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INSIDE THIS ISSUE

Measuring the Tightness of the Late-COVID Labor Market

Two recent NBER working papers develop new strategies for measuring the tightness of US labor markets and conclude that during 2021, these markets were significantly tighter than standard yardsticks, such as the aggregate unemployment rate, indicated.

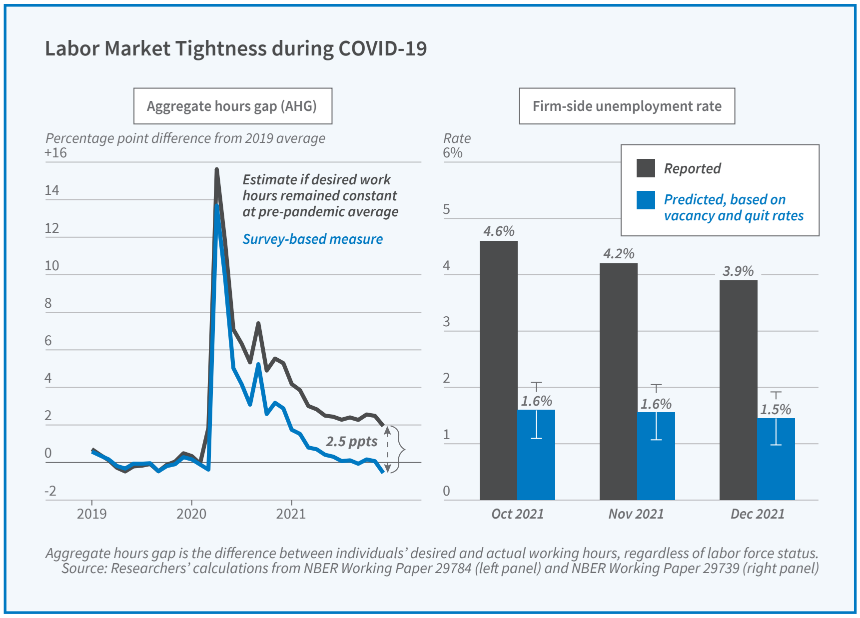
In **How Tight Are US Labor Markets?** (NBER Working Paper 29739), Alex Domash and Lawrence H. Summers explore the relationships between four different slack indicators — the number of unemployed people actively seeking a job, the employment-to-population ratio for adults aged 25 to 54, the job vacancy rate, and the quit rate — and nominal wage growth.

In December 2021, there were 1.7 job openings per job seeker, the highest level on record using data back to January 1960. The reported unemployment rate was 3.9 percent. From a firm's point of view, however, the researchers estimate that the effective unemployment rate was between 1.2 and 1.7 percent — more than two percentage points lower than the usually discussed rate. This estimate is based on the past association between vacancy rates, quit rates, and the unemployment rate.

The researchers' estimate of firm-side unemployment predicts wage growth better than the unemployment rate. In the fourth quarter of 2021, wage inflation was 4.9 percent, its highest rate in 20 years. The researchers conclude based on historical evidence that if the vacancy rate, quit rate, and inflation rate remain at their late-2021 levels, wage growth will surpass 6 percent over the next year.

> The US labor market in the second year of the COVID-19 pandemic was tighter than traditional measures indicate.

The researchers estimate that the US faces a labor shortage of about 6.9 million workers. They calculate that since the onset of the pandemic, about 1.3 million workers have left the labor force due to population aging, which would have occurred with or without the pandemic, about 1.5 million have left for COVID-19 health concerns, 1.4 million because of immigration restrictions, 1.3 million because of excess retirements, 1 million due to reduced incentives to work, and 400,000 in reaction to vaccination mandates. They conclude that labor markets will continue to be very tight unless there is a slowdown in labor demand.



