

# SPECIAL REPORT

## TD Economics



September 24, 2014

# RE-CHARGING THE U.S. LABOR MARKET

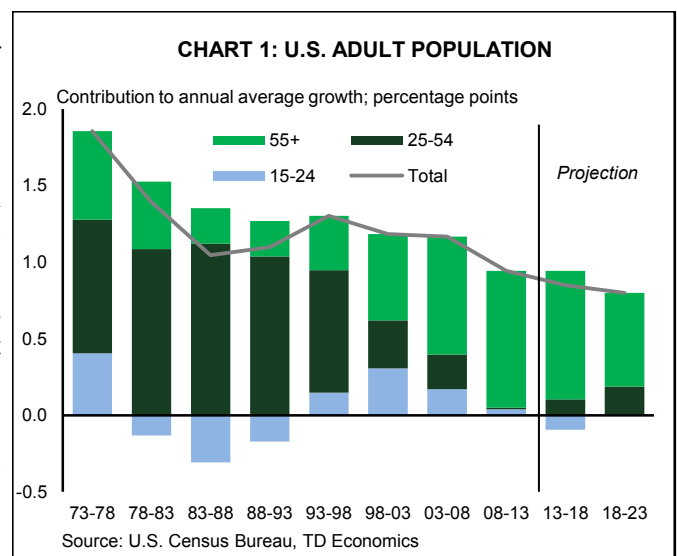
### Highlights

- American labor force growth has been meagre since the onset of the Great Recession. Adverse economic conditions increased the ranks of discouraged workers, however a broader trend of population aging exacerbated workers' exit from the labor force.
- While a rising economic tide may draw discouraged workers back into the labor market, demographic headwinds will not abate. Over the next decade, virtually all of the growth in the adult population will be among people over 55 years old. Consequently, trend growth in the U.S. labor force will be cut in half relative to its pace in the decades prior.
- One way to change this dynamic is to increase both the quantity and quality of immigrants. Current policy favors family-based immigration and is poorly equipped to take advantage of the international pool of talent. Fortunately, there is a consensus in Congress on increasing the level of both permanent and temporary work visas, particularly for high-skilled workers. Higher rates of skilled immigration could boost the running speed of the U.S. economy, and represent an upside risk to the longer-term outlook.
- The economic impact will not be uniform across the nation. Florida, New Jersey, California, New York, Massachusetts and Maryland are likely to see the biggest boost to their labor forces. However, immigration reform could make the biggest difference in states where the labor force is projected to decline, such as Massachusetts, New York, and Connecticut.

The United States, like many other advanced economies has an aging population. The statistics speak for themselves: over the next decade, virtually all of the growth in the adult population will be among people over 55 years old (Chart 1), while the fastest growing segment of the population will be those aged 70 to 74.

The aging population will have important implications for economic growth. As older people are less likely to participate in the labor market, population aging will slow the pace of future employment growth below the rate of growth in the adult population. Assuming current retirement and immigration laws remain in place, trend growth in the U.S. work force is likely to slow to just 0.5% annually over the next decade. As discussed in our recent report ([link](#)), the pace of economic growth is also expected to taper off to around 2.0%, considerably slower than the 3.0% it has averaged over the past century.

One way to change this dynamic is to increase immigration. Raising the number of skilled immigrants offers the best prospects for raising economic growth by simultaneously increasing the size, reducing the age, and raising the productivity of the workforce.



While there has yet to be an agreement found in Congress on the details of immigration reform, there is a general consensus on raising the level of employment-based immigration and lifting quotas on work visas.

The magnitude of the economic impact of immigration reform will depend on its scope. In examining the possible economic impact of immigration reform, this analysis focuses on reform that would increase the size of the population by 10 million over the next decade.<sup>i</sup> Reform of this size would increase the growth rate of the labor force by roughly 0.3 percentage points annually, and likely raise potential real GDP growth by roughly the same amount.

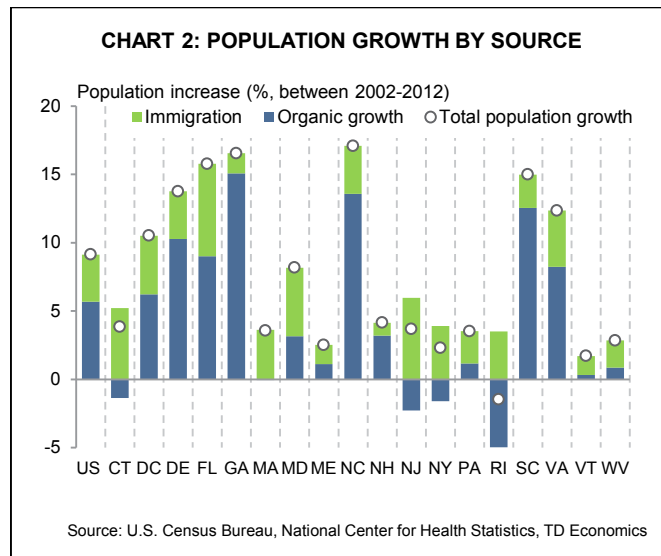
Geographically, the impact of higher immigration will not be uniform across the nation. Over the past decade, 60% of all immigrants have settled in just five U.S. states – California, Florida, Texas, New York and New Jersey. While immigration reform is likely to change the immigration mix and therefore alter the historical geographic distribution of immigrants, in all likelihood these large states will continue to receive the bulk of newcomers. Nonetheless, states facing slow or declining populations due to population aging, such as Connecticut, New York, and Massachusetts, are likely to be the biggest beneficiaries from increased international immigration. In these states, higher immigration, especially of skilled workers, could be the difference between slow-growing economies and vibrant ones.

