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Employment Effects of International Trade

In the past two decades, China's manufacturing exports have grown dramatically, and U.S. imports from China have surged. While there are many reports of plant closures and employment declines in sectors where import competition from China and elsewhere has been strongest, there is little evidence on the long-run effect on workers. In **Trade Adjustment: Worker Level Evidence** (NBER Working Paper No. 19226), **David Autor, David Dorn, Gordon Hanson,** and **Jae Song** examine the impact of exposure to rising trade competition from China on the employment and earnings trajectory of U.S. workers between 1992 and 2007. They find that workers bear substantial costs as a result of the "shock" of rising import competition. The adjustment to such shocks is highly uneven across workers, and varies according to their previous conditions of employment.

Individuals who in 1991 worked in manufacturing industries that experienced high subsequent import growth earned lower cumulative earnings over the 1992–2007 period, and they were at elevated risk of exiting the labor force and obtaining public disability benefits. The difference between a manufacturing worker at the 75th percentile of industry trade exposure and one at the 25th percentile of exposure amounted to reduced earnings equal to 46 percent of initial yearly income. Trade exposure also increased job churning across firms, industries, and sectors. Workers in sectors highly exposed to trade with China spent less time working for their initial employers, less time in their initial two-digit manufacturing industries, more time working elsewhere in manufacturing, and more time working outside of manufacturing.

> "Workers bear substantial costs as a result of the 'shock' of rising import competition."

The authors find that both the degree of job churn and the way earnings and employment adjust to import shocks differ substantially across demographic groups. Earnings losses are larger for individuals with low initial wages, low initial tenure, low attachment to the labor force, and for those employed at large firms with low wage levels. Losses for workers with high initial earnings are generally quite modest. For a given size import shock, high wage workers experience a larger reduction in their earnings and employment with their initial employer compared to low wage workers. However, for high skill workers separations are more likely to be voluntary, and are less likely to take place as part of a mass layoff, so initial losses are offset by gains in subsequent jobs. Low-wage workers tend to stay longer in their initial trade-exposed firms and industries, are more likely to separate from their initial firm during mass layoffs, and incur greater losses of earnings both at the initial firm and after moving to other employers.

— Claire Brunel

Longer, Healthier Lives

Life expectancy in the United States has risen sharply in recent decades. Some scholars have worried that the extra years of life could be "low quality" if longer life span is accompanied by longer periods of disability. Fortunately, that does not seem to be the case. In **Evidence for Significant Compression of Morbidity in the Elderly U.S. Population** (NBER Working Paper No. 19268), **David Cutler, Kaushik Ghosh,** and **Mary Beth Landrum** report that although those over the age of 65 are reporting that they have more diseases than those of similar age in the past, "the severe disablement that disease used to imply has been reduced" and "poor physical functioning is being increasingly compressed into the period just before death."

Life expectancy at age 65 increased from 17.5 years to 18.2 years between 1992 and 2005, while "disability-free life expectancy" rose by even more, from 8.8 years to 10.4 years. The result is an increase in the fraction of the lifetime that is disability-free, and a decline of 0.9 years in the expected number of years of disability. The gains in disability-free life expectancy were consistent for men and women, and across races, with non-whites and whites gaining 1.8 and 1.6 disability-free years respectively. Disability declined by roughly 3 percent for people 12 to 24 months from death, by about 6 percent for those who were 25 months or more from death, and by almost 25 percent for those who were eight or more years from death.

> "Poor physical functioning is being increasingly compressed into the period just before death."

The authors analyze data from the Medicare Current Beneficiary Survey, a representative sample of the U.S. elderly population that includes between 10,000 and 18,000 individuals each year between 1991 and 2009. By linking this database to death records through 2008, the authors were able to categorize the health status of nearly 200,000 people at various numbers of years before death. Within 12 months of death, about 80 percent of the elderly had at least one major health condition. Heart disease afflicted about 38 percent of respondents. Three other conditions each affect about one quarter of the respondents: cancer, chronic degenerative diseases like Alzheimer's disease and pulmonary disease, and recoverable acute conditions such as heart attack and stroke.

The authors find that the prevalence of any disability has declined even though the prevalence of major disease has been constant in the elderly population. While the proportion of the elderly population afflicted by acute conditions such as heart disease, stroke, and hip fracture fell from about 40 percent to about 30 percent, the prevalence of chronic disabilities such as Alzheimer's and pulmonary disease, and of disabling but generally non-fatal chronic diseases like arthritis or diabetes, has increased. Although over 60 percent of the elderly report having arthritis or diabetes, the probability of reporting such a condition is not related to remaining years of life.

