

IMMIGRATION AND ECONOMIC GROWTH

Gordon H. Hanson

As the 2012 presidential campaign gets under way, there will be intense public debate about the direction of economic policy. The continuing torpor of the U.S. economy and mounting government debt oblige candidates to detail how they would improve prospects for economic growth and reduce the federal budget deficit. We are sure to hear a great deal about plans to lower taxes, reduce government regulation, improve U.S. education, and rebuild infrastructure. But it is a near certainty that no candidate will make immigration part of his or her vision for achieving higher rates of long-run economic growth. To be sure, stump speeches will contain pat pronouncements about securing American borders, restoring the rule of law, or bringing undocumented immigrants out of the shadows, depending on the candidate's political orientation. Yet, it is a safe bet that after getting through these bullet points candidates will seek to change the subject. Immigration is a divisive issue that most national politicians prefer to avoid. President Obama checked his immigration box by making a halfhearted call for immigration reform in May 2011. That proposal was quickly buried under many more pressing items in his legislative outbox.

Ignoring immigration may make short-run political sense but it is a mistake if the goal is to build a coherent economic strategy. Immigration policy affects the pace of innovation in the U.S. economy, the supply of labor by high-skilled workers, the ability of regional economies to adjust to business cycle fluctuations, and the

Cato Journal, Vol. 32, No. 1 (Winter 2012). Copyright © Cato Institute. All rights reserved.

Gordon H. Hanson is Professor of Economics at the University of California San Diego and Director of the Center on Emerging and Pacific Economies.

integrity of local, state, and federal government finances. While current policies tend to do a poor job on these counts, designing a system that would make immigration good for America is easily within reach.

The Role of Immigration in Innovation

Past improvements in living standards for American households have been largely the consequence of growth in the productivity of capital and labor (Jones 1995). Productivity growth, in turn, is the result of innovations that create new products and production processes. The Windows operating system, the iPhone, Lipitor and other cholesterol-reducing drugs, safe, fuel-efficient automobiles, and improved agricultural varieties are a few among the many new products that have appeared in recent decades and that have raised the level of national welfare. Each was the consequence of intensive research and development that culminated in a blockbuster product based on myriad new patents. A binding constraint in generating innovations is the supply of highly talented scientists, engineers, and other technical personnel. Immigration helps relax this constraint.

Each year, U.S. universities conduct a global talent search for the brightest minds to admit to their graduate programs. Increasingly, foreign students occupy the top spots in the search. Data from the National Science Foundation's Survey of Earned Doctorates show that between 1960 and the late 2000s, the share of PhDs awarded to foreign students rose from one fifth to three fourths in mathematics, computer science, and engineering; from one fifth to three fifths in physical sciences; and from one fifth to one half in life sciences. U.S. university departments that have more foreign graduate students produce more academic publications and have their work cited more frequently (Stuen, Maskus, and Mobarak 2010). Once they graduate, U.S.-educated foreign workers patent at a significantly higher rate than U.S.-born workers (Hunt 2009). As a consequence, U.S. cities that attract these workers produce larger numbers of patents in electronics, machinery, pharmaceuticals, industrial chemicals, and other technology-intensive products (Kerr and Lincoln 2010). Simply put, high-skilled immigration promotes innovation. An additional benefit is that high-skilled immigrants are likely to pay far more in taxes than they use in public services, generating a positive net contribution to government fiscal accounts.

What does the United States do to attract talented foreigners? Foreign students who are admitted to U.S. universities can generally obtain a student visa. While the process of awarding visas was beset by onerous new restrictions after 9/11 (Alden 2009), many of these problems have since been resolved. Today, the difficulty is not in attracting top foreign students to America but in keeping here them after they graduate.

High-skilled immigrants have three primary channels for obtaining permission to work in the United States. The H-1B visa, which targets highly trained professionals, permits holders to work in the United States for a period of three years. It is renewable once, with the annual number of visas capped at 65,000. Employer-sponsored green cards permit holders to live and work in the country indefinitely. The annual number of new visas is capped at 150,000. The third channel is a family-sponsored green card, which requires marrying a U.S. citizen (visas for which there is no cap) or having a close relative already in the country legally (visas for which are capped at 640,000). Because of the limited number of work-based visas, the family visa route remains the most common path to legal residence for skilled workers. Rosenzweig (2007) reports that in the early 2000s among immigrants who entered the United States on student visas and ultimately obtained green cards, 55 percent did so by marrying a U.S. citizen. To make it in America, foreign students not only need to be smart enough to get into a U.S. university. They also need to be proficient at dating.

Despite many hurdles to their entry, high-skilled immigrants make important contributions to U.S. productivity growth. By making it easier for talented foreign students to stay on in the country once their studies are finished, their contributions could be even larger.