**Immigration is an important source of U.S. labor force growth**

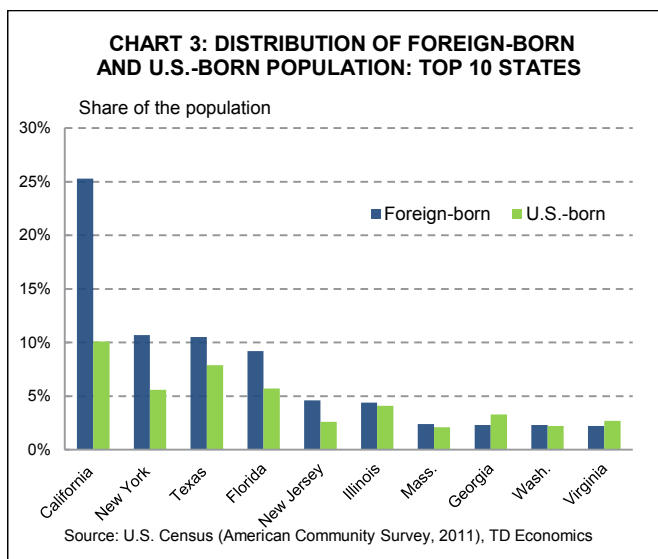
Over the past decade, immigration flows have represented a significant source of U.S. population growth, averaging just north of one million a year and accounting for a third of the total population increase. States in the Northeast, in particular, greatly relied on immigration inflows to support their population base. In the absence of international migration, Connecticut, Massachusetts, New Jersey, and New York would have experienced population declines as their organic population growth dwindled (Chart 2).<sup>ii</sup>

The contribution of immigrant workers to the labor force was even greater, since the majority of newcomers are of working age (54% of newcomers are between the ages of 25 and 54 versus 40% of the U.S. population) and participate in the labor market to a greater degree than their U.S.-born counterparts. As such, immigrant workers accounted for 60% of U.S. labor force growth since 2006.

The distribution of immigrants across U.S. states is quite



uneven. In absolute terms, five states – California, New York, Florida, Texas, and New Jersey – remain the most popular destinations. While containing only 32% of the U.S.-born population, these states become home to roughly 60% of newcomers (Chart 3). The next five states – Illinois, Massachusetts, Virginia, Georgia and Pennsylvania – account for an additional 13%, while the remaining 27% of immigrants are spread around 41 states.<sup>iii</sup> While the overall popularity of the “Big Five” immigrant states has remained undisputed over the past ten years, some of the states saw their share of new permanent residents decline (California), while others gained (Florida, New Jersey) relative to a decade prior. California’s share, for example, has fallen from 32% seen between 1990 and 2000 to 22% in the following decade.

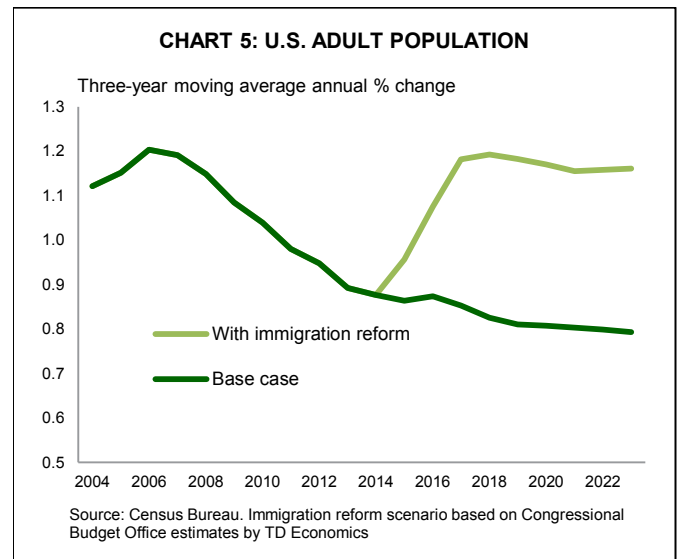
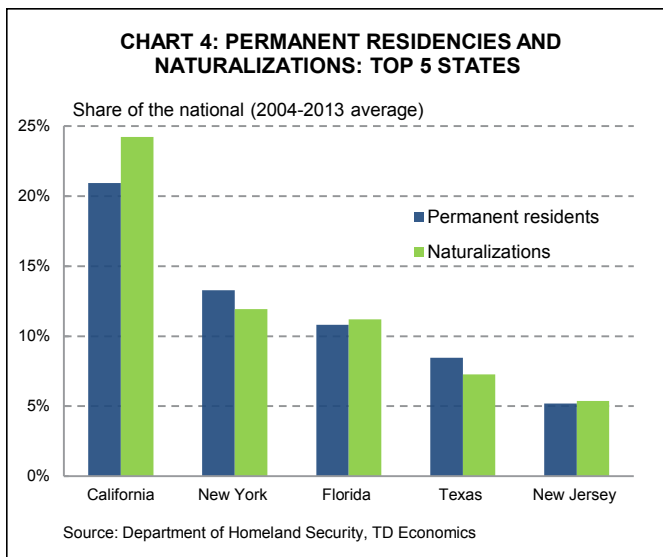


