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The Effect of Housing Wealth on College Choice

In **The Effect of Housing Wealth on College Choice: Evidence from the Housing Boom** (NBER Working Paper No. 18075), **Michael Lovenheim** and **Lockwood Reynolds** find that a $10,000 increase in a family's housing wealth in the four years before they send a child off to college increases the likelihood that that child attends a public flagship school by 2 percent. Public flagship universities are the elite public universities in each state and are characterized by having higher student body SAT scores, higher faculty-student ratios, and more total and instructional spending per student than other public institutions. They usually cost more than other public schools as well. Given "growing evidence of the high labor market and educational attainment returns to college quality," the authors conclude that the housing bust could change attendance decisions in ways that have "long-run effects on the supply of high-skilled labor and on income inequality."

The data for this study come from the 1997 National Longitudinal Survey of Youth. The authors measure college attendance, residence, home prices, and family characteristics for 2,801 students who were under age 18 in 1997, attended college within two years of high school graduation, and whose parents were homeowners living in a Metropolitan Statistical Area (MSA). They combine the self-reported home price in the 1997 NLSY with the MSA-level Conventional Mortgage Housing Price Index (CMHPI) created by Fannie-Mae and Freddie-Mac to measure the average housing price change in each MSA in each year. For the entire United States, the CMHPI increased by 121 percent between 1993 and 2003, the period covered by the sample. However, there were large regional variations: home prices in Syracuse, New York, increased by 19 percent, while those in New York City increased by 90 percent. The average homeowner in this sample experienced a four-year home price increase of $53,310 (in 2007 dollars).

> "In the lowest income category … a $10,000 increase in value increased the relative probability of attending a flagship university by 8.3 percent."

The students in this study attended one of four mutually exclusive higher education sectors: flagship public universities; non-flagship public four year schools; private four-year institutions; and community colleges. Because there was no strong relationship between home prices and the likelihood of being accepted to schools in a particular sector, conditional on applying, the authors con-

clude that any changes in enrollment were a result of changes in student application behavior.

Family income was divided into three groups: low-income households were defined as those with incomes of $75,000 or less with a sample mean of $50,023; middle-income households had earnings between $75,000 and $125,000 with a sample mean of $97,060; and high-income households reported incomes above $125,000 with a sample mean of $190,340.

The authors find that the effect of home price increases was strongest in the lowest income category, where a $10,000 increase in value increased the relative probability of attending a flagship university by 8.3 percent and decreased the relative probability of attending a community college by 3.8 percent. Lower-income students worked less at outside jobs as housing wealth increased, and the likelihood of their earning a BA increased by 1.8 percent. Changes in housing wealth increased the probability that those in the middle-income category attended a state flagship school by about 3.9 percent. There was no measurable effect of housing prices on attendance among families with incomes above $125,000.

— Linda Gorman

Protectionism Isn't Counter-Cyclic (Anymore)

Conventional wisdom holds that protectionism is counter-cyclic, meaning that tariffs and quotas become more prevalent during recessions. In **Protectionism Isn't Counter-Cyclic (Anymore)** (NBER Working Paper No. 18062), **Andrew Rose** shows that while that may have been a valid description in the period before the Second World War, it is now inaccurate.

Rose motivates his study by presenting scatter plots that show no obvious correlation between business cycles and protectionism after World War II. For the United States, a positive relationship between the unemployment rate and tariffs is evident between 1906 and 1942, but this relationship is strikingly reversed between 1946 and 1982 when high U.S. unemployment seems to coincide with low U.S. tariffs. Moreover, there does not seem to be a correlation between the level of economic growth and the number of commercial disputes initiated under the GATT/WTO dispute settlement system. Interestingly, the "Great Recession" of 2009 was associated with a collapse of global growth but there was no coincident uptick in trade disputes.

> "[There is] ... no evidence that tariff and non-tariff barriers rise systematically during cyclic downturns."

Using a panel of data covering over 60 countries and 30 years, as well as eighteen measures of protectionism and seven measures of business cycles, Rose finds no evidence that tariff and non-tariff barriers rise systematically during cyclic downturns. In fact, the message seems to be that protectionism is essentially acyclic. The results are robust across all measures of protectionism and business cycles, with various controls and different estimation methods.

Rose also looks at the prewar period by constructing a historical panel of data going back 140 years. He shows that protectionism was probably counter-cyclic before World War II, but it is hard to conclude that definitively because of the limited availability of reliable data for that period.

