monday that the killing of as many as 54 insurgents in this central Iraqi town would serve as a lesson to those fighting the United States, but Iraqis disputed the death toll and said anger against America would only rise."

Al Jazeera: "The U.S. military has vowed to continue aggressive tactics after saying it killed 54 Iraqis following an ambush, but commanders admitted they had no proof to back up their claims. The only corpses at Samarra's hospital were those of civilians, including two elderly Iranian visitors and a child."

These accounts are based on the same facts. But through selective omission, choice of words, and varying credibility ascribed to the primary source, they convey very different impressions of what transpired.

What drives the variation we see in how a given event is presented by different news outlets? Does the diversity of perspectives reflected in the quotes

above strengthen democracy, or undermine it? We have explored these questions in a series of theoretical and empirical papers about the role of ideology in the news media.

Theories of Media Bias

The model of media bias we develop was motivated by three empirical observations.[3] First, consumers tend to choose news outlets whose slant agrees with their own political beliefs. Second, they do not perceive themselves to be trading off quality in doing so, but rather judge these like-minded outlets to be more accurate and trustworthy than those they disagree with. Third, media firms appear to cater to this demand for like-minded news.

Our model begins with the observation that a Bayesian consumer, who is uncertain about the quality of an information source, will infer that the source is of higher quality when its reports conform to the consumer's prior expectations. A consumer who sees the headline, "Elvis spotted in Manhattan," in a newspaper at the supermarket checkout counter will rationally infer that the paper has low journalistic standards; this is far more likely than the alternative hypothesis that Elvis is in fact alive. By the same logic, a consumer who believes strongly that American troops never target civilians, or that humans are responsible for global warming, will rationally question the quality of a news source that suggests otherwise.

We use this fact as a foundation for a model in which consumers are rational, and media firms seek to develop a reputation for accuracy. Reputational concerns lead to a temptation to slant reports to the prior beliefs of customers, which can make all participants worse off. In the model, bias is lessened if the truth is likely to be learned after the media outlet makes its report. Competition provides such a verification mechanism and therefore can reduce bias.

This work builds on early theoretical contributions that identified two broad sources of media bias: supply-side factors, such as the objectives of governments,[4] owners[5], and journalists[6], and demand-side factors, such as voters' preferences for confirmatory information[7]and information-theoretic motives for coarsening information[8]. Our paper provides an additional rationale for consumer-driven bias.

Empirical Evidence on Media Bias

The fast-developing theoretical literature on media bias has created opportunities for empirical testing. Building on earlier work[9], we develop a text-based index of media slant based on whether a news outlet's language is more similar to that of a congressional Republican or Democrat.[10] The measure is built in an automated and scalable way, making it portable to other settings.

We use this measure to study the empirical forces determining the political slant of U.S. daily newspapers in 2005. Using zip code-level circulation data, we estimate a model of newspaper demand that explicitly incorporates slant, confirming an economically significant demand for like-minded news.

We then ask whether newspapers' choice of slant appears consistent with readers' preferences. We find that a meaningful portion of newspaper slant could be attributed to catering to consumer ideology, whereas factors like the identity of the newspaper's owner and the party affiliation of incumbent politicians matter much less.

A major limitation of this study is that most U.S. daily newspapers do not face head-to-head competition. This makes it difficult to study the effects of competition, a serious limitation because much of the policy directed at media markets is specifically oriented toward maintaining competition and ideological diversity.

To remedy this lack of recent data on newspaper competition, we turn to America's past. In the early twentieth century, the United States had hundreds of cities with competing daily newspapers. We use extant directories of U.S. newspapers to construct a cross-section of newspaper markets in 1924. The fact that newspapers at that time routinely declared explicit political affiliations meant that we did not need to resort to textual analysis to classify newspapers by ideology, although we did collect some quantitative content metrics to validate newspaper affiliations as a measure of ideology and to test some richer hypotheses about newspaper content.

We supplement our data on newspaper markets with detailed, town-level circulation data from 1924, supplied by the Audit Bureau of Circulations (and newly digitized), as well as anonymous cost and revenue data for a small sample of newspapers.

We use these data to build and estimate an economic model in which households demand like-minded news and newspapers compete for readers' subscription dollars and for advertising revenues.[11] We use the model to evaluate the role of competition in determining political affiliations, and to study the effects of various policies, both real and hypothetical.

We find that economic competition enhances ideological diversity; that the market undersupplies diversity; and that incorporating the two-sidedness of the news market is critical to evaluating the effect of public policy

Our historical data collection efforts also let us delve deeper into the connections between the media and the state. We use a panel of U.S. states from 1869–1928 to test for any effect of incumbent party transitions on the affiliations of entering and exiting newspapers.[12] Interestingly, despite anecdotal evidence that political patronage was an important source of newspaper funding in this period, we find little evidence that patronage resulted in distortions to the composition or content of the media. The only exception is during the Reconstruction South, when the return of Democrats to power is associated with a dramatic collapse in the importance of Republican newspapers.

The Effect of Newspaper Entry and Exit on Electoral Politics

America's past also offers a rich laboratory for studying the effects of newspapers on elections. We use the thousands of entries and exits of newspapers to estimate the effect of newspapers on voter turnout, voting patterns, and incumbency advantage.[13] We find that newspapers increase turnout, an effect driven mainly by the difference between having a newspaper and having no newspaper, rather than the difference between having a newspaper and having multiple competing papers. Interestingly, we also find that the effects on turnout in presidential elections die out with the emergence of radio and television, whereas newspapers remain important in stimulating turnout in congressional elections right up to the present. This finding is consistent with earlier work[14] showing that television was a better substitute for newspapers in national politics than in local politics.

We find no evidence that the political orientation of entering and exiting newspapers affects how local citizens vote. And, we find no clear evidence that newspapers systematically help or hurt incumbents. Thus, at least for the average newspaper, its primary effect is to stimulate political participation, rather than to help or hurt a particular political constituency.

Ideological Segregation Online and Offline

Motivated by concerns that the Internet is polarizing the electorate, we study the extent to which Internet news audiences are segregated along ideological lines.[15] We obtain detailed data on online news consumption, matched to data on household ideology. We define segregation using a standard metric which measures the extent to which conservatives are consuming news on the same news sites as other conservatives.

Our quantitative findings are surprising. We find that the average conservative's news diet consists of sources about as conservative as usatoday.com; the average liberal's diet is about as liberal as CNN.com. We also find that conservatives visit liberal sites and vice versa. For example, a visitor to rushlimbaugh.com is considerably more likely than the average Internet news consumer to visit nytimes.com in the same month.

The segregation of Internet news is higher than that of most (though not all) offline news media, but substantially lower than the segregation of face-to-face interactions with neighbors, co-workers, or family members.

We find no evidence that the Internet is becoming more segregated over time, despite an increasing proliferation of options.

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Life and Growth

Charles I. Jones*

During the twentieth century, life expectancy in the United States rose from less than 50 years to 77 years, while average incomes rose by about a factor of 7. Which change was more valuable? William Nordhaus famously posed this question to his friends and colleagues about a decade ago: which would you rather have, the health care system in 2000 but the average income in 1900, or the reverse? Based on this informal survey and on a range of other evidence, Nordhaus argued that the two changes were about equally important. The rise in longevity in the twentieth century was just as valuable as the more standard measure of economic growth.[1] Motivated in part by this observation, a number of my recent research papers explore the interplay between the value of life and economic growth.

The Value of Life and the Rise in Health Spending

Health spending was about 5 percent of GDP in the United States in 1960 and has risen to more than 17 percent in recent years. Importantly, this increase is not just a U.S. phenomenon: health spending as a share of GDP is rising in every OECD country for which there is data over this time period.[2] While part of the increase in the United States is surely due to particular institutional features of the U.S. economy, the fact that the health share is rising across a broad range of countries suggests that deeper economic forces may be at work.

My research with Robert Hall on this topic observes that standard utility functions — of the kind that economists use to study asset pricing, the labor-leisure tradeoff, and macroeconomic fluctuations — already contain a key ingredient that can deliver this type of "income effect" in health spending. In essence, consumption runs into strong diminishing returns during any given time period. These diminishing returns cause the value of life to rise disproportionately as we get richer, so that economic growth naturally tilts spending toward preserving life. Put more coarsely, as we get richer, which is more valuable: an additional flat-screen TV, another smart phone, or additional days of life to enjoy our already high standard of living? [3]

Quantitative analysis of this mechanism suggests that these effects can be substantial. For example, our baseline model indicates that it could be efficient to spend as much as 33 percent of GDP on healthcare by 2050, and even more in later years, assuming that economic growth continues. While this particular number is subject to a range of uncertainty, the more general point is that it could be economically efficient for society to spend ever-larger amounts of our GDP on life preservation as incomes continue to grow. This obviously introduces important questions about the nature of the financing of health expenditures at such high levels.[4] Still, the point remains: it may well be that much of the rise in health spending is a byproduct of economic growth — as we get richer, life is increasingly one of the most valuable goods we can purchase.