Disability may result from difficulty in physical functioning, such as the inability to walk a reasonable distance or to carry an object of moderate weight. The incidence of such functional limitations declined by 2.7 percent between 1991 and 2009. Disability may also be caused by an inability to carry out an Activity of Daily Living such as bathing or dressing, or by a problem with an Instrumental Activity of Daily Living such as doing light housework or managing money. The incidence of these disabilities declined by 22 percent.

— Linda Gorman

Stock Price Reactions to Index Inclusion

The impact on companies' share prices of being included in a stock index, such as the Standard and Poor's (S&P) 500, has long been analyzed and debated. In **Regression Discontinuity and the Price Effects of Stock Market Indexing** (NBER Working Paper No. 19290), **Yen-cheng Chang, Harrison Hong,** and **Inessa Liskovich** find that when a company moves from the Russell 1000 to the Russell 2000, its share price rises. The reverse move triggers a stock price decline. These findings provide support for the view that index inclusion can affect demand for a company's stock.

Past studies have found that companies added to the S&P 500 experience increases in their share values, and yet recent studies with the largest samples also have shown that there are no corresponding declines in share values when firms are deleted from that index. That seeming paradox has led some to conclude that the share-price increases might not only be tied to buying by passive stock-index funds or institutional investors who are benchmarked to various indexes. Rather, the spike in share prices might be associated with an increase in earnings forecasts and improvements in realized earnings at the time a firm is added to an index. Also, some scholars have theorized that lingering "investor recognition" of firms that were once on an index may partially explain why their share prices don't fall after deletions.

> "When a company from the Russell 1000 just makes it into the Russell 2000, its share price rises compared to that of a company that narrowly missed making it in. The reverse move triggers a stock price decline."

The authors attempt to resolve this puzzle by comparing firms that just made it into the Russell 2000 index to those that just missed making it in. The Russell 1000 is a value-weighted stock index comprising the 1,000 largest firms by market capitalization; the Russell 2000 is a similar index that includes firms 1,001 to 3,000. The two indexes are based on end-of-May market capitalization calculations. Small changes in the market capitalizations of firms that are ranked near 1,000 can move them from one index to the other. The authors analyze the trading and share prices of companies that moved back and forth between the two indexes from 1996 through 2012.

Because the indexes are capitalization-weighted, there is relatively little index buying when a firm enters the Russell 1000 as one of the smallest firms, but there is non-trivial buying when a firm joins the Russell 2000 as one of the index's largest capitalized firms. Indeed, the authors found the index weights for the stocks in the Russell 2000 just below the 1,000 cutoff (stocks 1,001 to 1,110) are around ten to fifteen times larger than the index weights for stocks just above the 1,000 cutoff (stocks 990 to 1,000).

In contrast to past S&P 500 studies, the authors also found a deletion effect for stocks whose market capitalization bumped them up from the heavily-traded top echelon of the Russell 2000 to the less heavily traded bottom of the Russell 1000. Stocks with such upward movement experienced lower returns than stocks that stayed on the Russell 2000.

The authors also found that Russell 2000 inclusion results in more trading in June, after end-of-May capitalizations are calculated, and that activity is consistent with investors rebalancing and tracking stocks. The just-added stocks have more trading volume than stocks that just missed addition to an index, while the just-deleted stocks have more trading volume than stocks that stayed in the index.

— Jay Fitzgerald

Immigrants and Local Labor Markets

In the last half-decade, when local labor demand has dried up, less-skilled Mexican-born immigrants have readily moved to find opportunity. They have been more mobile than low-skill native-born workers, according to **Brian Cadena** and **Brian Kovak.** In **Immigrants Equilibrate Local Labor Markets: Evidence from the Great Recession** (NBER Working Paper No. 19272), these authors find that the ready movement by Mexican immigrants reduces the impact of both positive and negative payroll employment changes on the employment outcomes of less-skilled native workers. In cities with substantial Mexican-born populations, this "geographic elasticity" reduced the effect of aggregate demand shocks on low-skilled natives' employment by more than 40 percent between 2006 and 2010. The authors conclude that "migration by Mexican-born immigrants dramatically reduces the geographic variability of labor market outcomes among the entire low-skilled population."

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The study confirms a finding from prior research that highly skilled workers move to places with better employment possibilities. For example, of the 97 metropolitan areas the authors studied, those with a 10 percentage point larger-than-average decline in employment between 2006 and 2010 saw a 5.3 percentage point larger-than-average drop in their population of native men with at least some college education. This is a relatively highly skilled part of the labor force. In contrast, there was no measurable drop in the population of less-skilled native men in these areas. The surprise finding is that less-skilled Mexican-born men were even more responsive to economic shocks than highly-skilled native men. Between 2006 and 2010, in those cities with a 10 percentage point larger-than-average employment decline, the population of Mexican-born men fell by 7.6 percentage points more than average. Most of the movement induced by changing labor demand was associated with migration by Mexicans who had already established themselves in the United States. Some returned to Mexico, others moved to new locations in the United States.