— Claire Brunel

The Impact of Immigration on the Educational Attainment of Natives

In **The Impact of Immigration on the Educational Attainment of Natives** (NBER Working Paper No. 18047), **Jennifer Hunt** finds that, contrary to the popular notion that immigrants may have a negative impact on the public education experience of native-born children, the net effect of immigrant children in schools is positive. Using the 1940–2000 censuses and the pooled 2008–2010 American Community Surveys, Hunt focuses on the impact of immigration on the probability of natives' completion of 12 years of schooling. She finds that an increase of one percentage point in the share of immigrants aged 11–64 in the population increases the probability that natives aged 11–17 eventually complete 12 years of schooling by 0.3 percentage points.

There are at least two ways in which immigration could affect schooling outcomes for natives. Immigrant children could compete for schooling resources with native children, lowering the return to native education and discouraging native high school completion. Conversely, native children might be encouraged to complete high school in order to avoid competing with immigrant high-school dropouts in the labor market. Hunt finds evidence that both channels are operative and that the net effect is positive, particularly for native-born blacks, but not for native-born Hispanics.

"An increase of one percentage point in the share of immigrants aged 11–64 in the population increases the probability that natives aged 11–17 eventually complete 12 years of schooling by 0.3 percentage points."

Compared to natives, immigrants to the United States are much more likely to be poorly educated, and also more likely to be highly educated. Immigrants are underrepresented among workers with an intermediate level of education, such as a high school diploma.

— Matt Nesvisky

The Nature of Countercyclical Income Risk

During recessions, most individuals' incomes don't fluctuate much more than they do in good economic times — the vast majority of wage earners experience the same small ups and down in income that they always do. What changes in an economic contraction are the nature of big fluctuations in income, according to **The Nature of Countercyclical Income Risk** (NBER Working Paper No. 18035) by **Fatih Guvenen**, **Serdar Ozkan**, and **Jae Song**. Large increases in income are less likely, and large drops in income become more likely.

"During the last two recessions, the top 1 percent of earners saw bigger income drops than all other groups."

In the recessions of the 1980s and 1990s, lower income individuals were more likely to experience negative shocks to income than their higher-income counterparts. In contrast, during the last two recessions, the top 1 percent of earners saw bigger income drops than all other groups, even the bottom 10 percent of earners**.**

The authors explain that: "for the first two recessions in

our sample period, very-high-income individuals fared better than anybody else in the population, whereas for the latest two recessions, there has been a remarkable reversal of these fortunes and the highest-income workers suffered the most."

The authors analyze a 10 percent sample of all male income earners in the United States, including those at the very top of the earnings distribution, from 1978 to 2010, using confidential Social Security data. Women were not included because their labor force participation increased during the period, which would have made the data more difficult to interpret.

According to the study, the Great Recession trimmed the average American man's income by 6.5 percent, the steepest decline in the postwar period. Of course there was wide dispersion in the changes in income over this period. One in ten saw income rise more than 65 percent; another one in ten saw it fall more than 55 percent. And while the average income declined between 2007 and 2009, the median income was nearly constant.

This wide dispersion of fortunes, together with the gap between the average and median income change, suggests that it is difficult to generalize about overall changes in the economy. Contrary to previous research, this study did not find that income changes were greater during recessionary periods. Instead, it found that large income changes, on balance, become more negative than positive during these contractions.

This study also found a close relationship over time between income of the top 0.1 percent and GDP growth and unemployment. Every 1 percentage point rise in male unemployment led to an average 6.9 percentage point decline in income for these earners at the very top. And, every 1 percentage point slowdown in GDP growth implied a 4.5 percent decline in their income.

— Laurent Belsie

The 2009 Federal Tobacco Excise Tax Increase and Youth Tobacco Use

In early 2009, Congress approved a tobacco tax increase of 61.6-cents per pack of 20 cigarettes and similar tax hikes on other tobacco products, such as on smokeless tobacco. The tax increases were to fund the Children's Health Insurance Program, a program that helps states insure low-income children who are not eligible for Medicaid. The overall tobacco tax hikes led to an immediate 22 percent average increase in retail cigarette prices and a 12 percent increase in retail prices for other tobacco products. In all, the new tobacco excise tax rates boosted federal revenue on tobacco products by about 147 percent, from $7.1 billion in the 12 months preceding the April 2009 tax increase to $17.5 billion in the 12 months after the tax increase.

"A 10 percent increase in cigarette prices can reduce the smoking prevalence among youth by around 5 percent."