Life and Growth

If economic growth produces an income effect that tilts an economy's spending toward health care, a natural question arises: can this structural change in turn have feedback effects on the nature of economic growth itself? After all, some new technologies save lives — new vaccines, new surgical techniques, anti-lock brakes, and pollution scrubbers. Other technologies threaten lives — pollution, nuclear accidents, global warming, the rapid global transmission of disease, and bioengineered viruses. When technological change involves life and death as well as just higher consumption, how is our understanding of economic growth affected? Can the diminishing returns to consumption affect the direction of technological change itself? [5]

To begin, consider what might be called a "Russian roulette" model of economic growth. Suppose the overwhelming majority of new ideas are beneficial and lead to growth in consumption. However, there is a small chance that a new idea will be dangerous and cause substantial loss of life. Do discovery and economic growth continue forever in such a framework, or should society eventually decide that consumption is high enough and stop playing the game of Russian roulette?

The answer to this question hinges on the extent of diminishing returns to consumption, just as in the research on health spending. In particular, for standard preferences, it turns out that the diminishing returns are strong enough that growth is affected. In the simple Russian roulette example, once the decision maker is sufficiently rich, it can be optimal to stop research all together. The risks of a disaster may outweigh the possible gain in consumption as life gets increasingly valuable.

Of course, there are many technologies whose main purpose is explicitly to save lives. What if researchers can invent cures for cancer and safer transportation? In this case, one can show that the research process itself is affected. As society (endogenously) gets richer, the direction of technological change is affected.

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The returns to inventing life-saving ideas rises relative to the return to inventing new consumption goods and research shifts toward saving lives.

Evidence from R and D spending and patenting suggests that this kind of shift has been observed during the last 40 years. On the R and D side, the empirical measures are far from perfect. For example, not everything that an economist or business person would consider to be R and D is counted as such in the data, and the classification of R and D according to whether the goal is to save lives versus to provide new consumption or investment goods is imperfect. What we can say is that the fraction of R and D that is health-related rose from around 7 percent in 1960 to more than 25 percent in 2006 in the United States. A similar increase is also observed for OECD countries. On the patent side, Jeff Clemens documents that the fraction of patenting devoted to medical equipment and pharmaceuticals rose from 4 percent in 1963 to more than 13 percent in 1999. By these measures, it appears that technological change itself is shifting toward life-saving technologies.[6]

If indeed this shift in the direction of technological change is occurring, it has important implications for (non-health) consumption growth. In particular, the model suggests that such shifts may cause the optimal rate of consumption growth to slow, relative to the feasible rate that could be achieved if research efforts were balanced. Depending on modeling details, it could be that consumption growth is reduced by between 20 and 60 percent. Alternatively, it could be — as the Russian roulette example suggested — that it is optimal for consumption growth to slow all the way to zero. Future research is needed to better distinguish these cases.

Beyond GDP

Life expectancy at birth varies substantially across countries. For example, in 2007 it stood at 82.5 years in Japan, 80.8 years in France, 77.8 years in the United States, 72.6 years in China, and just 51.0 years in South Africa. Such differences surely have a substantial impact on standards of living. However, they are captured only imperfectly, if at all, in conventional measures such as GDP per person. The third project related to life and growth that I discuss here examines a broader measure of economic welfare that incorporates differences in life expectancy.[7]

It has long been appreciated that GDP is an imperfect welfare measure. In the 1970s, Nordhaus and James Tobin made progress in constructing a "Measure of Economic Welfare" that included leisure, household work, and urban disamenities. The United Nations Human Development Index adds together GDP per person, literacy rates, and life expectancy to create an index number. More recently, economists including Amartya Sen, Joseph Stiglitz, Gary Becker, Tomas Philippson, Rodrigo Soares, and Marc Fleurbaey have made progress on this question.[8]

In my research on this topic with Peter Klenow, we seek to combine data on consumption, leisure, life expectancy, and inequality to produce a broader welfare measure for a large number of countries. We use conventional utility functions from economics to tell us how to convert leisure, life expectancy, and inequality into consumption-equivalent values that can be added together. This exercise leads to three main findings.

First, our welfare measure and GDP per person turn out to be highly correlated. The correlation coefficient is 0.95. Not surprisingly, perhaps, countries that are successful according to GDP tend to be successful on other dimensions as well, and vice versa.

However, it would be a mistake to conclude that this means that comparisons based on GDP are adequate. Our second finding is that the differences for particular countries are often large, and systematically so. For example, many Western European countries have higher life expectancy, more leisure, and lower inequality than the United States, and these differences are quantitatively important. For France and Germany, for example, we find that each of these differences add more than 10 percentage points to their welfare measure. Whereas GDP per person in France and Germany in 2007 was about three fourths of the U.S. level, this gap is essentially eliminated when the broader measure of welfare is considered. Western Europe as a whole moves from 76.4 percent of the United States in terms of GDP per person all the way up to 95.3 percent in our consumption-equivalent welfare measure.

Our third finding is that the opposite happens when one looks at developing countries. Relative to the United States and Western Europe, these countries tend to have lower life expectancy, higher inequality, and sometimes less leisure. China, for example, loses ground when compared to the United States on each of these dimensions: its GDP per person in 2007 was 12.6 percent of that of the United States, but its welfare is only 5.0 percent of ours. Other examples are also enlightening. The AIDs epidemic is partly responsible for South Africa's low life expectancy of 51 years, and this effect alone is enormous: South Africa falls from 17 percent of the United States in terms of GDP to just 2.4 percent in terms of welfare.

Conclusion

As researchers seek to understand the economic role played by considerations of life and death, new insights have emerged. The careful consideration of life-and-death issues can help us to understand the tremendous rise in health spending in the United States and the OECD, the changing nature of economic growth over time, and differences in economic welfare across countries.

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Robert Topel, eds. (Chicago: University of Chicago Press, 2003).

2. *See Table 124 in "Health United States 2011", published by the National Center for Health Statistics, Hyattsville, Maryland, 2012.*

3. *For example, this is true with additively separable preferences where flow utility is logarithmic or for similar preferences in which marginal utility falls even faster (such as CRRA preferences with a risk aversion parameter bigger than one). See R. E. Hall and C. I. Jones, "The Value of Life and the Rise in Health Spending" NBER Working Paper No. 10737, September 2004, and* Quarterly Journal of Economics, *February 2007, Vol. 122 (1), pp. 39–72.*

4. *For example, see K. Baicker and J.S. Skinner, "Health Care Spending Growth and the Future of U.S. Tax Rates" NBER Working Paper No. 16772, September 2011.*

5. *See C. I. Jones, "Life and Growth", NBER Working Paper No. 17094, revised April 2013.*

6. *J. P. Clemens, "The Effect of U.S. Health Insurance Expansions on Medical Innovation," U.C. San Diego working paper, January 2013.*

7. *See C. I. Jones and P. J. Klenow, "Beyond GDP: Welfare across Countries and Time," NBER Working Paper No. 16352, September 2010, revision in progress.*

8. *See the working paper cited in the preceding note for a more detailed discussion of these contributions.*

NBER Profile: *Mario Crucini*

Mario Crucini is a Research Associate in the NBER's Program on International Finance and Macroeconomics. He is also a Professor of Economics at Vanderbilt University and Director of the Center for International Price Research there.

Crucini received his M.A. and Ph.D. in Economics from the University of Rochester and an Honors B.A. in Economics from the University of Western Ontario in Canada. He has held faculty appointments at the Wharton School, University of Pennsylvania; the Ohio State University; the Stern School of Business, New York University; and the Melbourne Business School.

Crucini's research focuses on international business cycle transmission, microeconomic and macroeconomic aspects of international price determination, and the role of commercial policy during the Great Depression. He serves as co-editor of the *Canadian Journal of Economics* and Associate Editor of the *Journal of Monetary Economics*. He is also President of the International Economics and Finance Society.

Crucini lives in Brentwood, Tennessee with his wife, Jill, and their twin boys, Gabriel and Christopher. The family enjoys travelling the world together, meeting new friends, and learning first-hand about history, culture, and language. Fall break, though, is always spent at a relaxing cabin in the Smoky Mountains!

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Pascaline Dupas is a Research Associate in the NBER's Programs on Children and Development Economics. She is also an assistant professor of Economics at Stanford University. Previously she held appointments at Dartmouth College and at the University of California, Los Angeles. She is a development economist studying the determinants of and returns to human capital accumulation (health and education) and technology adoption among self-employed households in sub-Saharan Africa.

Dupas studied at the Ecole Normale Supérieure and completed her Ph.D. in Economics at the Ecole des Hautes Études and Sciences Sociales in Paris in 2006. She is also a Fellow of the Bureau for Research and Economic Analysis of Development, and an affiliate of the Abdul Latif Jameel Poverty Action Lab, the Center for Effective Global Action, and Innovations for Poverty Action. Dupas currently holds an Alfred P. Sloan Research Fellowship and was recently awarded an NSF CAREER grant.