The mobility differences uncovered by this study do not appear to be explained by differences in other characteristics of Mexican-born and native low-skilled workers, such as age, education, family structure, or home ownership. The authors point out that Mexican migrants may be predisposed to move because they have already opted to migrate once, in coming to the United

States. Also, they are less likely than natives to receive benefits such as unemployment insurance.

The "geographical elasticity" of immigrant workers implies that a recession or other adverse labor demand shock has a much smaller effect on native low-skilled workers in cities with many low-skilled Mexicans than on those in cities without such immigrants. A large immigrant worker population acts as a kind of shock absorber. That flexibility helps smooth the national allocation of low-skilled workers. It may also contribute to the integration of local and regional labor markets. "The rising share of the Mexican-born among the low-skilled therefore at least partially mitigates concerns that the relative lack of mobility among less skilled workers leads to large disparities in these workers' wages across local labor markets."

— Laurent Belsie

Weather Forecasts, Expected Profitability, and Farmer Behavior

Agricultural output in developing nations is strongly dependent on the weather, and as a result agricultural profits are heavily affected by the accuracy of weather forecasts. Farmers without access to good insurance markets act conservatively, investing less on their farms and choosing crop mixes and cultivation techniques that reduce the volatility of farm profits but also lower expected profits.

In **Forecasting Profitability** (NBER Working Paper No. 19334), authors **Mark Rosenzweig** and **Christopher Udry** use newly available data on farmers in India to estimate how the returns to planting-stage investments vary by rainfall. The sensitivity of investment returns to weather suggests that making weather more predictable has the potential for increasing profitability.

The authors find that weather forecasts significantly affect farmer investment decisions and that these responses account for a substantial fraction of the year-to-year investment variability. The accuracy of weather forecasts varies across regions within India, and farmers respond more strongly to weather forecasts in regions where these forecasts tend to be more accurate. The farmers' use of the forecasts increases both average profit levels and the variability of profits. Farmers with access to weather forecasts earn higher profits than farmers without such forecasts when rainfall realizations are high, but they earn less under adverse rainfall conditions.

> "Farmers respond more strongly to weather forecasts in regions where [they] tend to be more accurate."

The authors' analysis suggests that Indian farmers, on average, underinvest at planting time. The investment level that maximizes expected profits over the full distribution of rainfall forecasts is roughly three times the observed average level.

Little attention has been paid to directly improving farmers' capacity to deal with weather fluctuations by improving the accuracy of weather forecasts. In part this is because of the lack of estimates of the sensitivity of investment returns to weather and other common random events, as prior studies have typically provided estimates based on data from a single crop season or a particular locality. The authors assess how profit levels would be affected by rising forecast skill under both current climate conditions and under the conditions predicted by widely-used climate models. They find that even modest skill improvements would substantially increase average profits per farmer. The effect would be somewhat greater if the climate becomes warmer.

— Les Picker

Intergenerational Transmission of Welfare Dependency

The extent to which welfare dependency is perpetuated from one generation to the next is a question of great social importance for which there is only limited empirical evidence. In **Family Welfare Cultures** (NBER Working Paper No. 19237), **Gordon Dahl, Andreas Kostol,** and **Magne Mogstad** analyze this question using data from the Norwegian disability insurance (DI) system. They study the outcomes of appeals by claimants who were initially denied DI benefits. Judges are randomly assigned to DI appeals, and some are systematically more lenient than others.

The authors investigate whether the children of those whose appeal cases were assigned to lenient judges, and who were therefore more likely to be approved for DI receipt, are more likely to draw welfare benefits than the children of those whose DI appeals were heard by less lenient judges. They verify that the individual characteristics of the appellants are uncorrelated with the assignment of the judges. Their findings indicate that if parents become welfare dependents, the likelihood of their children eventually becoming welfare recipients also increases. Specifically, when parents are awarded DI, the likelihood that one of their adult children will participate in DI rises by 6 percentage points over the next five years, and 12 percentage points over the next decade. These findings suggest that a more stringent screening policy for DI benefits would not only reduce payouts to current applicants, but would also have long-run effects on participation rates and program costs. The results underscore how important accounting for intergenerational effects can be when making projections of how participation rates and program costs may be affected by program reforms.

> "When parents are awarded DI, the likelihood that one of their adult children will participate in DI rises by 12 percentage points over the next decade."

The authors explore the cultural mechanisms behind the intergenerational relationship that they discover. They do not find any evidence that parental participation reduces the stigma of participation, or that their findings are driven by differential child investments by parents on DI. They conclude that the cross-generational effects may arise from children learning from a parent's experience with the DI program.

— Matt Nesvisky