Greasing the Wheels of the U.S. Labor Market

Opposition to immigration in the United States is strongest regarding the admission of foreigners with low skill levels. There is the perception that low-skilled immigrants tend to be in the country illegally, to pay little in taxes while absorbing much in the way of government services, and to make neighborhoods less safe. Less appreciated are the contributions that low-skilled immigrants make in improving the efficiency of the U.S. economy. To use the words of

George Borjas (2001), low-skilled immigration greases the wheels of the U.S. labor market.

One contribution of low-skilled immigrants is to make it possible for high-skilled workers to spend more time on the job and less time doing non-work related chores. Women account for an ever increasing share of the U.S. high-skilled labor force. In 2008, 48 percent of workers with a college degree were female (as were 54 percent of currently enrolled undergraduate students, meaning the female share of highly educated labor is likely to rise in the future). The majority of highly educated women are married to highly educated men (Isen and Stevenson 2010: 13). For both to work outside the home often requires hiring outside labor to care for children, clean the home, launder clothes, and tend to the yard. In a study of immigration's impact on U.S. cities, Cortes (2008) finds that metropolitan areas that have had larger influxes of low-skilled immigrants have lower prices for dry cleaning, child care, housing cleaning, yard care, and other labor-intensive services. Lower prices for these services translate into more hours spent at work for high-skilled workers, particularly among women with a professional degree or PhD (Cortes and Tessada 2009). Low-skilled immigration thus indirectly contributes to productivity growth by raising the effective supply of high-skilled labor.

Another consequence of low-skilled immigration is to increase the mobility of the labor force. Low-skilled U.S.-born workers tend to be immobile across regions. When, say, the demand for low-skilled labor picks up in North Carolina, native-born workers in other regions are slow to move in (Notowidigdo 2010). Why this is the case is poorly understood. The consequence of the immobility of low-skilled labor is to gum up the labor market, slowing the pace of growth in booming regions and the pace of recovery in slumping regions. Relative to low-skilled natives, low-skilled immigrants are more mobile geographically (Card and Lewis 2007). They may hang dry wall in Texas in the winter, clean and pack poultry in Arkansas in the spring, and harvest vegetables in Georgia in the summer. True, many of these workers are in the country illegally. Approximately three-fifths of immigrant workers with less than a high school education are undocumented. Yet, their mobility across jobs and zip codes helps smooth fluctuations in the U.S. economy and ease the burden on U.S. workers when the unemployment rate rises. Since the last U.S. business cycle peak in 2007, the population of illegal immigrants

has declined by about one million individuals (Passel and Cohn 2011). Many of those workers returned to their home countries after jobs in U.S. industries disappeared during the Great Recession. Flexibility in the employment of immigrant labor helps reduce volatility in employment for native labor. Undocumented workers are particularly flexible as they lack restrictions on moving between employers to which low-skilled workers on H-2A or H-2B temporary visas are subject.

Not all workers in the United States benefit from low-skilled immigration. While employers see their factories and farms become more productive and high-skilled workers enjoy lower prices for goods and services they purchase, low-skilled native-born workers face increased competition in the workplace. Borjas (2003: 1370) finds that during the 1980s and 1990s low-skilled immigration reduced the wages of U.S.-born high-school dropouts by nine percent. Not all economists agree with his findings and the wage impact of immigration remains a topic of academic debate (Card 2005). Still, it is hard to imagine how more low-skilled immigration could be good for low-skilled native workers in the United States.

When assessing the labor market consequences of low-skilled immigration, it is important to keep in mind that any wage losses to low-skilled native workers represent a change in the *distribution* of national income but not in the *level* of national income. If low-skilled immigration pushes down wages for low-skilled labor, U.S. employers gain and U.S. low-skilled workers lose, with the gains to the former offsetting the losses to the latter. Moreover, economic theory suggests that immigration generates a surplus by making capital and land more productive, meaning that gains to U.S. employers are likely to exceed any losses to U.S. workers. In practice, the immigration surplus from low-skilled immigration in the United States appears to be small (Borjas 1999, Hanson 2007). But the point remains that one shouldn't count wage losses to low-skilled immigrant workers as a net loss from immigration, however painful it might be for the individuals who are negatively affected.

Immigration and the Tax Burden

Immigration's impact on government spending attracts much attention but is not well understood. A common criticism of immigration is that it increases government spending (Camarota 2004).

If true, reducing immigration, and illegal immigration in particular, would help to narrow the scope of government. The relationship between immigration and public finances is complex. Under current tax and spending rules, an exodus of low-skilled immigrants probably would reduce the net burden on U.S. taxpayers. But if reducing immigration requires substantially higher levels of enforcement the drain on government budgets could actually increase. A more sensible approach than a pure-enforcement strategy would be to allow low-skilled immigration to occur but to shield taxpayers from negative effects.