Meanwhile, Florida’s share rose from 7.5% to 10.4%.

Despite their dominance, large states were not the only ones seeing significant gains in the number of immigrants over the last decade. In fact, many states which have traditionally received small number of immigrants have seen brisk growth. The number of newcomers has doubled in Georgia, North Carolina, New Hampshire, Tennessee, South Dakota, Kentucky and Nebraska. Some of the states that saw the largest increases in the number of international immigrants were the ones facing the dual headwinds of aging populations and inter-state outmigration, and consequently slow organic population and labor force growth. New Hampshire and Pennsylvania are among this group, with the number of permanent residents up by 101% and 47%, respectively.

Retaining immigrants over time is no less important than attracting them. On that front, the data are re-assuring. A research note by the U.S. Department of Homeland Security shows that 79% of immigrants who received their permanent residence between 1993 and 1995 still lived in the same state at the time when they eventually became U.S. citizens.<sup>1</sup>

Unsurprisingly, the “Big Five” states with the highest share of permanent residents also account for high share of overall naturalizations and fair better in terms of retention (Chart 4). For example, retention rates were found to be substantially above the average in California and Florida, at 88.6% and 86.2%, respectively. In Texas, the retention rate was only slightly higher than the national, while in New York it did not differ from the national average.



**Slowing population and labor force growth is a reality across America**

Projections from the U.S. Census Bureau suggest that demographic challenges are not expected to abate over the next decade. The adult population is expected to expand by 8.6% (or 0.83% annually) – a 2.7 percentage point slowdown relative to the previous decade (Chart 5). In the absence of an acceleration in immigration, three states – Iowa, North Dakota, and West Virginia – are projected to see their adult population decline. With the exception of West Virginia, no other states in the TD Footprint will experience outright declines; however, population growth is projected to come to a standstill in New York (0.0% annually), and slow down to a crawl in Pennsylvania (0.1%), Connecticut (0.2%), Maine (0.2%), Massachusetts (0.3%), and Rhode Island (0.3%).

Meanwhile, weighed by an exodus of retiring baby-boomers, labor force growth will underperform to an even greater extent, slowing to 0.5% annually. The slowdown will manifest itself in most states. Those with rapidly aging populations will see their labor force growth slow down considerably more than would be suggested by slower population growth alone. As such, in New York, New Jersey, Pennsylvania, Maine, Virginia, and West Virginia the deceleration in labor force growth is projected to be greater than that of population growth.<sup>iv</sup> While population growth will remain positive in Massachusetts, Connecticut, New York, and Pennsylvania, their labor force growth is expected to contract by 0.2%, 0.1%, 0.3%, and 0.4% (annually), respectively (Chart 6). In contrast, three states in the TD Footprint – Florida, Georgia and North Carolina – will remain outperformers relative to the nation, with labor force

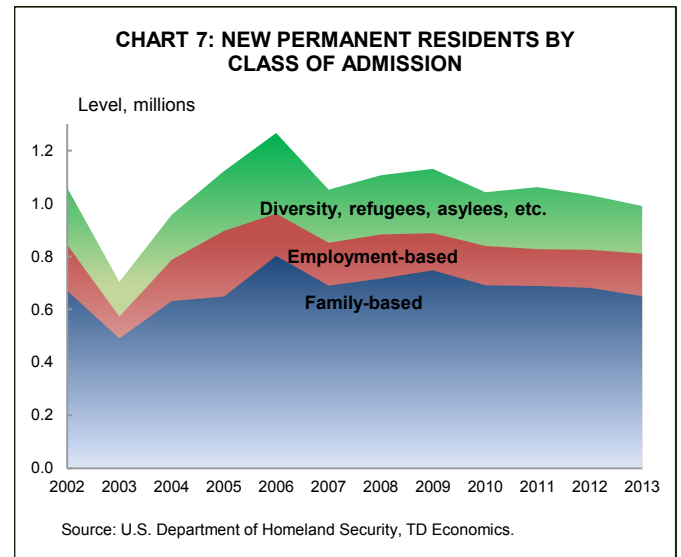
expanding at 1.4%, 0.8%, and 0.9%, respectively. Georgia is projected to see a modest acceleration of about 0.1 percentage points annually. The future also looks brighter for New Hampshire, with the labor force growth expected to fare slightly better than in the previous decade.

