

September 2013

IN THIS ISSUE

- Earners' Gender Identity and Relative Income within Households
- Evidence from a Chinese Experiment on Working from Home
- The Spillover Effects of Medicare Managed Care
- How Pro-poor Growth Affects the Demand for Energy
- Do Acquisitions Relieve Target Firms' Financial Constraints?
- Hospital Mergers, Patient Demand, and the Price of Care

Earners' Gender Identity and Relative Income within Households

Women experienced both income and labor force participation rate increases in the second half of the last century, with the most rapid gains in the early part of that period. In **Gender Identity and Relative Income within Households** (NBER Working Paper No. 19023), **Marianne Bertrand, Jessica Pan, and Emir Kamenica** examine some of the consequences of this shift. They conclude that the gender identity of earners within households has pronounced financial and social effects.

In particular, they focus on the aversion to wives earning

more than husbands. They establish that when a woman's potential or real income is more than

“When a woman's potential or real income is more than a man's, it can reduce marriage rates [and] women's labor force participation after marriage.”

a man's, it can reduce marriage rates, women's labor force participation after marriage, wives' future income, and marriage satisfaction. A wife earning more than a husband also can lead to an increase in the distribution of household chores toward the woman and to a slight increase in the likelihood of divorce.

The authors stress that more needs to be known about the long-run effects of the gender

composition of earnings. Also, the behavioral prescription that “a man should earn more than his wife” may not be as strong today as it has been in past decades and may well be evolving, thus affecting future gender economic and social dynamics.

— Jay Fitzgerald

Evidence from a Chinese Experiment on Working from Home

Ctrip is China's largest travel agency, with 16,000

employees and a market capitalization of about \$US 5 billion.

Beginning in December 2010, it conducted a randomized experi-

ment that measured the productivity of employees working at home versus those working in one of its call centers.

In **Does Working from Home Work? Evidence from a Chinese Experiment** (NBER Working Paper No. 18871), co-authors **Nicholas Bloom**, **James Liang** (who co-founded Ctrip and helped to make its productivity data available), **John Roberts**, and **Zhichun Jenny Ying** present the results of that experiment. They find that the home worker group increased its productivity by 13 percent over the trial's nine month life-time, with no measurable difference in the quality of calls.

Thanks to reduced breaks and sick days, home workers increased the minutes they worked on each shift by 9.2 percent. In a workforce with an average commute of 80 minutes per day, the employees attributed their reduction in sick days to the fact that on some days they felt well enough to work at home but not well enough to commute.

Their calls handled per minute also increased by 3.3 percent. When asked, the home workers attributed that improved performance to the quieter home environment. Work satisfaction

also was higher for home workers, and attrition was half that of the control group working in the call centers. Interview results suggested that the home

“Home workers increased the minutes they worked on each shift by 9.2 percent.”

workers were less likely to quit because no other comparable home-working jobs existed.

Ctrip estimates that the improvement in performance was worth about \$375 per employee per year, that working from home reduced its office costs by \$1,250 per employee per year, and that reducing attrition saved about \$400 per employee per year in training costs and lost productivity. The only negative result from the experiment was that rates of promotion for home workers were almost 50 percent lower, possibly because they were not visible to office-based managers.

Of the 994 employees in the airfare and hotel booking departments at Ctrip's Shanghai call center, 503 volunteered for the experiment. Of the volunteers, 249 met all conditions, such as working for the firm for at least six months, being willing to work from home for nine

months, having home access to broadband internet, and access to an independent workspace at home during their shift. They were invited to apply for the

experiment. Applicants with even-numbered birth dates worked from home as part of the 131-member treatment group. Applicants with odd-numbered birth dates continued working at a company call center as part of the 118-member control group. The home workers worked from home four days per week, returning to the call center for one shift on one day.