Aggregate hours gap is the difference between individuals' desired and actual working hours, regardless of labor force status.
Source: Researchers' calculations from NBER Working Paper 29784 (left panel) and NBER Working Paper 29739 (right panel)

In a related study, **Has the Willingness to Work Fallen during the COVID Pandemic?** (NBER Working Paper 29784), R. Jason Faberman, Andreas I. Mueller, and Ayşegül Şahin construct a labor market utilization measure from the questions in the Job Search Supplement of the Survey of Consumer Expectations of 2013 to 2021. They subtract each individual's actual hours worked from their desired work hours and sum the resulting difference across individuals to calculate an aggregate hours gap (AHG). Analyzing desired hours of work complements the study of vacancy and quit rates.

The researchers conclude that part-time workers and those who are out of the labor force reduced their desired work hours by 4.6 percent during the pandemic. The drop in desired hours characterized almost all demographic groups, suggesting that explanations of reduced labor supply that focus on disruptions in schooling and childcare cannot account for the whole decline.

Individuals in jobs with a lot of social contact desired fewer work hours, while those in jobs with low social contact desired more work hours. The AHG for part-time workers declined during the pandemic, with these workers reducing their desired hours by an average of 3.1 hours per week. Also, a lower share of part-timers wanted full-time work. While the pandemic did not change the work hours desired by the unemployed, there were substantial changes among those out of the labor force, many of whom normally report that they would prefer some part-time work. During the pandemic, the fraction of those out of the labor force who preferred not to work at all rose from 41 percent to 50 percent.

As the willingness to work fell, nearly everyone in the labor force increased their reservation wage, the wage that a job would need to pay in order to induce them to accept it. On average, reservation wages increased by 6.2 percent. The researchers conclude that "overall lower willingness to work has led to a contraction in labor supply that persists throughout the pandemic."

—Linda Gorman

The Impacts of Disability Benefits on Employment and Crime

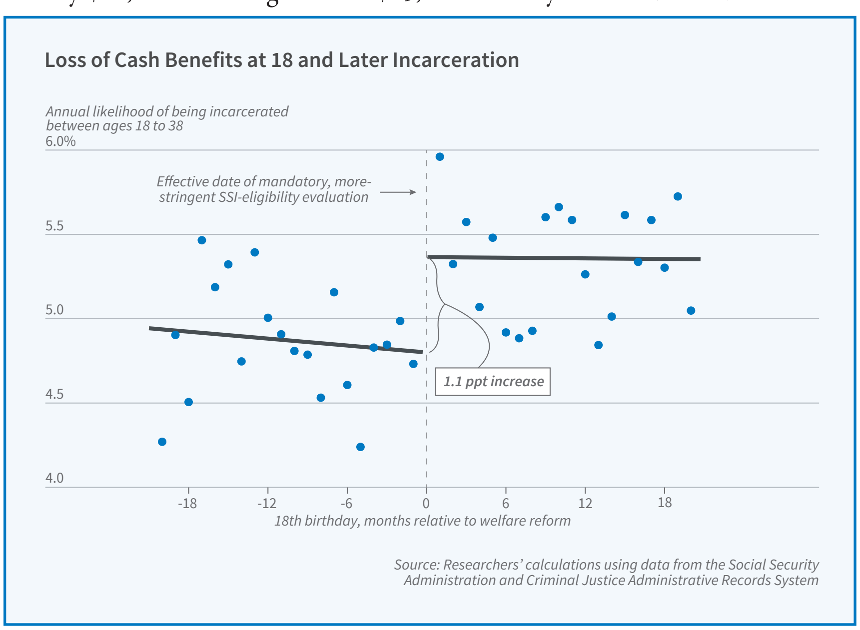
A federal welfare reform that took effect August 22, 1996, required that low-income children with disabilities be medically evaluated as part of the Social Security Administration's process for determining whether they would continue receiving cash assistance as adults in the Supplemental Security Income (SSI) program.