However, most states will not be as fortunate, and, unless there is an upswing in productivity, slowing or negative labor force growth will hinder their future economic growth prospects. Increased international immigration offers one way to tackle looming demographic challenges, by at once boosting population, labor force and productivity growth.

**Coming to work: current employment-based visas and immigration to the U.S.**

In its current form, the American immigration system is geared toward family-based immigration. Newcomers receive permanent residence cards, also known as “green cards,” on the basis of their family ties in the U.S. rather than their employment intent, skills or qualifications (Chart 7). Over the past ten years, employment-based inflows represented just 15% of legal immigration, while family immigration accounted, on average, for 65%. This level of family-based inflows is considerably higher than in other immigration-oriented countries, such as Canada and Australia, where family class represents only 35% and 32%, respectively, of the total.

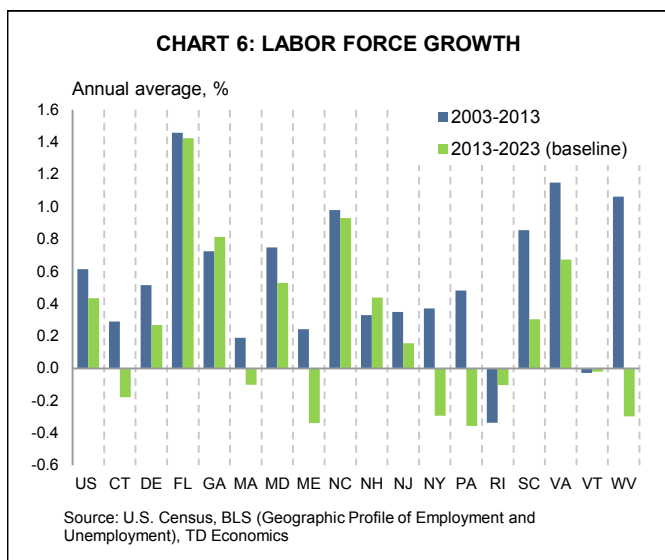
Permanent employment visas are subject to a 140,000 annual cap. Moreover, visa applicants from any one country cannot use more than 7% of the allotment of the employment visas per year – a situation that has resulted in a significant

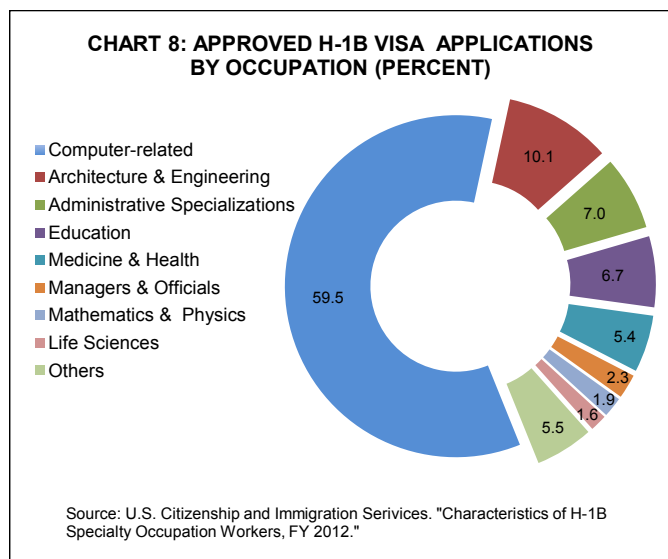


backlog of applications from high-demand countries.

In addition to employment-based immigration, temporary employment visas offer an alternative path into the labor force. Various types of work visas are available for foreign nationals seeking employment in the United States. Among those, the H-type visas – H-1B, H-2A and H-2B – are the most common. H-2A and H-2B visas are available to temporary agricultural, seasonal, and non-agricultural workers, while H-1B visas are reserved for highly educated professionals in certain occupations that require a bachelor’s degree or higher.<sup>v</sup> As a result of the educational qualifier, the bulk of the H-1B recipients are employed in the so-called STEM fields (science, technology, engineering and mathematics), as well as other occupations requiring specialized skills, such as post-secondary teaching and medicine (Chart 8). Between 2011 and 2012, STEM occupations accounted for 72% of all positions certified by the Department of Labor for the H-1B program. Unlike other types of visas, the H-1B is a “dual intent” visa, meaning that visa holders may be sponsored for permanent residence by their employers.

