

Fact Sheet

Published by Applied | Economic | Strategies, LLC

February 25, 2013

Fact Sheet No. 2013-2

Immigration and Economic Growth

The rate of economic growth is generally determined by how fast the workforce is growing and how quickly productivity is rising.¹ However, as the baby boomer generation starts to retire and productivity growth levels off, immigration is poised to play a vital role in continued U.S. economic growth.

Although some of America's economic competitors – in particular Japan and Germany – face shrinking populations, the United States admits up to 1 million immigrants per year. In terms of future economic growth, it is important for U.S. immigration policy to play a role in attracting large numbers of highly-educated and highly-skilled workers who will not only increase the workforce but contribute immensely to innovation and productivity growth.

Labor Force Growth Key to Economic Growth

From 1960 to 2008, the economy grew at an average annual rate of 3.3 percent.² About half of that (1.6%) was due to an expanding workforce as the baby boomers went to work and women entered the labor force in greater numbers, while the other half (1.7%) came from productivity growth — those workers making more, and better, goods and services per hour.³

Although both workforce growth and productivity have been important sources of real economic growth, their relative contribution has varied over time. From 1973 to 1990, workforce growth accounted for just over half of U.S. economic growth, while from 1995 to 2004 about 75 percent of growth was from productivity gains.⁴ Since 2010, the rate of productivity growth has fallen from 3.0 percent to just 0.9 percent in 2012, while the labor force growth has averaged just 0.2 over the past three years, partially resulting from lower levels of immigration.⁵ The consequence has been relatively weak economic growth.

Demographic Trends Creating A Drag On Economic Growth

Most of the recent decline in labor force participation is being driven by demographics, including the retirement of the baby boom generation.⁶ It is the biggest drag on labor force growth, and will remain so for the next couple of decades. Over the next ten years, the proportion of working-age Americans will decline from 67 percent to 64 percent, and by 2020 the contribution of labor force growth to U.S. economic growth rates is expected to decline to just 0.5 percent from a peak of 2.0 percent in the 1970s.⁷ Without a significant and sustained rise in productivity or an increase in immigration, the U.S. may be headed for a couple decades of lackluster economic growth.

Compounding this problem is the fact that by many measurements the U.S. is falling behind the rest of the world in the science, technology, engineering, and math (STEM) disciplines, at a time when these skills are increasingly vital to increasing productivity and global competition. For example, between 2010 and 2020 at least 1.1 million job openings in computing professions require at least a bachelor's degree, yet the U.S. will not produce even half the number of graduates needed to fill those positions.⁸ In the U.S., only about 4 percent of all bachelor's degrees awarded in 2008 were in engineering, as compared to approximately 19 percent throughout all of Asia and 31 percent in China

in particular.⁹ At current trends, the United States will produce twice as many graduates in the social sciences and business as in science, technology, engineering, and mathematics.¹⁰ Moreover, the gap is not limited to science and engineering jobs. A June 2011 McKinsey Global Institute report predicts a shortfall of 1.5 million “data-savvy” managers and analysts by 2018.¹¹

Increased Immigration Part of the Solution

Clearly an important part of the solution is to educate more Americans with STEM skills. However, immigration reform can play an important role too. One recent study estimates that increasing net migration to the level it was at in the year 2000 would increase the rate of economic growth by 0.3 percent per year.¹² Significantly increasing the number of high-skilled immigrants would also have a positive impact on productivity. For example, recent research shows high-skilled immigrants play an important role in innovation and, in certain sectors, entrepreneurship. Highly educated immigrants receive patents at more than twice the rate of highly educated citizens, and boost overall patent activity.¹³ Between 1995 and 2005, immigrants founded 25 percent of U.S. high-tech startups.¹⁴ , immigration can boost productivity growth and lead to higher long-run economic growth.¹⁵ Policymakers should consider reducing barriers to the immigration of skilled workers by significantly increasing the number of H-1B visas, making it easier for high-skilled immigrants to move from job to job, and better utilizing H-1B visa fees to strengthen STEM education.

Conclusion

The retirement of the baby boom generation will be a significant drag on labor force growth over the next 20 years and without a significant and sustained rise in productivity or an increase in immigration, the U.S. may be headed for two decades of relatively weak growth. Moreover, the world economy has entered a period in which there is a global labor market for high-skilled workers. Although the mobility of these workers will not be without regulation, the movement of high-skilled workers will intensify across developed economies and between developed and less developed countries. It is an economic imperative that policymakers take steps to train, attract, and keep talented people in the United States.

¹ Gross Domestic Product = (GDP/Hours Worked; or labor productivity)*(Hours Worked), therefore the growth rate of GDP = growth rate of labor productivity + growth rate of hours worked.

² Bureau of Economic Analysis data.

³ McKinsey Global Institute, “Growth and Renewal in the United States: Retooling America's Economic Engine,” February 2011. Available at http://www.mckinsey.com/Insights/MGI/Research/Productivity_Competitiveness_and_Growth/Growth_and_renewal_in_the_US.

⁴ *Id.*

⁵ Bureau of Labor Statistics data.

⁶ Since 1997, the labor force participation rate of women has also plateaued.

⁷ McKinsey Global Institute, “Growth and Renewal in the United States: Retooling America's Economic Engine.”

⁸ Bureau of Labor Statistics, Employment Projections: 2010 - 20, February 1, 2012; and Microsoft, “A National Talent Strategy,” 2012. Available at <http://www.microsoft.com/en-us/news/download/presskits/citizenship/MSNTS.pdf>.

⁹ National Science Foundation, Science and Engineering Indicators 2012, “Chapter 2: Higher Education in Science and Engineering.” Available at <http://www.nsf.gov/statistics/seind12/c2/c2h.htm>.

¹⁰ McKinsey Global Institute, “What Business Can Do To Restart Growth,” September 2011. Available at http://www.mckinsey.com/features/growth/what_business_can_do_to_restart_growth.

¹¹ McKinsey Global Institute, “Big data: The Next Frontier for Innovation, Competition, and Productivity,” May 2011. Available at http://www.mckinsey.com/insights/mgi/research/technology_and_innovation/big_data_the_next_frontier_for_innovation.

¹² McKinsey Global Institute, “Growth and Renewal in the United States: Retooling America's Economic Engine.”

¹³ Jennifer Hunt and Marjolaine Gauthier-Loiselle, “How Much Does Immigration Boost Innovation?,” *American Economic Journal: Macroeconomics*, vol. 2, no. 2, 2010, pp. 31–56.

¹⁴ Vivek Wadhwa, AnnaLee Saxenian, Ben Rissing and Gary Gereffi, “America's New Immigrant Entrepreneurs,” *Duke Science, Technology and Innovation Paper no. 23*, January 2007, http://people.ischool.berkeley.edu/~anno/Papers/Americas_new_immigrant_entrepreneurs_1.pdf.

¹⁵ Joseph Schumpeter, “The Theory of Economic Development,” Cambridge, Mass.: Harvard University Press, 1934; and Philippe Aghion and Peter Howitt, “A Model of Growth Through Creative Destruction,” *Econometrica*, vol. 60, no. 2, 1992, pp. 323–51.