Nearly all children on SSI who turned 18 after the reform were evaluated to determine whether their disability impeded their ability to work enough to qualify them for cash benefits in adulthood. Most children with 18th birthdays before this date transitioned onto adult SSI without an eligibility review. After the reform, about 36 percent of those who were medically reviewed were removed from SSI, losing annual benefits of nearly $10,000 relative to those who remained in the program.

In **Does Welfare Prevent Crime? The Criminal Justice Outcomes of Youth Removed from SSI** (NBER Working Paper 29800), Manasi Deshpande and Michael G. Mueller-Smith utilize SSI records, earnings records, criminal court charges, and correctional data between 1997 and 2017 to examine how the loss of cash benefits affected the employment and criminal justice outcomes of 18-year-olds over the following two decades.

The researchers find that removing youth from SSI increased criminal charges substantially, with a 60 percent increase (from 0.63 to 1.0) in charges associated with income generation, such as theft and burglary. There was also a 60 percent increase—from 4.7 to 7.6 percentage points—in the annual likelihood of being incarcerated. Although SSI removal also increased the likelihood of youth working in formal employment—the fraction of youth earning at least $15,000 annually increased from 11 to 16 percent—the increase in criminal justice involvement was even larger. The share of those turning 18 who were subsequently charged with an income-generating crime rose from 24 to 33 percent following SSI removal. The researchers find that youth respond either by working more in the formal sector or by engaging more in criminal activity; very few respond on both margins.

Removing low-income youth with disabilities from Supplemental Security Income at age 18 increased criminal charges associated with income generation as well as incarceration rates.



The effects of SSI removal varied by subgroup. For men, the increase in criminal charges was concentrated in theft and burglary, and the annual likelihood of being incarcerated increased by 50 percent, from 7.2 to 10.8 percentage points. For women, the largest increases in criminal charges were for theft, prostitution, and forgery/fraud (e.g., identity theft), with a subsequent 230 percent increase in the annual incarceration rate, from 0.7 to 2.3 percentage points. The impact of SSI removal on incarceration was disproportionately high for youth with low-earning parents and Black young adults, two groups with high baseline incarceration rates.

The researchers assess the impact of SSI review on various government expenditures and find that the increased cost of enforcement and incarceration nearly eliminate the SSI savings. They estimate that removing a youth from the SSI program saved taxpayers an average of $49,000 through lower SSI and Medicaid spending and higher tax revenue due to increased adult earnings. However, they also find that the average increase in police, court, and incarceration costs associated with each SSI removal was $41,000. They estimate victim costs, using conservative assumptions, of $87,000 per removal.

—Aaron Metheny

How the US-China Trade War Affected the Rest of the World

Upending a decades-long effort to reduce global trade barriers, China and the United States began mutually escalating tariffs on $450 billion in trade flows in 2018 and 2019. These tariff increases reduced trade between the US and China, but little is known about how trade was affected in the rest of the world.

In **The US-China Trade War and Global Reallocations** (NBER Working Paper 29562), Pablo Fajgelbaum, Pinelopi K. Goldberg, Patrick J. Kennedy, Amit Khandelwal, and Daria Taglioni find that the trade war created trade opportunities for other nations and increased overall global trade by 3 percent. Export growth was stronger, on average, in countries with larger shares of their exports governed by strong trade agreements, and in countries with more foreign direct investment.

In 2018 and 2019, the US raised tariffs on imports from China. It also raised tariffs on a subset of products from other countries, mainly in machinery and metals. China retaliated and imposed tariffs on imports from the US. At the same time, it also lowered tariffs on imports from the rest of the world. The tariff increases were a major departure from long-run trends towards tariff liberalization across the globe.

To analyze the impact of these four sets of tariff changes on global trade, the researchers match the tariffs' movements to global bilateral trade data from the International Trade Centre for the top 50 exporting countries, excluding oil exporters. Their analysis compares the export growth across products that were subject to different tariff increases by the US or China.