The number of H-1B visas is subject to an annual cap, which has been set at 85,000, with 20,000 reserved for international students completing their degrees at American universities. International students earning their degrees in the U.S. represent a natural and significant pool of future candidates for H-1B visas. According to 2011 data from the National Science Foundation, foreign students earned one-third of all doctorate degrees in science and engineering, and were particularly over-represented in some fields. For example, foreign students earned 56% of all doctorate degrees





in engineering, 51% in computer science, 44% of physics and 60% in economics.<sup>2</sup> Unfortunately, while the number of international students has increased by over 40%, reaching 820,000 in the 2012-13 academic year, the number of employment-based visas has remained unchanged, reducing the likelihood that American-educated international students will be able to work in the U.S. post-graduation (Chart 9).<sup>3</sup>

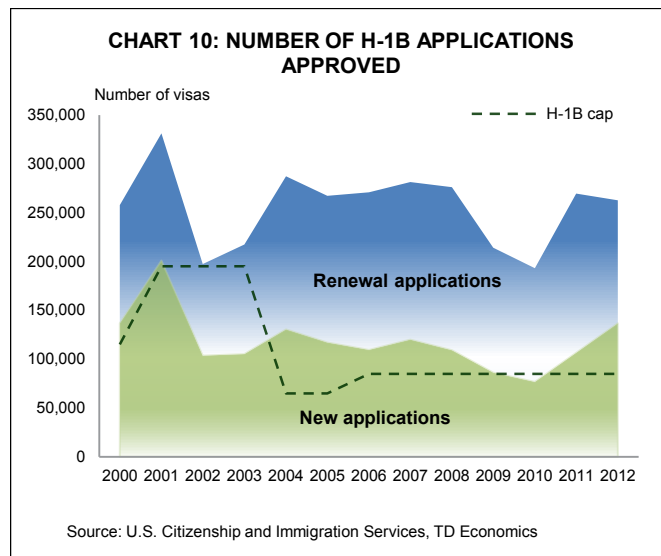
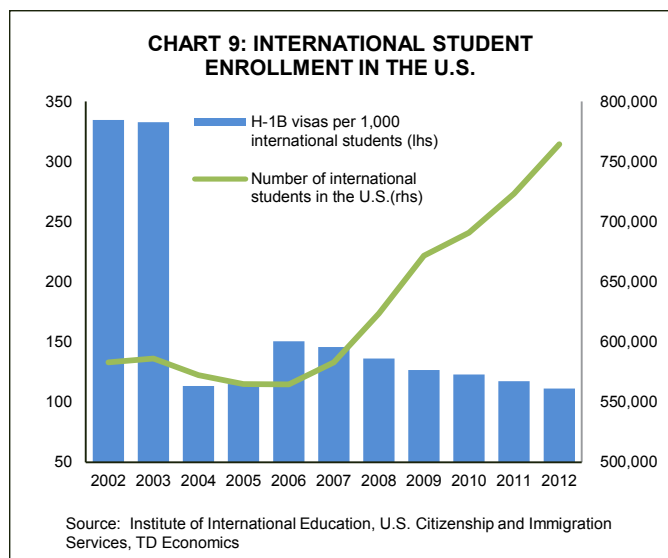
In fact, since 2003, private-sector demand for H-1B visas has consistently exceeded the supply, causing the statutory cap to be reached before year-end. In FY2014 and FY2015, for example, the cap was reached in just one week following the opening of the application process. The demand for H-1B visas is not due to employers attempting to lower costs. By law, holders of H-1B visas must be paid “wages...that are at least equal to the actual wage paid by the employer to other

workers with similar experience and qualifications for the job in question, or the prevailing wage for the occupation in the area of intended employment – whichever is greater.”<sup>4</sup>

High post-graduate retention rates for international students who received their doctorate degrees in STEM disciplines from American universities also corroborates the fact that demand for these professionals remains high. Five-year retention rates of temporary residents with PhDs in computer science, computer/electric engineering and other engineering fields stand at 77%, 76% and 70%, respectively.<sup>5</sup> By comparison, doctorate recipients from economics and other social science fields have substantially lower retention rates, at 42% and 46%, respectively.