Although the primary goal of this tax increase was to raise revenue, some supporters hoped that the increased cost of tobacco products also would deter, or reduce, the number of smokers across the country. In **The Impact of the 2009 Federal Tobacco Excise Tax Increase on Youth Tobacco Use** (NBER Working Paper No. 18026), co-authors **Jidong Huang** and **Frank Chaloupka** estimate that the tax increase indeed had a substantial short-term effect on the use of tobacco products. The percentage of middle- and high-school students who reported

smoking fell by between 9.7 percent and 13.3 percent immediately after the tax hike, and the percentage of students who reported using smokeless tobacco dropped by between 16 percent and 24 percent.

The authors rely on survey data from Monitoring the Future, which asked tens of thousands of eighth, tenth, and twelfth grade students, ages 14-to-18, at 389 schools across the nation about their tobacco-use habits over the past 30 days. The Monitoring the Future survey was conducted between February and May of 2009, both before and after the new federal tobacco tax increase, and the same survey was conducted at many of the same schools in 2008, giving the authors the added benefit of examining smoking behaviors of students over two calendar years at the same schools.

This study suggests that a 10 percent increase in cigarette prices can reduce the smoking prevalence among youth by around 5 percent, which is similar to what other studies have found. Besides a large short-term drop in the percentage of surveyed students who reported smoking after new federal tobacco taxes were imposed in 2009, the authors estimate that there would have been between 220,000 and 287,000 more current youth smokers, and between 135,000 and 203,000 more youth smokeless tobacco users in the short-term had the federal tax increase not been implemented. The authors note that the long-term projected impact of the 2009 tobacco tax increase may be even higher, because the higher tax rate — and the corresponding higher retail prices — may act as a financial deterrence to future students who might otherwise take up smoking or use smokeless tobacco.

— Jay Fitzgerald

Trade Credit and Taxes

International tax rate differences are sizeable and apparent. In general, high rates of taxation increase the cost of capital, reducing investment levels and driving up pre-tax returns. As a result, tax rate differences create incentives to transfer capital from low-tax, low-capital-cost, low-return users to high-tax, high capital-cost, high-return users by delaying or accelerating the payment of trade accounts.

In **Trade Credit and Taxes** (NBER Working Paper No. 18107), authors **Mihir Desai, Fritz Foley**, and **James Hines** examine the extent to which taxation influences trade credit practices by affecting the returns to investment. Using comprehensive data collected by the U.S. Bureau of Economic Analysis (BEA) on the operations of U.S. multinational firms, they observe that the foreign affiliates of U.S. multinational firms make extensive use of trade credit: at year end 2004, these affiliates held current accounts receivable of $1.49 trillion and had current accounts payable of $1.39 trillion; each of these exceeded 30 percent of total annual affiliate sales. Their evidence from the worldwide operations of U.S. multinational firms indicates that affiliates in low-tax jurisdictions use trade credit to lend, whereas those in high-tax jurisdictions use trade credit to borrow: 10 percent lower local tax rates are associated with net trade credit positions that are 1.4 percent higher as a fraction of sales.

"Affiliates in low-tax jurisdictions use trade credit to lend, whereas those in high-tax jurisdictions use trade credit to borrow."

Managers have incentives

to set accounts receivable and accounts payable in a manner that reallocates capital from lightly taxed operations where investment opportunities have dissipated to highly taxed operations in which profitable opportunities remain. This mechanism implies that net working capital positions — or the difference between accounts receivable and accounts payable — should be higher for firms facing lower tax rates. In this study, the detailed data on the foreign affiliates of U.S. multinational firms make it possible for the authors to observe affiliates of the same firm operating in different countries and therefore facing different corporate income tax rates.

The authors find several patterns suggesting that firms use working capital positions to reallocate capital in response to taxation. Their data indicate that affiliates in low tax jurisdictions have higher net working capital positions than do other affiliates. The tax pattern is strongest among affiliates with the greatest opportunities to use trade credit to reallocate capital and for affiliates that do not appear to have attractive investment opportunities, specifically those with low capital expenditures and high cash holdings.

The authors closely study firm responses to the Homeland Investment Act, which reduced the tax costs of repatriating foreign earnings in 2005. Foreign affiliates with positive net working capital positions were the most likely to increase their repatriations that year, suggesting that these affiliates used trade credit arrangements to reallocate capital prior to the tax holiday.

Taken together, the authors' findings illustrate the effect of taxes on levels of working capital. Firms use trade credit to mitigate the effect of tax differences on the allocation of capital, and their actions imply that tax rate differences across countries significantly affect capital allocation within firms, depressing investment

— Lester Picker

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