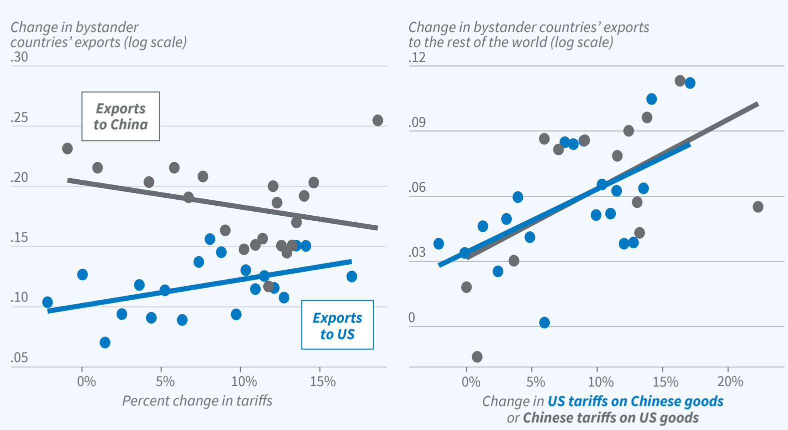
The US and China reduced exports of products subject to increased tariffs. US exports to China fell by 26.3 percent while exports to the rest of the world increased modestly, by 2.2 percent. China's exports to the US declined by 8.5 percent and its exports to the rest of the world rose by a statistically insignificant 5.5 percent. The researchers further find that trade in the products targeted by the tariffs increased among bystander countries. These nations did more than reallocate global trade flows across destinations; their overall exports to the world increased. Because of this response from the rest of the world, on net, they calculate that the trade war raised global trade by 3 percent.

> While the US and China largely taxed each other and depressed their bilateral trade flows, bystander countries increased their exports to the US and the rest of the world and global trade increased overall.

The researchers find that the winners and losers in the trade war are explained primarily by heterogeneity in exporters' responses to trade-war-induced price changes, rather than by specialization patterns. Many of the countries with strong export growth were operating along downward sloping supply curves and selling products that substituted for those previously supplied by the US or China. The countries that benefited the most were those with a high degree of international integration, as proxied by their participation in trade agreements and foreign direct investment. France, for example, increased its exports both to the US and to the rest of the world in response to the tariffs. Spain increased its exports to the US, but its exports to the rest of the world shrank. In South Africa and the Philippines, the tariff increases reduced both exports to the US and exports to the rest of the world. Statistically significant increases in bystander countries' exports in response to the tariffs occurred in 19 of the 48 countries in the data sample. One country reported a statistically significant decrease; there were no statistically significant impacts in the remaining 28 countries.

—Linda Gorman

US-China Trade War and Export Growth, 2017–19



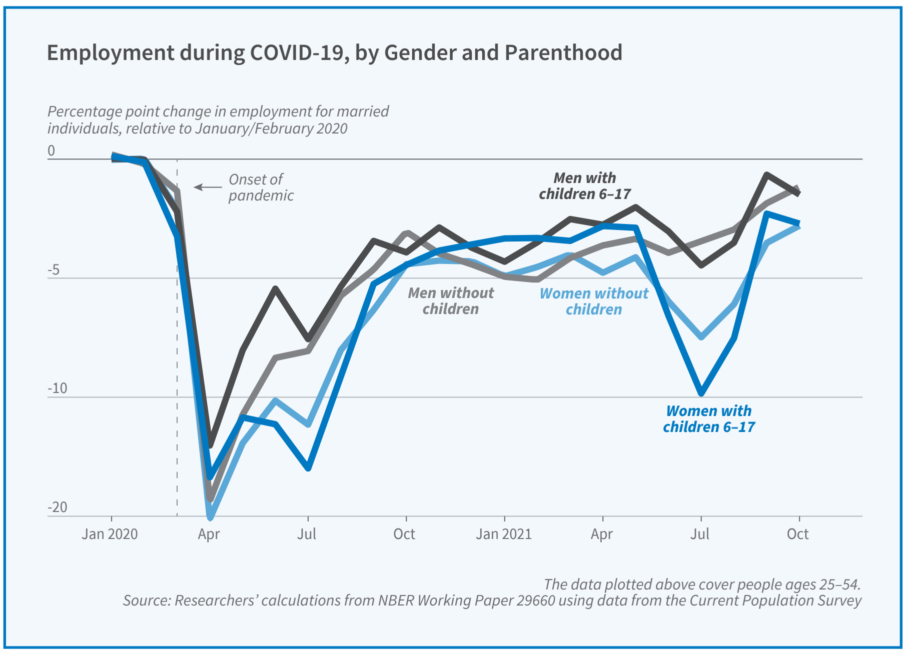
In the left panel, for exports to China, tariff change corresponds to Chinese tariffs on US goods, and vice versa.
Source: Researchers' calculations using data from the International Trade Centre