Unlike private sector firms, academic and research institutions are not subject to the cap. Because this portion of H-1B visas is not limited, the actual number of high-skilled work visas issued annually has exceeded the 85,000 cap, varying between 100,000 to 150,000 annually over the past 10 years (Chart 10).<sup>6</sup> Uncapped visa applications account for a relatively small fraction of H-1B requests, representing approximately 10% of the total, nonetheless, the inflow of international researchers into the U.S. academic labor force has been substantial, particularly in STEM-fields. The share of foreign-trained doctoral degree holders (including both U.S.-born and foreign-born) in science and engineering employed in U.S. universities now exceeds that of the U.S.-trained academics, rising from 45% in 1973 to 56% in 2010 (the most recent data available).<sup>7</sup>

In all likelihood, raising or relaxing the quotas on employment-based visas would increase the number of



high-skilled immigrants that become permanent members of the U.S. workforce. This is also an area of relative common ground among political parties in Washington. Both parties have put proposals on the table for ways to boost employment- and skill-based immigration (Table 1, for more details see Text Box in the Appendix B).

**Impact of immigration reform on labor force growth**

We have carried out a numerical exercise based on the analysis by the Congressional Budget Office (CBO) of the Senate’s immigration reform bill that raises the size of the U.S. population by 10 million people over the next decade<sup>vi</sup>. In addition, our analysis takes into account the historical distribution of immigrants across U.S. states, and their age profiles.<sup>8</sup>

We find that many states could see substantial gains in labor force growth. Leading the way are Florida, California, New York and New Jersey, where immigration reform could bolster labor force by roughly 7%-8% by 2023 – a significant increase relative to a 3.5% gain expected at the

national level. Just as important, immigration reform could help to stem labor force declines in Massachusetts, New York, and Connecticut. A 2% boost to Pennsylvania’s labor force will not be sufficient to fully offset the projected 3.5% contraction there; nonetheless, increased immigration could limit the decline to 1.5% (for state comparisons and details see Appendix A).

**Other positive spillovers**

The impact of potential immigration reform on GDP growth extends beyond the promise of a larger and younger labor force. The role that foreign-born workers play in spurring U.S. innovative and entrepreneurial activity has been well-documented. Immigrants are twice as likely as U.S.-born workers to have a Ph.D., and consequently are twice as likely to earn patents on their inventions.<sup>9</sup> Foreign-born workers are also over-represented in science and engineering (S&E) occupations, accounting for slightly more than 25% of all S&E workers, while representing only 15% in the entire college-educated workforce.<sup>10</sup> Given the strong

**Table 1: Proposed changes to employment-based immigration and H-1B visa program**

	<b>Border Security, Economic Opportunity, and Immigration Modernization Act (S. 744)</b>	<b>SKILLS Visa Act (H.R.2131)</b>
<b>Employment and skills-based immigration</b>	- Eliminates 7% per-country limits - Maintains 140k employment-based cap - Introduces merit-based program, with cap of 120-250k permanent visas per year (50% of visas will be reserved for higher skilled applicants), depending on labor market conditions.	- Raises annual cap to 235k
	<b>Exemptions</b>	
	Spouses and children of the primary applicant, graduates of US universities in STEM disciplines, foreign nationals with extraordinary abilities, outstanding professors and researchers, multinational executives, noncitizens who have earned a doctoral degree, certain noncitizen physicians.	No exemptions. Provides an additional 25k visas for spouses and children of the primary applicant, and an additional 95k visas for US STEM advanced degree graduates, entrepreneurs, advanced degree holders and skilled workers.
<b>H-1B</b>	- Increases cap from 65k to 115k, with formula-based adjustments over time to a maximum of 180k. - Increases cap for US master's holders from 20k to 25k, and reserves them exclusively to STEM graduates (up to 20k additional visas made available if cap is exhausted quickly). - Provides work authorization for spouses - Increases fees of up to \$10,000 per worker for employers with large shares of H-1B and L-1 holders in workforce and prohibits hiring more than 50% on these visas.	- Increases cap from 65k to 155k, with no adjustment mechanism  - Increases cap for US master's degree holders from 20k to 40k, with no adjustment mechanism.  - Provides work authorization for spouses.  - Increases fees, but does not prohibit hiring for high-volume users.

Source: Migration Policy Institute. "Side-by-side comparison of 2013 Senate immigration bill with individual 2013 House bills". August 2013.

correlation between the research and development activities and the rate of growth in productivity, increased inflow of highly skilled immigrants, proposed under the reform, can also boost the rate of innovation in the economy and lift productivity growth. The CBO's analysis of the Senate plan estimated that immigration reform could raise national productivity by roughly 0.7% over the next decade.

In terms of the regional impact, states with higher share of STEM-related industries – Virginia, Maryland, D.C., Massachusetts, Washington, and Colorado – are well positioned to reap the benefits of greater rates of high-skilled immigration. Over the past decade, professional, scientific and technical services – an industry with the highest concentration of STEM jobs – has punched above its weight in these states. While accounting for roughly 10% of GDP in Massachusetts, Colorado, and Maryland, professional, scientific and technical services were responsible for at least 20% of growth in state real GDP. In Virginia, where professional and technical services account for roughly 12% of GDP, the industry was single-handedly responsible for 40% of the economic growth over the past 10 years. Incidentally, with the exception of Massachusetts, state growth outpaced the national in all of the above states.