Low-skilled immigrants, whether legal or illegal, pay taxes and use government services (Camarota 2004). They pay sales taxes when they make purchases and property taxes for the housing they rent or own. A worker who presents a Social Security number to an employer, be the number valid or not, will have payroll taxes deducted from his or her paycheck, with those taxes sent on to the federal government. All workers are subject to federal income taxes, though in practice most low-income workers owe little in tax and most illegal workers appear not to file tax returns (GAO 2010). To be eligible to receive welfare benefits financed by the federal government, an individual must be a U.S. citizen. Not only are illegal immigrants excluded from receiving federally funded entitlements but so are noncitizen legal immigrants. The major drain on government finances from immigration comes from public education—all children, regardless of legal status, must attend school—and public health care. The U.S.-born children of immigrants are eligible to receive Medicaid and other subsidized health services. Some ineligible immigrants obtain health services through hospital emergency rooms, often at public expense.

The net fiscal impact of low-skilled immigration is the subject of heated debate. Poring over the many recent studies—most of which offer only partial views of immigration's fiscal consequences and produce estimates that require strong assumptions that are difficult to verify—it does appear that the net fiscal impact is negative (CBO 2007). In the mid-2000s, Camarota (2004) put the annual fiscal cost for the federal government at \$12 billion (in 2011 dollars), with the net fiscal cost for state and local governments (whose total budgets are far less than the federal budget) exceeding this amount. Yet, even if these figures are true, it does not necessarily follow that the correct policy response is to attempt to eliminate illegal immigration.

One problem with reducing low-skilled immigration is that doing so is not costless. Lowering the illegal population requires devoting more resources to policing U.S. borders and monitoring U.S. work-sites. Even though in the last seven years the U.S. Border Patrol has more than doubled the number of officers on the U.S.-Mexico border (to 20,000 agents), illegal immigration continues. Encouraging the departure of the 11 million illegal immigrants currently in the country would require substantially more intensive interior enforcement. Immigration and Customs Enforcement has increased scrutiny of U.S. businesses and more and more employers use E-Verify to validate the eligibility of prospective workers for employment. But we still have around eight million undocumented workers in the U.S. labor force (Passel and Cohn 2011). Driving illegal immigration to zero would require additional enforcement at additional expense. If the extra cost of such enforcement is larger than the net fiscal cost of illegal immigration, then driving illegal immigration to zero would fail a cost-benefit test. In truth, we don't know if current levels of enforcement spending are justified. The 2011 combined budgets of Customs and Border Protection and Immigration and Customs Enforcement, the two federal agencies charged with immigration enforcement, was \$15 billion, with not all of these funds going to immigration-related activities. Before ramping up enforcement further, the U.S. government should tell the American people exactly how much immigration enforcement costs and how much it saves taxpayers by removing immigrants who would otherwise be a net fiscal burden on the U.S. economy. To date, the government has failed to provide such information.

A second issue with reducing low-skilled immigration relates to how fiscal burdens are shared across levels of government and across individuals. Whereas the federal government enjoys revenues from payroll taxes and income taxes generated by immigrants, states and localities tend to be responsible for funding K-12 education and public health care for the children of immigrants. The federal government thus enjoys more of the fiscal benefits of immigration while states and localities are stuck with a much higher share of the costs. Such inequities in burden sharing have provoked protest by governors in high-immigration states (Goodnough 2010).

Another source of unequal burden sharing is that U.S. employers enjoy benefits from immigration, in terms of higher productivity for their operations, while taxpayers pay for the education and health

services that immigrant households receive. Taxpayers thus subsidize employers in agriculture, construction, meatpacking, restaurants and hotels, and other sectors that have high levels of employment of low-skilled immigrant labor. A reasonable solution to the current predicament is to eliminate such subsidies by making employers internalize the fiscal cost of immigrant workers. One way of achieving internalization is to subject employers to an immigrant labor payroll tax that would fund the benefits that their immigrant employees, and their family members, receive. Such a tax would make employers bear the fiscal consequences of immigration, releasing taxpayers from the burden and perhaps easing political opposition to immigration.

Aligning Incentives, Sharing Gains

Immigration moves workers from countries where they are less productive to countries where they are more productive. Simply by crossing the U.S.-Mexico border, Mexican workers see their hourly wage increase by a factor of 2.5, adjusting for cost of living differences between the United States and Mexico (Hanson 2009: 192). Students from Vietnam, Ghana, or Bolivia who obtain graduate degrees in the United States develop the potential to publish academic research or create patentable technology that they could not have accomplished at home. For the world as a whole, international migration appears to increase total income and generate large gains for those who take the risk of moving from one nation to another.