Dupas lives in Palo Alto with her husband, Kudzai, and their 2-year old daughter Naomi.

NBER Profile: *Matthew Gentzkow*

Matthew Gentzkow is a Research Associate in the NBER's Programs on Industrial Organization and Political Economy and the Richard O. Ryan Professor of Economics and Neubauer Family Faculty Fellow at the University of Chicago's Booth School of Business. He is also a co-editor of the *American Economic Journal: Applied Economics.* He studies empirical industrial organization and political economy, with a specific focus on media industries.

Gentzkow attended Harvard University, receiving his bachelor's degree in 1997, master's degree in 2002, and Ph.D. in 2004, all in Economics. He received an Alfred P. Sloan Research Fellowship in 2009 and has been awarded a National Science Foundation grant for research on media bias. His research has been published in the *Journal of Political Economy*, the *Quarterly Journal of Economics*, the *American Economic Review*, and *Econometrica*.

NBER Profile: *Charles I. (Chad) Jones*

Chad Jones is a Research Associate in the NBER's Program on Economic Fluctuations and Growth and the STANCO 25 Professor of Economics at Stanford University's Graduate School of Business. He received his Ph.D. in Economics from MIT in 1993 and his A.B. in Economics from Harvard University in 1989.

After teaching at Stanford from 1993–2001, Jones was a member of the economics faculty at the University of California, Berkeley from 2001 to 2008. He returned to Stanford in 2008.

Jones studies long-run economic growth, and in particular has examined the fundamental sources of growth in incomes over time and the reasons underlying the enormous differences in standards of living across countries. In recent years, he has focused on the economic causes behind the rise in health spending and longevity.

Jones is the author of two textbooks, *Introduction to Economic Growth* (2013, with Dietrich Vollrath) and *Macroeconomics* (2011). He has been honored as a National Fellow of the Hoover Institution, a John M. Olin Foundation Faculty Fellow, and an Alfred P. Sloan Foundation Research Fellow.

NBER Profile: *Jesse Shapiro*

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Shapiro attended Harvard University, where he earned a bachelor's degree in economics and a master's degree in statistics in 2001, and a Ph.D. in economics in 2005.

Before joining the Chicago Booth faculty, he was the inaugural Becker Fellow at the Becker Center on Chicago Price Theory. He was also an Alfred P. Sloan Research Fellow in 2011–12.

Shapiro is co-editor of the *Journal of Political Economy*, and an Associate Editor of *American Economic Journal: Applied Economics.*

Shapiro lives in Chicago with his wife, Emily Oster — who is also an economist at Chicago Booth and is a Faculty Research Fellow in the NBER's Labor Studies, Health Care, and Development Economics Programs — and their daughter Penelope.

Conferences

The 24th NBER-TCER-CEPR Conference Held in Tokyo

The 24th NBER-TCER-CEPR Conference on "Experiments for Development: Achievements and New Directions" took place in Tokyo on March 18 and 19, 2013. This meeting was sponsored jointly by: the Centre for Economic Policy Research in London; NBER; the Tokyo Center for Economic Research; and the National Graduate Institute for Policy Studies (GRIPS). Organizers Shin-ichi Fukuda, University of Tokyo and TCER, Takeo Hoshi, University of California, San Diego and NBER, and Tetsushi Sonobe, GRIPS, chose these papers to discuss:

- **David McKenzie**, **Francisco Campos, Aidan Coville, Ana Fernandes**, and **Markus Goldstein**, The World Bank, "Learning from the Experiments that Never Happened: Lessons from Trying to Conduct Randomized Evaluations of Matching Grant Programs in Africa"

- **Yukichi Mano**, Hitotsubashi University, and **Tetsushi Sonobe**, "Teaching KAIZEN to Small Business Owners: An Experiment in a Metalworking Cluster in Nairobi"

- **Alistair Munro,** GRIPS, and **Bereket Kebede, Marcela Tarazona-Gomez,** and **Arjan Verschoor,** University of East Anglia, "Autonomy and Efficiency. An Experiment on Household Decisions in Two Regions of India"

- **Tahir Andrabi**, Pomona College; **Jishnu Das**, The World Bank; and **Asim Ijaz Khwaja**, Harvard University and NBER, "Understanding Educational Markets: A Sentinel Approach"

- **Tomoya Matsumoto**, GRIPS, "Disseminating New Farming Practice among Small Scale Farmers: Experimental Intervention in Uganda"

- **Alex Oo** and **Russell Toth**, University of Sydney, "Using Framed Field Experiments to Understand Market Behavior in Developing Countries: Do Community-Sanctioned Social Pressures Constrain Microenterprise Growth?"

- **Hisaki Kono**, Institute of Developing Economies, "Microcredit Games with Noisy Signals: Collusion or Free-Riding?"

Summaries of these papers may be found at: http://www.nber.org/confer/2013/TRIO13/summary.html

Understanding the Capital Structures of Non-Financial and Financial Corporations

NBER Research Associates Viral Acharya of NYU's Stern School of Business, Heitor Almeida of the University of Illinois at Urbana-Champaign, and Malcolm Baker of the Harvard Business School organized an NBER conference on "Understanding the Capital Structures of Non-Financial and Financial Corporations" which took place on April 5 and 6, 2013. They selected these papers to discuss:

- **Alexander Ljungqvist**, New York University and NBER, and **Florian Heider**, European Central Bank, "As Certain as Debt and Taxes: Estimating the Tax Sensitivity of Leverage from Exogenous State Tax Changes" (NBER Working Paper No. 18263)

- **Jaewon Choi** and **Dirk Hackbarth**, University of Illinois, Urbana-Champaign, and **Josef Zechner**, Vienna University of Economics and Business, "Granularity of Corporate Debt"

- **Arvind Krishnamurthy** and **Annette Vissing-Jorgensen**, Northwestern University and NBER, "Short-term Debt and Financial Crises: What We Can Learn from U.S. Treasury Supply"

- **Isil Erel**, Ohio State University; **Stewart Myers**, MIT and NBER; and **James Read**, The Brattle Group, "Capital Allocation"

- **Franklin Allen**, University of Pennsylvania and NBER, and **Elena Carletti**, European University Institute, "Deposits and Bank Capital Structure"

- **Konstantin Milbradt**, MIT, and **Martin Oehmke**, Columbia University, "Maturity Rationing and Collective Short-Termism"

- **Anat Admati** and **Paul Pfleiderer**, Stanford University; **Peter DeMarzo**, Stanford University and NBER; and **Martin Hellwig**, Max Planck Institute, "Debt Overhang and Capital Regulation"

- **Shekhar Aiyar**, International Monetary Fund; **Charles Calomiris**, Columbia University and NBER; **John Hooley** and **Yevgeniya Korniyenko**, Bank of England; and **Tomasz Wieladek**, London Business School, "The International Transmission of Bank Capital Requirements: Evidence from the UK"

- **Andres Almazan**, University of Texas at Austin; **Adolfo de Motta**, McGill University; and **Sheridan Titman**, University of Texas, Austin and NBER, "Debt, Labor Markets, and the Creation and Destruction of Firms"

- **John Graham**, Duke University and NBER; **Mark Leary**, Washington University in St. Louis; and **Michael Roberts**, University of Pennsylvania and NBER, "A Century of Capital Structure: The Leveraging of Corporate America"

Summaries of these papers may be found at: http://www.nber.org/confer/2013/UCSs13/summary.html

Twenty-eighth Annual Conference on Macroeconomics

The NBER's Twenty-eighth Annual Conference on Macroeconomics, organized by Research Associates Jonathan Parker of Northwestern University and Michael Woodford of Columbia University, took place in Cambridge on April 12 and 13. These papers were discussed:

- **Elena Asparouhova**, University of Utah; **Peter Bossaerts** and **Nilanjan Roy**, California Institute of Technology; and **William Zame**, University of California, Los Angeles, "Experiments on the Lucas Asset Pricing Model"

- **Venky Venkateswaran**, Pennsylvania State University, and **Randall Wright**, University of Wisconsin, Madison and NBER, "Pledgability and Liquidity: A New Monetarist Model of Financial and Macroeconomic Activity"

- **Paul Beaudry**, University of British Columbia and NBER, and **Franck Portier**, Toulouse School of Economics, "Understanding Non-Inflationary Demand Driven Business Cycles"

- **Martin Lettau**, University of California, Berkeley and NBER, and **Sydney Ludvigson**, New York University and NBER, "Shocks and Crashes" (NBER Working Paper No. 16996)

- **Francesco Bianchi**, Duke University, and **Leonardo Melosi**, Federal Reserve Bank of Chicago, "Dormant Shocks and Fiscal Virtue"