At the end of the experiment, Ctrip expanded the work-from-home option to the entire firm. Two-thirds of the control group opted to remain in the office. Half of the home workers elected to return to the office, citing “concerns over the loneliness of home working and the lower rates of promotion.” As a result of the self-selected exodus of people, a large fraction of whom had performed relatively badly at home, the performance gains by home workers nearly doubled after the experiment ended.

— Linda Gorman

The Spillover Effects of Medicare Managed Care

Medicare, which pays for the health care of the vast major-

ity of the elderly U.S. population, has two distinct components.

Traditional Medicare pays a set fee for any covered service and

patients are free to select the participating provider of their choice. Medicare Advantage, which covers about 27 percent of Medicare beneficiaries, allows them to join one of the private managed care health plans offered in their area. They receive all of their Medicare-covered health care from the plan which, in return for a risk-adjusted per person payment from Medicare, must agree to provide at least as much coverage as traditional Medicare. If private plans improve the efficiency of health care delivery, those improvements could “spill over” to affect the care of other patients served by the same providers.

In **The Spillover Effects of Medicare Managed Care: Medicare Advantage and Hospital Utilization** (NBER Working Paper No. 19070), **Katherine Baicker, Michael Chernew, and Jacob Robbins** use changes in Medicare Advantage’s payment policy to examine whether increasing enrollment in an area’s Medicare Advantage plans affects hospital costs for other patients in the area. They conclude that a larger Medicare Advantage market share does lower costs by reducing the intensity of care received

by traditional Medicare patients, as well as younger patients, during an inpatient stay.

“Increasing Medicare Advantage market share by 10 percentage points results in a 2.4 percent decline in area hospitalization costs.”

In real terms, Medicare Advantage payment rates rose from an average of \$624 a month in 1997 to an average of \$860 a month in 2009. Significant changes in the way payments were calculated occurred in 1997, 2003, and 2006. The data for the study suggest that the Medicare Advantage HMO market share was slightly lower in 2009 than in 1999, while the market share of the other types of plans increased. Exploiting the changes in payment structure, the authors find that increasing Medicare Advantage benchmark payments by \$100 increases the market share of Medicare Advantage plans by 3 to 5 percent.

After combining Medicare enrollment data with data on all hospital admissions from state inpatient databases for Florida, New York, California, Arizona, and Massachusetts, the authors find that increasing the Medicare Advantage market share by 10 percent-

age points results in a 2.4 percent decline in area hospitalization costs as measured by

total inpatient facility charges multiplied by a hospital’s cost-to-charge ratio. There was a parallel reduction in length of stay, with a 10 percentage point increase in Medicare Advantage penetration leading to a 0.2 day reduction in overall length of stay (compared with an average length of stay of 5 days).

The authors calculate that in the five states studied, increasing Medicare Advantage payments by \$100 per patient per month would increase Medicare Advantage enrollment by 400,000, and Medicare Advantage spending by \$5 billion. The 5-percentage-point increase in Medicare Advantage market share would reduce the overall costs of hospital care by 2 percent, reducing hospital costs for the remaining traditional Medicare population by about \$600 million (although not necessarily reducing the Medicare program’s costs).

— Linda Gorman

How Pro-poor Growth Affects the Demand for Energy

About 1.5 billion people across the world live without

electricity, mainly in developing countries. Observers

believe that many of them eventually will obtain higher

incomes through anti-poverty programs and economic growth, thus boosting their ability to acquire energy-using assets and increasing their energy consumption.

In **How Pro-poor Growth Affects the Demand for Energy** (NBER Working Paper No. 19092), **Paul Gertler, Ori Shelef, Catherine Wolfram, and Alan Fuchs** analyze data from Mexico after the government introduced a conditional cash transfer, Oportunidades, in the late 1990s as part of an ambitious anti-poverty initiative. The program subsidized families' income under the conditions that they met certain healthcare and educational requirements for their children. The cash transfers, that could increase for families as their children achieved certain milestone goals, totaled about \$4 billion annually to 5 million households.