Pandemic School Closures and Parents' Labor Supply

Two new studies show that school closures caused by the COVID-19 pandemic significantly reduced parents' labor market activity. They reach different conclusions about which demographic groups were most affected, one concluding that it was parents without college degrees, the other pointing to mothers with school-aged children. These disparities may be the result of the studies' analysis of somewhat different time periods and geographic areas.

> Hours worked declined for parents without college degrees but not for those with them, and childcare duties fell more heavily on mothers.

In **The Impact of School and Childcare Closures on Labor Market Outcomes during the COVID-19 Pandemic** (NBER Working Paper 29641), Kairon Shayne D. Garcia and Benjamin W. Cowan report that parents, especially those without college degrees, responded to school closures by reducing their hours or shifting from full- to part-time work. They concentrate on the period from August 2020 to April 2021 because it covers the height of the pandemic and the first full academic term for which many schools switched to remote learning. Their study draws on cellphone data of foot traffic to pinpoint school closures, and on the Basic Monthly Current Population Survey for labor-supply information.



The data plotted above cover people ages 25–54.
Source: Researchers' calculations from NBER Working Paper 29660 using data from the Current Population Survey

School closures were associated with a 3.8 percentage point decline in full-time work by mothers and a 2.5 percentage point decline by fathers, with the reductions primarily resulting from transitions to part-time work. Mothers on average worked 1.3 fewer hours a week and fathers 1.5 fewer hours. Parents without a college degree worked about two hours less per week, while those with college degrees showed negligible declines. Some studies of the early months of the pandemic — prior to the period considered in this study — found larger reductions in labor supply for mothers than for fathers, possibly because as the pandemic evolved, fathers pitched in more. Among unmarried parents, women were more likely than men to shift to part-time work; reductions in hours worked were comparable across genders. School closings were not associated with changes in labor supply among those who were not parents. The researchers explain the disparities across education groups by suggesting that more-educated workers were more likely to shift to working from home and to have access to alternative childcare arrangements or private schooling.

While Garcia and Cowan study changes in labor supply when schools close, Benjamin Hansen, Joseph J. Sabia, and Jessamyn Schaller also consider changes when they reopen. In **Schools, Job Flexibility, and Married Women's Labor Supply: Evidence from the COVID-19 Pandemic** (NBER Working Paper 29660), which also analyzes data from the Current Population Survey, they cover a broader time frame, September 2019 to October 2021. Their study spans all three academic years that were affected by the pandemic. It also includes a somewhat larger geographic area, with more rural locations, than the other study. The results suggest that in-person K-12 schooling was associated with employment gains for married women with school-aged children, but not for any other group, including single mothers and married custodial fathers.

After schools reopened, married women with school-aged children reported a 3.3 percentage point increase in employment and a 3.3 percentage point decline in remote work. The figures exclude women who were employed in the K-12 educational sector.

Mothers with and without college degrees showed comparable employment gains after schools reopened. Educational attainment, however, was a significant factor in work patterns. Mothers who completed college reduced remote work by 4.4 percentage points, versus a statistically insignificant 1.4 percentage point decline for those with less education.