- **Kfir Eliaz**, Brown University, and **Rani Spiegler**, Tel Aviv University, "Reference Dependence and Labor-Market Fluctuations"

Summaries of these papers may be found at: http://www.nber.org/confer/2013/macro13/summary.html

Economics of Culture and Institutions

An NBER Conference on the Economics of Culture and Institutions took place in Cambridge on April 13, 2013. NBER Research Associate Alberto Bisin of New York University and NBER Faculty Research Fellow Paola Giuliano of the University of California, Los Angeles, organized the meeting. These papers were discussed:

- **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)
- **Saumitra Jha**, Stanford University, and **Alberto Diaz-Cayeros**, University of California, San Diego, "Does Contract Failure Foster Ethnic Assimilation? Evidence from Cochineal in Mexico"
- **David Atkin**, Yale University and NBER, "The Caloric Costs of Culture: Evidence from Indian Migrants"
- **Shang-Jin Wei**, Columbia University and NBER; **Xiaobo Zhang**, International Food Policy Research Institute; and **Yin Liu**, Tsinghua University, "Status Competition and Housing Prices" (NBER Working Paper No. 18000)
- **Davide Ticchi** and **Andrea Vindigni**, IMT Institute for Advanced Studies Lucca, and **Thierry Verdier**, Paris-Jourdan Sciences Economiques, "Democracy, Dictatorship and the Cultural Transmission of Political Values"
- **Robert Akerlof**, University of Warwick, "Duty, Anger, and Compliance"
- **Christine Binzel**, University of Heidelberg, and **Jean-Paul Carvalho**, University of California, Irvine, "Education, Social Mobility, and Religious Movements: A Theory of the Islamic Revival in Egypt"

Summaries of these papers may be found at: http://www.nber.org/confer/2013/CIs13/summary.html

Innovation Policy and the Economy

The NBER's fourteenth annual Conference on Innovation Policy and the Economy took place in Washington on April 23, 2013. The conference was organized by NBER Research Associates Josh Lerner of Harvard University and Scott Stern of MIT. The following papers were discussed:

- **Liran Einav** and **Jonathan Levin**, Stanford University and NBER, "The Data Revolution and Economic Analysis"
- **Aaron Chatterji**, Duke University, and **Edward Glaeser** and **William Kerr**, Harvard University and NBER, "Clusters of Entrepreneurship and Innovation"
- **Timothy Simcoe**, Boston University and NBER, "Industry Standards and Innovation Policy"
- **Brett Danaher**, Wellesley College, and **Michael Smith** and **Rahul Telang**, Carnegie-Mellon University, "Piracy and Copyright Enforcement Mechanisms"
- **Ajay Agrawal**, University of Toronto and NBER, and **Christian Catalini** and **Avi Goldfarb**, University of Toronto, "Crowdfunding and Innovation"

Summaries of these papers may be found at: http://www.nber.org/confer/2013 /IPEs13/summary.html

Conference on the Economics of Aging

An NBER Conference on the Economics of Aging, organized by David Wise of NBER and Harvard University, took place on May 10 and 11 in Arizona. These papers were discussed:

- **Angus Deaton**, Princeton University and NBER, and **Arthur Stone**, Stony Brook University, "Grandpa and the Snapper: the Well-Being of the Elderly Who Live with Children"
- **James Poterba**, MIT and NBER; **Steven Venti**, Dartmouth College and NBER; and **David Wise**, "The Nexus of Social Security Benefits, Health, and Wealth at Death" (NBER Working Paper No. 18658)
- **David Cutler**, Harvard University and NBER, **Kaushik Ghosh**, NBER; and **Mary Beth Landrum**, Harvard School of Public Health, "Evidence for Significant Compression of Morbidity in the Elderly U.S. Population"
- **James Banks** and **Elaine Kelly**, Institute for Fiscal Studies, and **James Smith**, RAND Corporation, "Spousal Health Effects: the Role of Selection"
- **Michael Hurd**, RAND Corporation and NBER, and **Pierre Carl Michaud** and **Susann Rohwedder**, RAND Corporation, "The Lifetime Risk of Nursing Home Use"
- **Arie Kapteyn** and **Erik Meijer**, University of Southern California, "A Comparison of Different Measures of Health and their Relation to Labor Force Transitions at Older Ages"
- **Amitabh Chandra**, Harvard University and NBER; **David Malenka**, Dartmouth-Hitchcock Medical Center; and **Jonathan Skinner**, Dartmouth College and NBER, "On the Diffusion of Drug-Eluting Stents"
- **Florian Heiss**, University of Mainz; **Daniel McFadden**, University of California, Berkeley and NBER; **Till Stowasser**, Würzburg; and **Joachim Winter**, University of Munich, "Understanding the SES Gradient in Health Among the Elderly: The Role of Childhood Circumstances"
- **John Beshears**, Stanford University and NBER; **James Choi**, Yale University and NBER; **David Laibson**, Harvard University and NBER; and **Brigitte Madrian**, Harvard University and NBER, "Who Uses the Roth 401(k), and How Do They Use It?"
- **Gabor Kezdi**, Central European University; and **Robert Willis**, University of Michigan and NBER, "Expectations, Aging and Cognitive Decline"
- **Axel Boersch-Supan**, MEA and NBER, "Early Retirement, Mental Health and Social Networks"
- **Esther Duflo** and **Abhijit Banerjee**, MIT and NBER, and **Sharon Barnhardt**, Indian Institute of Management, "Nutrition, Iron Deficiency Anemia, and the Demand for Iron Fortified Salt: Evidence from an Experiment in Rural Bihar"

Summaries of these papers may be available at: http://conference.nber.org/confer/2013/AGs13/summary.html

Poverty, Inequality, and Social Policy

An NBER/Universities' Research Conference on "Poverty, Inequality, and Social Policy" took place in Cambridge on May 10 and 11, 2013. NBER Research Associates Phillip Levine of Wellesley College and Melissa Schettini Kearney of the University of Maryland organized the conference and chose these papers to discuss:

- **Marianne Bitler**, University of California, Irvine and NBER; **Hilary Hoynes**, University of California, Davis and NBER; and **Elira Kuka**, University of California, Davis, "Do In-Work Tax Credits Serve as a Safety Net?"
- **Bhashkar Mazumder**, Federal Reserve Bank of Chicago, and **Sarah Miller**, University of Michigan, "The Effects of the Massachusetts Health Reform on Financial Well Being"
- **Joanne Hsu**, Federal Reserve Board, and **David Matsa** and **Brian Melzer**, Northwestern University, "Unemployment Insurance and Consumer Credit"
- **Patricia Anderson**, Dartmouth College and NBER; **Kristin Butcher**, Wellesley College and NBER; **Hilary Hoynes**; and **Diane Whitmore Schanzenbach**, Northwestern University and NBER, "Understanding Food Security Over the Great Recession"
- **Lucie Schmidt**, Williams College, and **Lara Shore-Sheppard** and **Tara Watson**, Williams College and NBER, "The Effect of Safety Net Programs on Food Insecurity"
- **Hannes Schwandt**, Princeton University, "Unlucky Cohorts: Income, Health Insurance, and AIDS Mortality of Recession Graduates"
- **Ariel Kalil**, University of Chicago; **Magne Mogstad**, University College London; and **Mari Rege** and **Mark Votruba**, Case Western Reserve University, "Father Presence and the Intergenerational Transmission of Educational Attainment"
- **Phillip Levine** and **Melissa Schettini Kearney**, "Income Inequality and the Decision to Drop Out of High School"
- **Anna Aizer**, Brown University and NBER; **Florencia Borrescio Higa**, Brown University; and **Hernan Winkler**, University of California, Los Angeles "Impact of Rising Inequality on Health at Birth"
- **Adriana Lleras-Muney**, University of California, Los Angeles and NBER; **Anna Aizer**; **Joseph Ferrie**, Northwestern University and NBER; and **Shari Eli**, University of Toronto, "The Long Term Impact of Means-Tested Transfers: Evidence from the Mother's Pension Program"
- **Anuj Shah**, University of Chicago; **Sendhil Mullainathan**, Harvard University and NBER; and **Eldar Shafir,** Princeton University, "Poverty Impedes Cognitive Function"

Summaries of these papers are available at: http://conference.nber.org/confer/2013/URCs13/summary.html

The Labor Market in the Aftermath of the Great Recession

An NBER Conference on "The Labor Market in the Aftermath of the Great Recession" took place in Cambridge on May 17 and 18, 2013. NBER Research Associates Alexandre Mas of Princeton University and David Card, University of California, Berkeley, organized the program. These papers were discussed:

- **Joseph Altonji** and **Lisa Kahn**, Yale University and NBER, and **Jamin Speer**, Yale University, "Cashier or Consultant? Entry Labor Market Conditions, Field of Study, and Career Success"
- **Jesse Rothstein**, University of California, Berkeley and NBER, "Disability Insurance and the Business Cycle?"
- **Edward Lazear** and **Kathryn Shaw**, Stanford University and NBER, and **Christopher Stanton**, University of Utah, "Making Do with Less: Working Harder During Recessions"
- **Giuseppe Moscarini**, Yale University and NBER, and **Fabien Postel-Vinay**, University of Bristol, "Did the Job Ladder Fail after the Great Recession?"
- **Marianne Bitler**, University of California, Irvine and NBER, and **Hilary Hoynes**, University of California, Davis and NBER, "The More Things Change, the More They Stay the Same: The Safety Net, Living Arrangements, and Poverty in the Great Recession"
- **Kory Kroft**, University of Toronto; **Fabian Lange**, McGill University; **Matthew Notowidigdo**, University of Chicago and NBER; and **Lawrence Katz**, Harvard University and NBER, "Duration Dependence and the Great Recession"
- **Thomas Lemieux**, University of British Columbia and NBER, and **Florian Hoffmann**, University of British Columbia, "Unemployment in the Great Recession: A Comparison of Germany, Canada and the United States"
- **Erling Barth**, University of Oslo and NBER; **Jim Davis**, Bureau of the Census; and **Richard Freeman**, Harvard University and NBER, "Dispersion of Employment Growth and Wages among Establishments in Recession and Recovery"
- **Lucia Foster** and **Cheryl Grim**, Bureau of the Census, and **John Haltiwanger**, University of Maryland and NBER, "Reallocation in the Great Recession: Cleansing or Not?"
- **Paul Beaudry**, University of British Columbia and NBER; **David Green**, University of British Columbia; and **Benjamin Sand**, York University, "The Great Reversal in the Demand for Skill" (NBER Working Paper No. 18901)
- **Daron Acemoglu** and **David Autor**, MIT and NBER; **David Dorn**, CEMFI; **Gordon Hanson**, University of California, San Diego and NBER; and **Brendan Price**, MIT, "Import Competition and the Great U.S. Employment Sag of the 2000s"
- **Michael Elsby**, University of Edinburgh; **Donggyun Shin**, Kyung Hee University; and **Gary Solon**, Michigan State University and NBER, "Wage Adjustment in the Great Recession"
- **Till von Wachter**, Columbia University and NBER, "The Effect of the Great Recession on Older Workers"

Summaries of these papers may be available at: http://conference.nber.org/confer/2013/LMs13m/summary.html

NBER News

Chetty Receives John Bates Clark Medal

NBER Research Associate Raj Chetty received the American Economics Association's John Bates Clark Medal for 2013. This annual award recognizes the American economist under the age of 40 who has made the most substantial contribution to economic thought and knowledge. This year's prize highlights Chetty's research contributions in public economics and the economics of education. It calls attention to his work on the role of tax salience, his analysis of how various types of adjustment costs affect behavioral responses to taxation, and his research using administrative record databases to estimate key parameters that bear on the design of social insurance and educational programs. Chetty is a Professor of Economics at Harvard University and one of the co-directors of the NBER's Public Economics Program. He is also a member of the NBER's Programs on Aging and Economic Fluctuations and Growth. He received his B.A. in 2000 and his Ph.D. in 2003 from Harvard University.

Other current NBER Research Associates who have received the Clark Medal include Daniel McFadden, Martin S. Feldstein, Joseph E. Stiglitz, James J. Heckman, Jerry A. Hausman, Sanford J. Grossman, Paul R. Krugman, Lawrence H. Summers, David Card, Kevin M. Murphy, Andrei Shleifer, Steven Levitt, Daron Acemoglu, Susan C. Athey, Emmanuel Saez, Esther Duflo, Jonathan Levin, and Amy Finkelstein. Gary Becker, who was an NBER affiliate from 1957 until 1979, also received the Clark Medal, as did the late Milton Friedman and Zvi Griliches, both of whom were NBER affiliates.

Program and Working Group Meetings

Law and Economics

The NBER's Program on Law and Economics, directed by Christine Jolls of Yale Law School, met in Cambridge on February 28 and March 1, 2013. These papers were discussed:

- **Alexander Dyck**, University of Toronto, and **Adair Morse** and **Luigi Zingales**, University of Chicago and NBER, "How Pervasive is Corporate Fraud?"
- **Edward Glaeser**, Harvard University and NBER, and **Cass Sunstein**, Harvard Law School, "Why Does Balanced News Produce Unbalanced Views?"(NBER Working Paper No. 18975)
- **Scott Baker**, Washington University School of Law, and **Albert Choi**, University of Virginia Law School, "Reputation and Litigation: Using Formal Sanctions to Control Informal Sanctions"
- **Louis Kaplow**, Harvard Law School and NBER, "Optimal Multistage Adjudication"
- **Joshua Fischman**, Northwestern University School of Law, "Measuring Inconsistency, Indeterminacy, and Error in Adjudication"
- **Steven Shavell**, Harvard Law School and NBER, "Risk Aversion and the Optimality of Attenuated Legal Change"

Special Session on Corporate Governance

- **John Matsusaka** and **Oguzhan Ozbas**, University of Southern California, "Managerial Accommodation, Proxy Access, and the Cost of Shareholder Empowerment"
- **Martijn Cremers**, University of Notre Dame, and **Allen Ferrell**, Harvard Law School, "Thirty Years of Shareholder Rights and Stock Returns"
- **Fabio Braggion**, Tilburg University, and **Mariassunta Giannetti**, Stockholm School of Economics, "At the Origins of the Non-Voting Shares' Discount: Investor Preferences vs. Fundamentals"
- **Kose John**, New York University, and **Dalida Kadyrzhanova**, University of Maryland, "Managerial Entrenchment Waves"

Summaries of these papers may be found at: http://www.nber.org/confer/2013/LEs13/summary.html

Productivity, Innovation, and Entrepreneurship Meeting

The NBER's Program on Productivity, Innovation, and Entrepreneurship, directed by NBER Research Associates Nick Bloom of Stanford University and Josh Lerner of the Harvard Business School, met in Cambridge on March 15, 2013. These papers were discussed:

- **Daniel Paravisini**, London School of Economics and NBER, and **Antoinette Schoar**, MIT and NBER, "The Information and Agency Effects of Scores: Randomized Evidence from Credit Committees"
- **Eric Budish**, University of Chicago; **Benjamin Roin**, Harvard Law School; and **Heidi Williams**, MIT and NBER, "Do Fixed Patent Terms Distort Innovation? Evidence from Cancer Clinical Trials"
- **Pierre Azoulay**, MIT and NBER; **Jeffrey Furman**, Boston University and NBER; and **Joshua Krieger** and **Fiona Murray**, MIT, "Retractions" (NBER Working Paper No. 18499)
- **Daniel Bradley** and **Incheol Kim**, University of South Florida, and **Xuan Tian**, Indiana University, "Providing Protection or Encouraging Holdup? The Effects of Labor Unions on Innovation"
- **Karthik Krishnan**, Northeastern University; **Debarshi Nandy**, Brandeis University; and **Manju Puri**, Duke University and NBER, "Increased Access to Financing and Firm Productivity"
- **Sharon Belenzon** and **Aaron Chatterji**, Duke University, "Eponymous Entrepreneurs"
- **Amitabh Chandra**, Harvard University and NBER; **Amy Finkelstein**, MIT and NBER; **Adam Sacarny**, MIT; and **Chad Syverson**, University of Chicago and NBER, "Healthcare Exceptionalism? Productivity and Allocation in the U.S. Healthcare Sector"

Summaries of these papers may be found at: http://www.nber.org/confer/2013/PRs13/summary.html

International Trade and Investment

The NBER's Program on International Trade and Investment met in Cambridge on March 22 and 23, 2013. Program Director Robert Feenstra of University of California, Davis, organized the meeting. These papers were discussed:

- **Alberto Cavallo**, MIT; **Brent Neiman**, University of Chicago and NBER; and **Roberto Rigobon**, MIT and NBER, "Product Introduction, Currency Unions, and the Real Exchange Rate" (NBER Working Paper No. 18563)

- **JaeBin Ahn**, International Monetary Fund, "Estimating the Direct Impact of Bank Liquidity Shocks on the Real Economy: Evidence from Letter-of-Credit Import Transactions in Colombia"

- **Dennis Novy**, University of Warwick, and **Alan Taylor**, University of Virginia and NBER, "Trade and Uncertainty"

- **Andrei Levchenko**, University of Michigan and NBER, and **Jing Zhang**, University of Michigan, "Ricardian Productivity Differences and the Gains from Trade"

- **Robert Johnson**, Dartmouth College and NBER, and **Andreas Moxnes**, Dartmouth College, "Technology, Trade Costs, and the Pattern of Trade with Multi-Stage Production"

- **Xue Bai**, Pennsylvania State University; **Kala Krishna**, Pennsylvania State University and NBER; and **Hong Ma**, Tsinghua University, "How You Export Matters: Export Mode, Learning, and Productivity in China"