Convincing the American public that immigration benefits them, and not just migrants, is a task few politicians are willing to embrace. Yet, evidence suggests that for the United States immigration of high-skilled labor accelerates the rate of productivity growth and immigration of low-skilled labor improves the efficiency of the labor market. The downsides of immigration, brought about in part by the entry of undocumented workers, include adverse consequences for U.S. taxpayers. The problem is not immigration per se but rules governing taxes and spending that fail to make U.S. employers internalize the fiscal consequences of hiring low-skilled foreign labor. The nation could preserve the benefits from immigration and increase its public support by shifting the fiscal burden of immigration from taxpayers to employers. If we as a nation are going to continue to support immigration, we need to find arrangements that align the incentives of employers, households, and workers.

References

- Alden, E. (2009) *The Closing of the American Border: Terrorism, Immigration and Security since 9/11*. Washington: Harper Perennial.
- Borjas, G. (1999) *Heaven's Door: Immigration Policy and the American Economy*. Princeton, N.J.: Princeton University Press.
- _____ (2001) "Does Immigration Grease the Wheels of the U.S. Labor Market?" *Brookings Papers on Economic Activity* 1: 69–133.
- _____ (2003) "The Labor Demand Curve Is Downward Sloping: Reexamining the Impact of Immigration on the Labor Market." *Quarterly Journal of Economics* 118 (4): 1335–74.
- Bound, J.; Turner, S.; and Walsh, P. (2009) "Internationalization of U.S. Doctorate Education." NBER Working Paper No. 14792.
- Camarota, S. A. (2004) "The High Cost of Cheap Labor: Illegal Immigration and the Federal Budget." Washington: Center for Immigration Studies.
- _____ (2008) "Homeward Bound: Recent Immigration Enforcement and the Decline in the Illegal Alien Population." Washington: Center for Immigration Studies.
- Card, D. (2005) "Is the New Immigration Really so Bad?" *Economic Journal* 115(507): 300–23.
- Card, D., and Lewis, E. (2007) "The Diffusion of Mexican Immigrants during the 1990s: Explanations and Impacts." In G. Borjas (ed.) *Mexican Immigration to the United States*. Chicago: University of Chicago Press.
- Congressional Budget Office (2007) "The Impact of Unauthorized Immigrants on the Budgets of State and Local Governments." Washington: CBO.
- Cortes, P. (2008) "The Effect of Low-skilled Immigration on U.S. Prices: Evidence from CPI Data." *Journal of Political Economy* 116 (3): 381–422.
- Cortes, P., and Tessada, J. (2009) "Low-skilled Immigration and the Labor Supply of Highly Educated Women." Working Paper, Boston University. Available at <http://www.inesad.edu.bo/bcde2009/A2%20Cortes%20Tessada.pdf>.
- General Accounting Office (2010) "Tax Compliance: IRS May Be Able to Improve Compliance for Non-resident Aliens." GAO–10–429. Washington.

- Goodnough, A. (2010) “Governors Voice Grave Concerns on Immigration.” *New York Times* (11 July).
- Hanson, G. H. (2007) “The Economic Logic of Illegal Immigration.” Council Special Report No. 26, Council on Foreign Relations.
- _____ (2009) “The Economic Consequences of International Migration.” *Annual Review of Economics* 1: 179–208.
- Hunt, J. (2009) “Which Immigrants Are Most Innovative and Entrepreneurial?” NBER Working Paper No. 14920.
- Isen, A., and Stevenson, B. (2010) “Women’s Education and Family Behavior: Trends in Marriage, Divorce, and Fertility.” NBER Working Paper No. 15725.
- Jones, C. (1995) “R&D Based Models of Economic Growth.” *Journal of Political Economy* 103(4): 759–84.
- Kerr, W., and Lincoln, W. (2010) “The Supply Side of Innovation: H-1B Visa Reforms and U.S. Ethnic Invention.” NBER Working Paper No. 15768.
- Notowidigdo, M. (2010) “The Incidence of Local Labor Demand Shocks.” MIT Working Paper.
- Passel, J., and Cohn, D. (2011) “Unauthorized Immigrant Population: National and State Trends, 2010.” Pew Center for Hispanic Studies.
- Rosenzweig, M. (2007) “Education and Migration: A Global Perspective.” Working Paper, Yale University. Available at www.growthcommission.org/storage/cgdev/documents/EquityandGrowth/Rosenzweig.pdf.
- Stuen, E. T.; Mobarak, A. M.; and Maskus, K. (2010) “Skilled Immigration and Innovation: Evidence from Enrollment Fluctuations in U.S. Universities.” Center for Economic Policy Research Discussion Paper No. 7709.
- Zucker, L. G., and Darby, M. R. (2008) “Star Scientists, Innovation, and Regional and National Immigration.” NBER Working Paper No. 13547.