The authors find that this pro-poor transfer program had a large effect on the purchase of energy-using assets. Using both household data and country-level panel data, they conclude that existing energy demand

forecasts could grossly underestimate future energy use in the developing world.

“Existing energy demand forecasts could grossly underestimate future energy use in the developing world.”

Government data and survey results from 1998, when the Oportunidades program began, through 2007 provide the authors with information on participants' purchases of household durable assets, such as refrigerators, gas stoves, TVs, and washing machines. Their actual energy expenditures also are tracked in later-year program surveys. The authors show that both the level and frequency of anti-poverty payments affect the rate of acquisition of assets. Asset accumulation is substantially greater when transfer payments are larger, and the effect is greater for households that are closer to middle class. Also, households are more likely to acquire assets when cash is transferred over a shorter time period.

Based on the findings from Mexico's conditional cash transfer program, the

authors anticipate that there likely will be a surge in the demand for energy as families

gain from economic development and anti-poverty programs. They also argue that the speed at which the poor emerge from poverty can affect their increased asset accumulation and energy demand. Thus, two countries with the same level of income per capita could have varying rates of asset ownership, resulting in different levels of per capita energy use.

Extrapolating the lessons learned from the household analysis to models of aggregate energy needs, the authors show that in countries with pro-poor growth, the income elasticity of energy is nearly double that of countries with GDP growth that was less favorable to the poor. “These results suggest that not accounting for pro-poor growth would grossly underestimate future energy use,” the authors conclude.

— Jay Fitzgerald

Do Acquisitions Relieve Target Firms' Financial Constraints?

Managers often claim that an important source of value in acquisitions is the

acquiring firm's ability to finance investments for the target firm. Firms will some-

times forego valuable investment opportunities because of financial constraints; through

acquisition, the target firm can gain better access to capital markets through the parent, or can finance new projects using the parent's cash flow.

In Do Acquisitions Relieve Target Firms' Financial Constraints? (NBER Working Paper No. 18840), co-authors **Isil Erel**, **Yeejin Jang**, and **Michael Weisbach** evaluate these predictions using a sample of over 5,000 European acquisitions that occurred during 2001–8. The disclosure requirements in European countries make available data on the financial statements of targets before and after acquisition, as long as the target remains an independent subsidiary following the acquisition. The authors thus are able to measure each target firm's cash and investment policies both before and after the acquisition, and to evaluate the extent to which the acquisition led to improved access to capital.

They find that target firms

indeed are constrained prior to acquisition, and that the constraints are lessened after

“Acquisitions mitigate financing constraints, potentially providing a source of value by enabling target firms to improve their investment policy.”

the firms are acquired. In particular, cash holdings decline significantly after acquisition. When access to capital markets is imperfect, managers will adopt financial policies that ensure that the most important investments will continue to be financed, notably by holding more cash on their balance sheets. Therefore, lower cash holdings are in line with lower financial frictions for the target firm after acquisition.

Moreover, the data show that after acquisition, target firms save less cash out of incremental cash flows, and that the target firm's investments tend to be less correlated with cash flows. All of these results are consistent with the view that acquisi-

tions mitigate financing constraints, potentially providing a source of value by enabling

target firms to improve their investment policies.

These effects are larger when the target is most likely to be constrained prior to the acquisition, for example when the acquired firm is independent rather than the subsidiary of another firm, or when the target firm is small. In addition, the reduction in financial constraints occurs in both diversifying and same-industry acquisitions, suggesting that the results truly reflect reductions in financial constraints rather than other factors. Consistent with the financing view of acquisitions, investment by target firms increases substantially after acquisitions.

— Claire Brunel

Hospital Mergers, Patient Demand, and the Price of Care

Managed care organizations (MCOs) can obtain lower prices from healthcare providers than traditional fee-

for-service purchasers because of their bargaining leverage. In part to counterbalance the growing market power of

MCOs, some hospitals have merged in recent decades.