- **Brian Kovak**, Carnegie Mellon University; **Ryan Michaels**, University of Rochester; and **David Byrne**, Federal Reserve Board, "Price and Quality Dispersion in an Offshoring Market: Evidence from Semiconductor Production Services"

Summaries of these papers may be found at: www.nber.org/confer/2013/ITIs13/summary.html

Environmental and Energy Economics

The NBER's Program on Environmental and Energy Economics met in Cambridge on March 28 and 29, 2013. NBER Research Associates Lawrence Goulder of Stanford University and Wolfram Schlenker of the University of California, Berkeley, organized the meeting. These papers were discussed:

- **Maureen Cropper**, University of Maryland and NBER; **Kabir Malik**, University of Maryland; **Alexander Limonov**, Resources for the Future; and **Anoop Singh**, Indian Institute of Technology (Kanpur), "The Impact of Electricity Sector Restructuring on Coal-fired Power Plants in India"

- **Martin Weitzman**, Harvard University and NBER, "A Primer on Discounting Climate Risks"

- **Joshua Graff Zivin**, University of California, San Diego and NBER; **Matthew Kotchen**, Yale University and NBER; and **Erin Mansur**, Dartmouth College and NBER, "Spatial and Temporal Heterogeneity of Marginal Emissions: Implications for Electric Cars and Other Electricity-Shifting Policies" (NBER Working Paper No. 18462)

- **Timothy Beatty**, University of Minnesota, and **Jay Shimshack**, Tulane University, "Air Pollution and Children's Respiratory Health: A Cohort Analysis"

- **Cloe Garnache**, University of California, Davis, "Fish, Floods and Farmers: The Joint Production of Ecosystem Services on a Working Landscape"

- **Christopher Knittel** and **Robert Pindyck**, MIT and NBER, "The Simple Economics of Commodity Price Speculation"

- **Mark Jacobsen**, University of California, San Diego and NBER, and **Arthur van Benthem**, University of Pennsylvania, "Vehicle Scrappage and Gasoline Policy"

- **Eva Arceo-Gomez**, CIDE; **Rema Hanna**, Harvard University and NBER; and **Paulina Oliva**, University of California, Santa Barbara and NBER, "Does the Effect of Pollution on Infant Mortality Differ Between Developing and Developed Countries? Evidence from Mexico City" (NBER Working Paper No. 18349)

- **Judson Boomhower**, University of California, Berkeley, and **Lucas Davis**, University of California, Berkeley and NBER, "Free Riders and the High Cost of Energy-Efficiency Subsidies"

- **Emanuele Massetti** and **Robert Mendelsohn**, Yale University, and **Shun Chonabayashi**, Cornell University, "How Does Temperature Affect Land Values in the East of the US?"

- **Matthew Kahn**, University of California, Los Angeles and NBER, and **Frank Wolak**, Stanford University and NBER, "Using Information to Improve the Effectiveness of Nonlinear Pricing: Evidence from a Field Experiment"

Summaries of these papers are available at: http://www.nber.org/confer/2013/EEEs13/summaryEEE.html

International Finance and Macroeconomics Program Meeting

The NBER's Program on International Finance and Macroeconomics met in Cambridge on March 29, 2013. NBER Research Associates Gita Gopinath, Harvard University, and Hélène Rey, London Business School, organized the meeting. These papers were discussed:

- **Andrew Rose**, University of California, Berkeley and NBER, "The March of an Economic Idea"

- **Alberto Cavallo**, MIT; **Brent Neiman**, University of Chicago and NBER; and **Roberto Rigobon**, MIT and NBER, "Product Introductions, Currency Unions, and the Real Exchange Rate" (NBER Working Paper No. 18563)

- **Javier Bianchi**, University of Wisconsin, Madison and NBER; **Juan Hatchondo**, Indiana University; and **Leonardo Martinez**, International Monetary Fund, "International Reserves and Rollover Risk" (NBER Working Paper No. 18628)

- **Wenxin Du** and **Jesse Schreger**, Harvard University, "Local Currency Sovereign Risk"

- **Alessandro Dovis**, University of Minnesota, "Efficient Sovereign Default"

- **Gianluca Benigno**, London School of Economics; **Huigang Chen**, JD Power; **Christopher Otrok**, University of Missouri; **Alessandro Rebucci**, Inter-American Development Bank; and **Eric Young**, University of Virginia, "Capital Controls or Real Exchange Rate Policy? A Pecuniary Externality Perspective"

- **Emmanuel Farhi,** Harvard University and NBER, and **Ivan Werning,** MIT and NBER, "Fiscal Unions" (NBER Working Paper No. 18280)

Summaries of these papers may be found at: http://www.nber.org/confer/2013/IFMs13/summary.html

Public Economics

The NBER's Program on Public Economics met in Cambridge on April 4 and 5, 2013. Program Director Amy Finkelstein of MIT and NBER Research Associate Brian Knight of Brown University organized the meeting. These papers were discussed:

- **Judith A. Frias**, Instituto Mexicano del Seguro Social; **Todd Kumler**, Columbia University; and **Eric Verhoogen**, Columbia University and NBER, "Enlisting Workers in Monitoring Firms: Payroll Tax Compliance in Mexico"
- **Patrick Kline**, University of California, Berkeley and NBER, and **Melissa Tartari**, Yale University, "What Distributional Impacts Mean: Welfare Reform Experiments and Competing Margins of Adjustment"
- **Casey Rothschild**, Wellesley College, and **Florian Scheuer**, Stanford University and NBER, "Redistributive Taxation in the Roy Model" (NBER Working Paper No. 18228)
- **Mikhail Golosov**, Princeton University and NBER; **John Hassler**, Stockholm University; **Per Krusell**, Stockholm University and NBER; and **Aleh Tsyvinski**, Yale University and NBER, "Optimal Taxes on Fossil Fuel in General Equilibrium" (NBER Working Paper No. 17348)
- **James Poterba**, MIT and NBER; **Steven Venti**, Dartmouth College and NBER; and **David Wise**, Harvard University and NBER, "The Drawdown of Personal Retirement Assets: Husbanding or Squandering?"
- **Eric Budish**, University of Chicago; **Benjamin Roin**, Harvard Law School; and **Heidi Williams**, MIT and NBER, "Do Fixed Patent Terms Distort Innovation? Evidence from Cancer Clinical Trials"
- **Naoki Aizawa**, University of Pennsylvania, and **Hanming Fang**, University of Pennsylvania and NBER, "Equilibrium Labor Market Search and Health Insurance Reform" (NBER Working Paper No. 18698)

Summaries of these papers may be found at: http://www.nber.org/confer/2013/PEs13/summary.html

Insurance Working Group Meets

The NBER's Insurance Working Group, directed by NBER Research Associates Liran Einav of Stanford University and Kenneth Froot of Harvard Business School, met in Cambridge on April 5 and 6, 2013. These papers were discussed:

- **Benjamin Handel**, University of California, Berkeley and NBER, and **Jonathan Kolstad**, University of Pennsylvania and NBER, "Health Insurance for Humans: Information Frictions, Plan Choice, and Consumer Welfare"
- **Keith Ericson**, Boston University and NBER, and **Amanda Starc**, University of Pennsylvania, "How Product Standardization Affects Choice: Evidence from the Massachusetts Health Insurance Exchange"
- **Jeffrey Brown**, University of Illinois and NBER; **Arie Kapteyn**, RAND Corporation; **Erzo Luttmer**, Dartmouth College and NBER; and **Olivia Mitchell**, University of Pennsylvania and NBER, "Complexity as a Barrier to Annuitization: Do Consumers Know How to Value Annuities?"
- **Levon Barseghyan** and **Francesca Molinari**, Cornell University, and **Joshua Teitelbaum**, Georgetown Law School, "Inference under Stability of Risk Preferences"

- **Tatyana Deryugina**, University of Illinois, Urbana-Champaign, "Reducing the Cost of Ex Post Bailouts with Ex Ante Regulation: Evidence from Building Codes"

- **Dwight Jaffee** and **Johan Walden**, University of California, Berkeley, and **Rustam Ibragimov**, Harvard University, "Equilibrium with Monoline and Multiline Insurers"

- **Ralph Koijen**, University of Chicago and NBER, and **Motohiro Yogo**, Federal Reserve Bank of Minneapolis, "The Cost of Financial Frictions for Life Insurers"

- **Daniel Gottlieb**, University of Pennsylvania, and **Kent Smetters**, University of Pennsylvania and NBER, "Narrow Framing and Life Insurance" (NBER Working Paper No. 18601)

Summaries of the papers are available at: http://www.nber.org/confer/2013/INSs13/summary.html

Political Economy

The NBER's Program on Political Economy, directed by Alberto Alesina of Harvard University, met in Cambridge on April 12, 2013. These papers were discussed:

