National Foundation for American Policy

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New Research: Immigrants Increasingly Important to U.S. Science & Engineering; Analysis Shows House and Senate Bills Could Advance Innovation and Competitiveness

Arlington, Va. – Immigrants have played an increasingly important role in contributing to science and engineering advancements in America, as demonstrated by their awards, research, entrepreneurship and education, according to a new report released by the National Foundation for American Policy (NFAP), an Arlington, Va.-based policy research group. The analysis finds that while historically immigrants have always made important contributions to the country, objective measures indicate those contributions have increased significantly since the 1960s, when major restrictions on immigration were lifted, and, in particular, over the past 20 years, as immigrants have found important niches in science and technology fields.

A second report finds key parts of pending immigration bills would open the door wider to highly skilled individuals. If Congress takes up immigration reform legislation later this year, employers and the U.S. economy would benefit from several provisions on high skilled immigration in House and Senate bills. However, aspects of the legislation would, at minimum, complicate the hiring and recruitment process and could be revised, the analysis notes.

The two reports, "The Increasing Importance of Immigrants to Science and Engineering in America" and "House and Senate Legislation on High Skill Immigration," are available at www.nfap.com.

"The best approach for growth, innovation and the U.S. economy would combine the strongest features of the House and Senate bills," said Stuart Anderson, executive director, National Foundation for American Policy, and former head of policy and counselor to the Commissioner of the INS (August 2001 to January 2003). "Immigrants have historically been important to the country but those contributions, particularly in science, engineering, medical research and business startups, have increased significantly over the past 20 to 30 years. Establishing the right set of laws and policies has become even more important."

U.S. employers have been frustrated by the low quota on H-1B temporary visas, which are used to hire skilled foreign nationals and have been exhausted every year for the past 12 fiscal years. The low level of employment-based green cards means a highly skilled immigrant could wait 6 to 10 years or more for permanent residence.

S. 744 passed the U.S. Senate in June 2013, at nearly the same time the House Judiciary Committee passed H.R. 2131, the SKILLS Visa Act. Neither H.R. 2131 nor other House immigration bills have moved to the House floor. The analysis finds the best approach would mean 1) selecting the less-restrictive House approach to H-1B visas, after changing the requirement that foreign nationals should be paid more than their U.S. counterparts, 2) adopting the Senate approach to employment-based green cards, since that provides more green cards and will eliminate the current backlog, and 3) taking the best elements of the House and Senate measures on immigrant entrepreneur visas, particularly the provision in S. 744 to permit a renewable temporary status for a foreign-born entrepreneur.

Employers are concerned about a measure in the House and Senate bills that would require foreign nationals on H-1B visas to be paid much higher wages than their U.S. counterparts. The Senate bill would grant the Department of Labor nearly unlimited investigative authority and mandate "good faith" recruitment, a standard that may be too ambiguous for companies to ensure compliance. A series of measures aimed at some employers (generally those with 50 percent or more H-1B/L-1 visa holders in workforce) are likely to violate U.S. commitments under the General Agreement on Trade in Services (GATS). The likely GATS violations include higher fees, prohibiting new H-1B and L-1 petitions, and barring those employers from performing work for U.S. clients off-site.

The research on the "Increasing Importance of Immigrants to Science and Engineering in America" found:

- Between 1901 and 1959, only one immigrant to the United States (William Francis Giauque) won the Nobel Prize in Chemistry, while between 1960 and 2013, 23 immigrants won the Nobel Prize for Chemistry.

- From 1901 to 1959, 9 immigrants to the United States won the Nobel Prize for Medicine, but 28 immigrants were awarded the Nobel Prize for Medicine from 1960 to 2013.

- In Physics, 15 immigrants won the Nobel Prize from 1901 to 1959, while 21 immigrants won the Nobel Prize for Physics between 1960 and 2013.

- Between 1960 and 2013, immigrants won 72 Nobel Prizes in Chemistry, Medicine and Physics, compared to 25 between 1901 and 1959.

- Immigrants have been awarded 24 of the 68 Nobel Prizes won by Americans in Chemistry, Medicine and Physics since 2000.

- Refugee scientists, who entered America in the 1930s despite restrictive U.S. immigration policies, were decisive in helping America become the first country to develop the atomic bomb. It was the refugees themselves who approached President Franklin Roosevelt, with a letter signed by Albert Einstein, Leo Szilard and Alexander Sachs, to plant the seed for what became the Manhattan Project.

- An Israeli-born immigrant entrepreneur developed the prototype for attack drones, which are today a key part of U.S. military strategy.

- Many of today's immigrant cancer researchers come from countries that would have been barred from immigration under U.S. law prior to 1965, including China, India, and South Korea. At the top 7 cancer research centers, 42 percent of the researchers are foreign-born, including 62 percent at the University of Texas MD Anderson Cancer Center and 56 percent at Memorial Sloan-Kettering Cancer Center in New York.

- International students increase the capacity of U.S. universities to conduct research, retain top faculty and offer high quality academic programs to U.S. students in science and engineering fields. In 2011, foreign nationals accounted for 71 percent of the full-time graduate students in electrical engineering at U.S. universities, compared to 44 percent in 1982. International students accounted for 65 percent of full-time graduate students in computer science in 2011, compared to 35 percent in 1982.

- The importance of immigrant entrepreneurs to American innovation and the U.S. economy has increased dramatically over the past 40 years. Prior to 1980, only 8 U.S. publicly-traded companies funded with venture capital (or 7 percent) had an immigrant founder or co-founder, according to the National Venture Capital Association. But

between 2006 and 2012, 92 companies with venture backing that became publicly traded (or 33 percent) had at least one immigrant founder, a significant increase from both the 1970s and 1980s. Notable publicly traded companies with an immigrant founder or co-founder include Google, eBay, LinkedIn and Tesla Motors.

- Looking to the next generation of publicly traded companies, particularly in the technology sector, a December 2011 National Foundation for American Policy study found, "Immigrants have started nearly half of America's 50 top venture-funded companies and are key members of management or product development teams in more than 75 percent of our country's leading cutting-edge companies."

While some of the rise in indicators like immigrant Nobel Prize winners reflects an overall increase in the reputation and capability of American institutions and researchers post-1960, a greater openness to immigration helped make the United States the leading global destination for research in many different science and technology fields, including computers, cancer research and many others.

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About the National Foundation for American Policy

Established in the Fall 2003, the National Foundation for American Policy (NFAP) is a 501(c)(3) non-profit, non-partisan public policy research organization based in Arlington, Virginia focusing on trade, immigration and related issues. The Advisory Board members include Columbia University economist Jagdish Bhagwati, Ohio University economist Richard Vedder, former U.S. Senator and Energy Secretary Spencer Abraham and other prominent individuals. Over the past 24 months, NFAP's research has been written about in the *Wall Street Journal*, the *New York Times*, the *Washington Post*, and other major media outlets. The organization's reports can be found at www.nfap.com.

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