At the metropolitan level, some of the areas with the highest demand for STEM workers are located in well-known tech-hubs, such as San Jose, Washington DC, Seattle, Boston, San Diego and San Francisco. San Jose – home to Silicon Valley – has the highest intensity of H-1B visas requests (as measured by the number of H-1B work autho-

METRO AREA	IMMIGRANTS SHARE, %	U.S.-BORN SHARE, %
Los Angeles, CA	15.2	8.5
New York, NY	13.9	7.7
San Francisco, CA	5.4	3.6
Washington, DC	4.7	2.7
Miami - Hialeah, FL	4.4	0.7
Chicago, IL	4.0	3.4
San Jose, CA	3.0	1.1
Houston, TX	2.6	1.8
San Diego, CA	2.4	1.9
Fort Lauderdale, FL	2.3	0.7
<b>Total top 10</b>	<b>57.9</b>	<b>32.1</b>

Source: Kauffman Foundation. "Lessons for U.S. Metro Areas: Characteristics and Clustering of High-Tech Immigrant Entrepreneurs."

rization requests per 1,000 workers) (Table 2). Other locations where STEM-skills are in high demand include: Palm Bay, Florida, due to the presence of the IT sector centered around the Kennedy Space Center and the Cape Canaveral Air Force Station; Houston, Texas because of its large energy sector; and, Durham-Chapel Hill, North Carolina due to its large network of universities. On the other hand, New York City has the largest number of STEM-related positions in technology and the financial sectors that are filled through the H-1B program. Additionally, many areas with ties to defense-related industries and high-skilled manufacturing, such as Virginia Beach (Virginia), Hartford (Connecticut), and Baltimore (Maryland), also have many STEM-related jobs.

The pull of these STEM-hubs is even stronger for immigrant high-tech workers and entrepreneurs, who exhibit greater geographic clustering. Nearly half of the total number of immigrant high-tech entrepreneurs are based in just six metro areas – New York, Los Angeles-Long Beach, San Francisco, San Jose, Chicago and Washington – compared to 27% of entrepreneurs who were U.S.-born (Table 3). All in all, 80% of immigrant high-tech entrepreneurs and 77% of immigrant workers employed in technology industries are located in the largest 25 metropolitan areas, compared to 57% and 55% of their U.S.-born counterparts.<sup>11</sup> Given their large pools of talent (both domestic and overseas) and vibrant culture, these metro areas will remain attractive for new businesses. In fact, there are signs that technology startups and tech firms with smaller footprints increasingly favor urban headquarters, such as Silicon Alley and Brook-

METRO AREA	SHARE, %	INTENSITY
New York, NY	16.3	6.3
Los Angeles, CA	5.5	3.4
San Francisco, CA	5.0	8.4
San Jose, CA	4.6	17.1
Washington, DC	4.5	4.8
Chicago, IL-IN-WI	4.3	3.3
Boston, MA	3.5	4.8
Dallas, TX	3.3	3.7
Houston, TX	3.1	3.9
Seattle, WA	3.0	5.6
<b>United States</b>	<b>100.0</b>	<b>2.4</b>

Source: The Brookings Institution. "The Search for Skills: Demand for H-1B Immigrant Workers in U.S. Metropolitan Areas."

lyn's Tech Triangle in New York City, and Silicon Beach in Los Angeles.<sup>12</sup>

#### **Bottom Line**

Due to aging, labor force growth is set to slow considerably over the next decade, with some states expected to be hit harder than others. Fortunately, there appears to be relative political consensus around measures that would increase the level of employment-based immigration, and raise the inflow of temporary workers and entrepreneurs from overseas. While no agreement has yet been reached, an overhaul of U.S. immigration system has the potential to significantly alter the demographic landscape across the

nation and represents an upside to our base-case growth outlook. This can be particularly meaningful to states that are otherwise likely to see declining labor forces, such as Massachusetts, Connecticut, and New York. In addition to boosting labor force growth, increased immigration of highly-skilled workers and entrepreneurs could also prop up productivity. States with a significant share of high-tech and research oriented industries are well-positioned to benefit from these spillover effects. Ditto for many metro areas, which continue to attract a disproportional share of foreign talent. All in all, the economic yields from immigration could be raised considerably.