- **Patrick Francois**, University of British Columbia; **Ilia Rainer**, George Mason University; and **Francesco Trebbi**, University of British Columbia and NBER, "How Is Power Shared in Africa?" (NBER Working Paper No. 18425)

- **Francesco Passarelli**, Università Bocconi, and **Guido Tabellini**, IGIER, "Emotions and Political Unrest"

- **Christian Dippel**, University of California, Los Angeles, "The Transmission of Colonial Institutions: Evidence from the 19th Century Caribbean"

- **Eliana La Ferrara**, Bocconi University, "Does Interaction Affect Racial Prejudice and Cooperation? Evidence from Randomly Assigned Peers in South Africa"

- **Raymond Fisman**, Columbia University and NBER, and **Yongxiang Wang**, University of Southern California, "The Mortality Cost of Political Connections"

- **Gergely Ujhelyi**, University of Houston, "Civil Service Rules and Policy Choices: Evidence from U.S. State Governments"

Summaries of these papers may be found at: http://www.nber.org/confer/2013/POLs13/summary.html

Organizational Economics Working Group Meeting

The NBER's Working Group on Organizational Economics met at Stanford University on April 12 and 13, 2013. The program was organized by Working Group Director Robert Gibbons of MIT. The papers discussed were:

- **Björn Bartling** and **Ernst Fehr**, University of Zurich, and **Klaus Schmidt**, University of Munich, "Use and Abuse of Authority: A Behavioral Foundation of the Employment Relation"

- **Decio Coviello**, HEC Montreal; **Andrea Ichino**, University of Bologna; and **Nicola Persico**, Northwestern University and NBER, "The Inefficiency of Worker Time Use"

- **Steven Callander**, Stanford University, and **Niko Matouschek**, Northwestern University, "A Simple Theory of Growth in a Complicated World"

- **Oriana Bandiera**, London School of Economics; **Andrea Prat**, Columbia University; and **Raffaella Sadun**, Harvard University and NBER, "Managing Firms in an Emerging Economy: Evidence from the Time Use of Indian CEOs"

- **Hongyi Li**, University of New South Wales, "Developing Shared Knowledge"

- **Luis Garicano**, London School of Economics, and **Luis Rayo**, University of Chicago, "Relational Knowledge Transfers"

- **Daniel Paravisini**, London School of Economics and NBER, and **Antoinette Schoar**, MIT and NBER, "The Information and Agency Effects of Scores: Randomized Evidence from Credit Committees"

- **Heikki Rantakari**, University of Southern California, "Organizational Structure and Market Competition"

Summaries of these papers are available at: http://www.nber.org/confer/2013/OEs13/summary.html

Asset Pricing Program Meeting

The NBER's Program on Asset Pricing met at the University of Chicago on April 19, 2013. Hui Chen and Andrew Lo, NBER and MIT, organized the meeting and chose these papers to discuss:

- **Bruce Carlin** and **Francis Longstaff**, University of California, Los Angeles and NBER, and **Kyle Matoba**, University of California, Los Angeles, "Disagreement and Asset Prices" (NBER Working Paper No. 18619)

- **Suleyman Basak** and **Anna Pavlova**, London Business School, "A Model of Financialization of Commodities"

- **Nicolae Garleanu**, University of California, Berkeley and NBER; **Stavros Panageas**, University of Chicago and NBER; and **Jianfeng Yu**, University of Minnesota, "Financial Entanglement: A Theory of Incomplete Integration, Leverage, Crashes, and Contagion"

- **Martin Lettau**, University of California, Berkeley and NBER; **Matteo Maggiori**, New York University; and **Michael Weber**, University of California, Berkeley , "Conditional Risk Premia in Currency Markets and Other Asset Classes" (NBER Working Paper No. 18844)

- **Andrea Frazzini**, AQR Capital Management; **Ronen Israel**, AQR Capital; and **Tobias Moskowitz**, University of Chicago and NBER, "Trading Costs of Asset Pricing Anomalies"

- **Leonid Kogan**, MIT and NBER; **Dimitris Papanikolaou**, Northwestern University and NBER; and **Noah Stoffman**, Indiana University, "Technological Innovation: Winners and Losers" (NBER Working Paper No. 18671)

Summaries of these papers may be found at: http://www.nber.org/confer/2013/APs13/summary.html

Corporate Finance

The NBER's Program on Corporate Finance met at the University of Chicago Booth School on April 19, 2013. Philipp Schnabl, NBER and Stern School of Business at New York University, and Zhiguo He, NBER and University of Chicago Booth School, organized the meeting. These papers were discussed:

- **Rene Stulz**, Ohio State University and NBER; **Taylor Nadauld** and **Craig Merrill**, Brigham Young University; and **Shane Sherlund**, Federal Reserve Board, "Why Did Financial Institutions Sell RMBS at Fire Sale Prices During the Financial Crisis?"

- **William Fuchs** and **Aniko Oery**, University of California, Berkeley, and **Andrzej Skrzypacz**, Stanford University, "Transparency and Distressed Sales under Asymmetric Information"

- **Kelly Shue**, University of Chicago, and **Richard Townsend**, Dartmouth College, "Swinging for the Fences: Executive Reactions to Quasi-Random Option Grants"

- **Bruno Biais** and **Augustin Landier**, University of Toulouse, "The (Ir)resistible Rise of Agency Rents"

- **David Scharfstein**, Harvard University and NBER, and **Adi Sunderam**, Harvard University, "Concentration in Mortgage Lending, Refinancing Activity, and Mortgage Rates"

- **Tobias Berg**, Humboldt University; **Manju Puri**, Duke University and NBER; and **Jorg Rocholl**, ESMT, "Loan Office Incentives and the Limits of Hard Information"

- **Daniel Paravisini**, London School of Economics and NBER, and **Antoinette Schoar**, MIT and NBER, "The Information and Agency Effects of Scores: Randomized Evidence from Credit Committees"

Summaries of these papers may be found at: http://www.nber.org/confer/2013/CFs13/summary.html

Health Economics Program Meeting

The NBER's Program on Health Economics met in Cambridge on April 19, 2013. Program Director Michael Grossman and Research Associate Theodore Joyce of City University of New York's Graduate Center organized the meeting. These papers were discussed:

- **Resul Cesur**, University of Connecticut; **Erdal Tekin**, Georgia State University and NBER; and **Aydogan Ulker**, Deakin University, "Air Pollution and Infant Mortality: Evidence from the Expansion of Natural Gas Infrastructure" (NBER Working Paper No. 18736)

- **John Romley**, University of Southern California, and **Neeraj Sood**, University of Southern California and NBER, "Identifying the Health Production Function: The Case of Hospitals"

- **Hans van Kippersluis**, Erasmus University Rotterdam, and **Titus Galama**, University of Southern California, "Why the Rich Drink More but Smoke Less: The Impact of Wealth on Health Behaviors"

- **Yin-Chi Wang**, Chinese University of Hong Kong, and **Ping Wang**, Washington University and NBER, "Barrier to Health and Poverty Trap"

- **Andrea Chung**, Carnegie Mellon University, and **Martin Gaynor** and **Seth Richards-Shubik**, Carnegie Mellon University and NBER, "Subsidies and Structure: The Lasting Impact of the Hill-Burton Program on the Hospital Industry"

Summaries of these papers may be available at: http://www.nber.org/confer/2013/HEs13/summary.html

Behavioral Finance

The Behavioral Economics Working Group held a meeting on Behavioral Finance at the University of Chicago on April 20, 2013. NBER Research Associates Andrei Shleifer, Harvard University, and Luigi Zingales, University of Chicago, organized the meeting and chose these papers to discuss:

- **Nicola Gennaioli**, CREI; **Andrei Shleifer**; and **Robert Vishny**, University of Chicago and NBER, "Money Doctors" (NBER Working Paper No. 18174)

- **John Chalmers**, University of Oregon, and **Jonathan Reuter**, Boston College and NBER, "What is the Impact of Financial Advisors on Retirement Portfolio Choices and Outcomes?" (NBER Working Paper No. 18158)

- **Umit Gurun**, University of Texas, Dallas, and **Gregor Matvos** and **Amit Seru**, University of Chicago and NBER, "Advertising Expensive Mortgages" (NBER Working Paper No. 18910)

- **Santosh Anagol**, University of Pennsylvania, and **Shawn Cole** and **Shayak Sarkar**, Harvard University, "Understanding the Advice of Commissions Motivated Agents: Evidence from the Indian Life Insurance Market"

- **John Campbell**, Harvard University and NBER; **Tarun Ramadorai**, University of Oxford; and **Benjamin Ranish**, Harvard University, "Getting Better: Learning to Invest in an Emerging Stock Market"

- **Luigi Guiso**, Einaudi Institute for Economics and Finance; **Paola Sapienza**, Northwestern University and NBER; and **Luigi Zingales**, "Time Varying Risk Aversion"