In Mergers When Prices are Negotiated: Evidence from

the Hospital Industry (NBER Working Paper No. 18875), **Gautam Gowrisankaran, Aviv Nevo, and Robert Town** investigate the extent to which hospital bargaining and patient coinsurance restrain prices of medical services. They use discharge data from Virginia Health Information and administrative claims data from payers, and then model patient behavior by constructing prices for each hospital-payer-year as well as patient-specific coinsurance rates.

After the authors estimate the demand for care, they use their findings to analyze the impact of a proposed merger between Inova Health System and Prince William Hospital, a transaction that was challenged by the Federal Trade Commission and ultimately abandoned. They conclude that

the proposed merger would have raised the quantity-weighted average price of the merging

“[Hospital] prices would rise by 3.7 percent if coinsurance rates were zero, but would drop by 16 percent if coinsurance rates were ten times as high as at present.”

hospitals by 3.1 percent.

The authors also examine a remedy proposed by the FTC in a different hospital merger case, where the newly acquired hospitals were forced to bargain separately to maintain competition in the marketplace. They find that separate bargaining does not eliminate the anticompetitive effects of the merger because bargaining leverage diminishes on both sides of the market.

They estimate that mean prices would rise by 3.7 percent if coinsurance rates were zero, but would drop by 16

percent if coinsurance rates were ten times as high as they are now. Because patient cost-

sharing has trended upwards recently, these results suggest that if the trend continues, it could result in a substantial reduction in provider prices. The authors determine that patient demand for health-care is quite inelastic because patients typically pay only about 3 percent of the cost of their hospital care out-of-pocket. Prices are significantly constrained by MCO bargaining leverage, although still much higher than they would be in the absence of insurance.

— Matt Nesvisky

NBER

The National Bureau of Economic Research is a private nonprofit research organization founded in 1920 and devoted to objective quantitative analysis of the American economy. Its officers are:

James M. Poterba—President and

Chief Executive Officer

Kathleen B. Cooper—Chairman

*Martin B. Zimmerman—Vice
Chairman*

The NBER Digest summarizes selected Working Papers recently produced as part of the Bureau's program of research. Working Papers are intended to make preliminary research results available to economists in the hope of encouraging discussion and suggestions for revision. The Digest is issued for similar informational purposes and to stimulate discussion of Working Papers before their final publication. Neither the Working Papers nor the Digest has been reviewed by

the Board of Directors of the NBER.

The Digest is not copyrighted and may be reproduced freely with appropriate attribution of source. Please provide the NBER's Public Information Department with copies of anything reproduced.

Individual copies of the NBER Working Papers summarized here (and others) are available free of charge to Corporate Associates and to the affiliates of other organizations, such as universities and colleges, with subscriptions. For all others, there is a charge of \$5.00 per downloaded paper or \$10.00 per hard copy paper. Outside of the United States, add \$10.00 per order for postage and handling. Advance payment is required on all orders. To order, call the Publications Department at (617) 868-3900 or visit www.nber.org/papers. Please have the Working Paper Number(s) ready.

Subscriptions to the full NBER Working Paper series include all 1000 or more papers published each year. Subscriptions are free to Corporate Associates. For others within the United States, the standard rate for a full subscription is \$8320; for academic libraries and faculty members, \$6760. Higher rates apply for foreign orders. The on-line standard rate for a full subscription is \$2000 and the on-line academic rate is \$940.

Partial Working Paper subscriptions, delineated by program, are also available. For further information, see our Web site, or please write: National Bureau of Economic Research, 1050 Massachusetts Avenue, Cambridge, MA 02138-5398.

Requests for Digest subscriptions, changes of address, and cancellations should be sent to Digest, NBER, 1050 Massachusetts Avenue, Cambridge, MA 02138-5398. Please include the current mailing label.