The age of children made a difference. Mothers of children aged 12 to 17 saw a 3.9 percentage point increase in employment, compared with 2.5 percentage points for those with children aged 6 to 11. The decline in remote work was almost entirely among the mothers of the younger children. The researchers suggest that mothers with younger children may seek out jobs with greater flexibility, and that those with older children may have decided to leave the labor force when schools went remote in order to make sure that students kept up their grades.

— Steve Maas

Explaining the Decline of the US' Net Foreign Asset Position

For decades, the United States appeared to enjoy a special privilege: although it imported more goods and services than it exported, its net foreign asset (NFA) position remained only slightly negative. Since the Great Recession, that privilege has disappeared and the NFA position — the difference between the foreign assets held by Americans and the US assets owned by foreigners — has declined sharply, even when measured as a percentage of gross domestic product (GDP).

In **The End of Privilege: A Reexamination of the Net Foreign Asset Position of the United States** (NBER Working Paper 29771), Andrew Atkeson, Jonathan Heathcote, and Fabrizio Perri analyze why the NFA has deteriorated so much. They find that most of the change can be explained by a boom in US equity values that was not matched by foreign stock prices. Their paper upends the conventional explanation for America's so-called special privilege, which for a time allowed the United States to fund its large trade deficit with its earnings on foreign assets.

In the early years of this millennium, the most common explanation for the US' small NFA position was that Americans owned high-return foreign equities while foreigners held low-return US assets such as Treasury bonds. Data available at the time supported that view. By analyzing newer federal data, however, more finely tuned to capturing economic and financial flows and balance sheet positions, the researchers uncover a different explanation. They find that the relative performance of foreign and US holdings within asset classes, rather than differences in the type of assets held, accounts for most of the changes in the US NFA position between 2010 and 2021.

The researchers divide the dynamics of the US NFA position into three phases. In the first, from 1992 to 2002, the US NFA position deteriorated from minus 5 to minus 18 percent of GDP, paralleling rising deficits in the current account. During the second phase, from 2002 to 2010, the NFA position was roughly stable while the current account continued its negative trend. This was the era of America's special privilege, as previous researchers dubbed it, because it appeared that the US could finance its trade deficits with the high returns earned on foreign assets. That privilege came to an end in the third phase, 2010–21, when the NFA position fell by more than 40 percent even though the current account as a percentage of GDP was roughly stable. By 2021, the decline in the US NFA position had not only negated the phase of special privilege, but had fallen to a lower level than would be indicated by the cumulated current account deficits over the full period from 1992–2021.

Since the Great Recession, Americans have earned only moderate returns on their foreign investments while foreigners have reaped a bonanza on the boom in US stocks.

The reason for the plunge during the third phase was a boom in US stock prices that was not matched elsewhere. While Americans were earning moderate returns on their foreign stocks and other financial investments, foreigners were earning very high returns on their US holdings.

US Net Foreign Asset Position as Share of GDP, 1992–2021

Source: Researchers' calculations using data from the Bureau of Economic Analysis

The researchers consider two possible explanations for the stronger returns on US stocks than their global counterparts during the last decade. One is that US firms made substantial investments in productive capital that are not measured in the national accounts, while the other is that they experienced a rise in market power and a corresponding increase in monopoly profits. If the first explanation was correct, the US would have experienced a period of low or negative measured output and a huge trade and current account deficit, far beyond the deficit actually reported. The researchers conclude that since this was not observed, unmeasured investments may have contributed to the decline of the NFA position, but they are unlikely to be a dominant factor. A rise in monopoly profits and a larger share of value added accruing to the owners of firms, however, appears much more consistent with the NFA movement and other macroeconomic data. Since foreign investors own roughly 30 percent of the US corporate sector, their share of the increased profitability of this sector corresponds to an annual flow of about 1.3 percent of US GDP.