These summaries may be found at: http://www.nber.org/2013/BEs13/summary.html

Cohort Studies Meeting

The NBER's Working Group on Cohort Studies, directed by Dora Costa of the University of California, Los Angeles, met at the University of Chicago on April 26, 2013. These topics were discussed:

- **Douglas Almond**, Columbia University and NBER; **Hongbin Li**, Tsing Hua University; and **Shuang Zhang**, Stanford University, "Land Reform and Sex Selection in China"

- **Shelly Lundberg**, University of California, Santa Barbara, and **Robert Pollak**, Washington University and NBER, "The Uneven Retreat from Marriage in the U.S., 1950–2010"

- **Gabriella Conti**, University of Chicago and NBER, "Early Life Adversity, Changes in Gene Expression, and Health: Evidence from Rhesus Monkeys"

- **Prashant Bharadwaj**, University of California, San Diego and NBER, and **Petter Lundborg** and **Dan-Olof Rooth**, Lund University, "Fetal Origins in the Long Run"

- **Carlos Villarreal**, University of Chicago, "Where the Other Half Lives: Evidence on the Origin and Persistence of Poor Neighborhoods from New York City 1830–2011"

Summaries of these papers may be found at: http://www.nber.org/confer/2013/CSs13/summary.html

Education Program Meets

The NBER's Program on Education, directed by Caroline Hoxby of Stanford University, met in Cambridge on May 9, 2013. The following papers were discussed:

- **Katja Kaufmann** and **Matthias Messner**, Bocconi University, and **Alex Solis**, Uppsala University, "Returns to Elite Higher Education in the Marriage Market: Evidence from Chile"

- **Justine Hastings**, Brown University and NBER, and **Christopher Neilson** and **Seth Zimmerman**, Yale University, "Returns to Postsecondary Education in Chile: Fields, Selectivity, Students, and Luck"

- **Peter Bergman**, University of California, Los Angeles, "Parent-Child Information Frictions and Human Capital Investment: Evidence from a Field Experiment"

- **Peter Hinrichs**, Georgetown University, "What Kind of Teachers Are Schools Looking For? Evidence from a Randomized Field Experiment"

- **Maria Fitzpatrick**, Cornell University and NBER, and **Damon Jones**, University of Chicago and NBER, "Higher Education, Merit-Based Scholarships, and Post-Baccalaureate Migration" (NBER Working Paper No. 18530)

- **Peter Arcidiacono** and **V. Joseph Hotz**, Duke University and NBER, and **Esteban Aucejo**, London School of Economics, "University Differences in the Graduation of Minorities in STEM Fields: Evidence from California" (NBER Working Paper No. 18799)

- **Jason Fletcher**, Yale University and NBER; **Stephen Ross**, University of Connecticut; and **Yuxiu Zhang**, Yale University, "The Determinants and Consequences of Friendship Composition"

Summaries of these papers may be found at: http://www.nber.org/confer/2013/CHEDs13/summary.html

Children's Program Meeting

The NBER's Program on Children, directed by Janet Currie of University of California, Los Angeles, met in Cambridge on May 10, 2013. The following papers were discussed:

- **Jason Lindo**, University of Oregon and NBER; **Jessamyn Schaller**, University of Arizona; and **Benjamin Hansen**, University of Oregon, "Economic Conditions and Child Abuse" (NBER Working Paper No. 18994)
- **David Figlio**, Northwestern University and NBER, "The Effects of Poor Neonatal Health on Children's Cognitive Development" (NBER Working Paper No. 18446)
- **Rukmini Banerji**, Pratham; **James Berry**, Cornell University; and **Marc Shotland**, MIT, "The Impact of Mother Literacy and Participation Programs on Child Learning: Evidence from a Randomized Evaluation in India"
- **Jorge Aguero** and **Mindy Marks**, University of California, Riverside, and **Neha Raykar**, Public Health Foundation India, "The Wage Penalty for Motherhood in Developing Countries"

Summaries of these papers may be found at: http://www.nber.org/confer/2013/CHEDs13/summarych.html

Bureau Books

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http://www.press.uchicago.edu/Misc/Chicago/infopage.html

The Great Inflation: The Rebirth of Modern Central Banking

The Great Inflation: The Rebirth of Modern Central Banking, edited by Michael Bordo and Athanasios Orphanides, is available from the University of Chicago Press in July 2013.

Controlling inflation is among the most important objectives of economic policy. By maintaining price stability, policymakers are able to reduce uncertainty, improve price monitoring mechanisms, and facilitate more efficient planning and allocation of resources, thereby raising productivity.

This volume focuses on understanding the causes of the Great Inflation of the 1970s and 1980s, during which time many nations experienced rising inflation, and which propelled interest rates across the developing world into the double digits. In the decades since, there has been considerable debate on the immediate cause of the period's rise in inflation. Among the areas explored are the role of monetary policy in driving inflation and the implications this has had, both for policy design and for evaluating the performance of those who set the policy. In this volume, contributors map monetary policy from the 1960s to the present, shedding light on the ways in which the lessons of the Great Inflation were absorbed and applied to today's global and increasingly complex economic environment.

Bordo is a Research Associate in the NBER's Programs of Research on Monetary Economics and the Development of the American Economy and is the Board of Governors Professor of Economics at Rutgers University. Orphanides is a Senior Lecturer at the MIT Sloan School of Management and former Governor of the Central Bank of Cyprus.

The price of this volume is $120.00 (cloth).

Housing and the Financial Crisis

Housing and the Financial Crisis, an NBER Conference Report edited by Edward Glaeser and Todd Sinai, is available from the University of Chicago Press this summer.

Conventional wisdom once held that housing prices could not fall. But the spectacular boom and bust of the housing market during the first decade of the twenty-first century, and millions of foreclosed homeowners, have made it clear that housing is no different from any other asset in its ability to climb and to crash.

This volume looks at what happened to prices and construction, both during and after the housing boom, in different parts of the American housing market. It helps to explain why certain areas experienced less volatility than others. It also examines the causes of the boom and bust, including the availability of credit, the perceived reduction in risk because of the securitization of mortgages, and the increase in lending from foreign sources. Finally, it examines a range of policies that might address some of the sources of recent instability.

Glaeser is a Research Associate in the NBER's Program on Economic Fluctuations and Growth and the Fred and Eleanor Glimp Professor of Economics at Harvard University. Sinai is a Research Associate in the NBER's Program on Public Economics and an Associate Professor of Real Estate and Business Economics and Public Policy at the Wharton School.

The price of this volume is $110.00 (cloth).

NBER Macroeconomics Annual 2012, Volume 27

NBER Macroeconomics Annual 2012, Volume 27, edited by Daron Acemoglu, Jonathan Parker, and Michael Woodford, is available from the University of Chicago Press in June 2013. This volume includes both theoretical and empirical contributions that encompass macroeconomic research on topics that relate to the business cycle and economic growth, as well as papers that address important policy-relevant questions.

Two papers shed light on causes of the recent financial crisis: how firms accessed credit during the financial crisis, and how the risk in mortgage lending was measured in the United Kingdom in the decades before the crisis. Other papers in this volume include: a study of individual prices over time, which draws out the implications of observed price adjustment for macroeconomic models of price stickiness; a focus on the implications of microeconomic estimates of labor supply for the determination of employment rates; a study of the empirical validity of the Keynesian explanation for employment declines during recessions; and an analysis of how efficient the fiscal stimulus has been as measured by the economic impact of changes in federal highway spending across U.S. states.

All three editors are Research Associates in the NBER's Programs on Economic Fluctuations and Growth. Acemoglu is the Elizabeth and James Killian Professor of Economics at MIT. Parker is the Donald C. Clark/HSBC Professor of Consumer Finance at Northwestern University. Woodford is the John Bates Clark Professor of Political Economy at Columbia University.

This volume costs $90.00 for a clothbound volume and $60.00 for paperback.

NBER International Seminar on Macroeconomics 2012, Volume 9

NBER International Seminar on Macroeconomics 2012, Volume 9, edited by Francesco Giavazzi and Kenneth West, is available from the University of Chicago Press in July 2013. The International Seminar on Macroeconomics has met annually in Europe for over thirty years. The topics covered in this year's volume fall into four categories: exchange rates, global business cycles, the financial crisis, and unemployment and the Great Recession.

The chapters include a study of capital account policies which sometimes are used to peg the real exchange rate and an analysis of panel data from OECD countries that can characterize and explain changes in house prices. Other studies explore some issues central to the financial crisis, such as its impact on trade flows, the effects of official bailouts, and the nature and evolution of unemployment during the Great Recession.

Giavazzi is a Research Associate in the NBER's Program on International Finance and Macroeconomics and a professor of economics at Bocconi University in Italy. West is a Research Associate in NBER's Programs on Monetary Economics and Economic Fluctuations and Growth and the John D. MacArthur and Ragnar Frisch Professor of Economics at the University of Wisconsin, Madison.

The price of this volume is $90.00 for a clothbound volume and $60.00 for paperback.

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