—*Laurent Belsie*

Enclosure of Rural England Boosted Productivity and Inequality

Enclosure involved privatizing rural land in England that had been in common ownership and consolidating scattered plots that had been farmed by individual households. The process began in the Middle Ages, and originally took place only when there was unanimous local agreement. At the beginning of the 18th century, large parts of the country had not been enclosed.

Around 1700, Parliament allowed owners of three-quarters of the land in an area, by value, to petition for an act of enclosure of all common property. This institutionalized a process for proceeding with enclosure over the opposition of some affected residents. By about 1900, virtually all of England was under private, consolidated ownership.

In **The Economic Effects of the English Parliamentary Enclosures** (NBER Working Paper 29772), Leander Heldring, James A. Robinson, and Sebastian Vollmer study all English Parliamentary enclosure acts between 1750 and 1830 and describe their impact. The researchers assemble data on agrarian outcomes in over 15,000 parishes, and they compare parishes that were enclosed in the Parliamentary period, 1750–1830, to those that were not enclosed by this method at the end of the period. Because the decision to file an enclosure petition likely correlated with parish attributes, the researchers develop an estimation strategy that draws on information on the success or failure of enclosure petitions for nearby parishes.

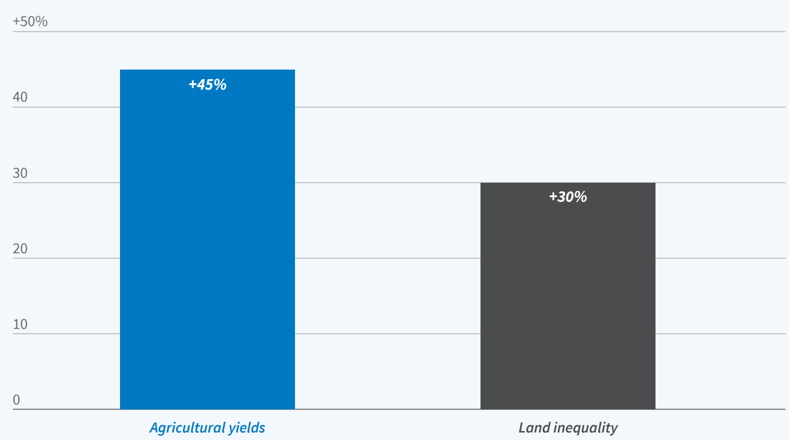
The analysis finds that by 1830, enclosures were associated, on average, with a 45 percent increase in agricultural yields. Inequality in land ownership, measured by the value of land held by different owners, also increased following enclosure. The researchers also estimate that the Gini coefficient, a common measure of income or wealth inequality, rose by 30 percent in parishes that enclosed relative to those that did not. These results are in line with theoretical arguments pointing to potential inefficiencies in shared governance and ownership of land. Even in communities as small, cohesive, and stable as a parish, informal governance mechanisms coordinating behavior and investment appear to have been less efficient than those of private ownership.

> Parliamentary enclosures increased agricultural yields as well as inequality in the distribution of landholdings in enclosing parishes.

Contemporary advocates of Parliamentary enclosure suggested that it promoted investment, innovation, and experimentation in new techniques. The researchers explore the claim regarding innovation by examining the number of agricultural patents filed in a parish, which increased modestly following enclosure. The quality of local infrastructure, measured by the probability that surveyors rated a road in the parish to be of poor quality, also improved. The share of acreage in a parish that was either sown with turnips or subject to appropriate fallowing practices — ways to replenish depleted soils and improve output — also rose following enclosure. Prior to enclosure, the practices may not have been adopted because their implementation required coordination among villagers with disparate interests in commonly governed fields. Parliamentary enclosure gave everyone the freedom to implement best practices without the need for coordination.

—Lauri Scherer

Economic Effects of Parliamentary Enclosure



Percent change in agricultural yields is based on logarithmic approximation
Source: Researchers' calculations using data from various sources