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## Appendix A

Table A: Impact of immigration reform on population and labor force growth*								
State	Adult population				Labor force			
	2003-2013	2013-2023 (baseline)	2013-2023 (with S. 744)	Reform impact	2003-2013	2013-2023 (baseline)	2013-2023 (with S.744)	Reform impact
	% (annual)	%	%	percentage points	% (annual)	%	%	percentage points
United States	1.08	0.83	1.14	0.31	0.61	0.50	0.84	0.34
Alaska	1.68	1.00	1.21	0.22	1.01	0.50	0.73	0.23
Alabama	0.91	0.34	0.41	0.07	0.18	-0.09	0.00	0.09
Arkansas	0.96	0.65	0.74	0.09	0.33	0.23	0.34	0.11
Arizona	2.06	2.46	2.70	0.24	1.12	1.91	2.21	0.29
California	1.14	1.00	1.60	0.59	0.66	0.69	1.35	0.65
Colorado	1.64	0.88	1.11	0.23	1.06	0.45	0.70	0.24
Connecticut	0.66	0.15	0.51	0.37	0.29	-0.18	0.22	0.39
Delaware	1.51	0.85	1.07	0.23	0.52	0.27	0.53	0.27
Florida	1.72	2.03	2.51	0.48	1.46	1.42	1.99	0.57
Georgia	1.63	1.19	1.43	0.24	0.72	0.81	1.08	0.27
Hawaii	1.32	0.55	1.03	0.48	0.49	-0.09	0.48	0.57
Iowa	0.51	-0.02	0.12	0.15	0.41	-0.47	-0.32	0.15
Idaho	1.75	1.53	1.68	0.15	1.07	1.07	1.23	0.16
Illinois	0.46	0.22	0.57	0.35	0.36	-0.10	0.28	0.38
Indiana	0.79	0.37	0.49	0.12	0.00	0.04	0.17	0.13
Kansas	0.69	0.29	0.47	0.17	0.40	-0.13	0.04	0.18
Kentucky	0.74	0.41	0.53	0.11	0.53	-0.01	0.12	0.13
Louisiana	0.51	0.32	0.40	0.08	0.28	-0.11	-0.01	0.10
Massachusetts	0.69	0.27	0.73	0.46	0.19	-0.10	0.39	0.50
Maryland	1.05	0.83	1.23	0.40	0.75	0.53	0.95	0.42
Maine	0.43	0.22	0.33	0.11	0.24	-0.34	-0.22	0.12
Michigan	0.14	0.23	0.43	0.20	-0.64	-0.16	0.07	0.23
Minnesota	0.80	0.75	1.01	0.25	0.12	0.32	0.58	0.25
Missouri	0.76	0.43	0.56	0.12	-0.02	0.07	0.21	0.14
Mississippi	0.57	0.47	0.52	0.05	-0.40	-0.08	-0.01	0.07
Montana	1.13	0.60	0.65	0.05	0.73	-0.05	0.01	0.06
North Carolina	1.81	1.34	1.49	0.15	0.98	0.93	1.10	0.17
North Dakota	1.31	-0.27	-0.16	0.11	1.64	-0.74	-0.63	0.11
Nebraska	0.78	0.19	0.40	0.21	0.55	-0.22	-0.01	0.21
New Hampshire	0.65	0.90	1.09	0.18	0.33	0.44	0.63	0.19
New Jersey	0.59	0.45	1.07	0.62	0.35	0.15	0.82	0.67
New Mexico	1.31	0.56	0.74	0.18	0.23	-0.15	0.08	0.22
Nevada	2.52	2.37	2.70	0.33	1.94	1.94	2.30	0.36
New York	0.51	0.03	0.72	0.70	0.37	-0.29	0.50	0.79
Ohio	0.32	0.05	0.18	0.13	-0.37	-0.35	-0.21	0.15
Oklahoma	0.99	0.48	0.59	0.12	0.68	0.08	0.21	0.13
Oregon	1.22	1.18	1.39	0.21	0.19	0.81	1.05	0.24
Pennsylvania	0.55	0.05	0.24	0.19	0.48	-0.36	-0.15	0.21
Rhode Island	0.05	0.25	0.60	0.35	-0.34	-0.10	0.27	0.37
South Carolina	1.63	0.83	0.92	0.08	0.86	0.30	0.40	0.10
South Dakota	1.09	0.14	0.26	0.12	0.51	-0.40	-0.28	0.12
Tennessee	1.21	0.89	1.01	0.12	0.53	0.48	0.61	0.14
Texas	2.05	1.54	1.86	0.32	1.64	1.21	1.55	0.34
Utah	2.19	1.60	1.79	0.19	1.84	1.33	1.52	0.19
Virginia	1.44	1.06	1.39	0.33	1.15	0.67	1.02	0.35
Vermont	0.38	0.50	0.64	0.13	-0.03	-0.02	0.12	0.14
Washington	1.48	1.36	1.67	0.31	0.98	0.97	1.31	0.35
Wisconsin	0.66	0.41	0.53	0.12	0.05	-0.07	0.05	0.12
West Virginia	0.32	-0.10	-0.06	0.04	0.19	-0.69	-0.64	0.05
Wyoming	1.59	0.33	0.40	0.07	1.06	-0.30	-0.23	0.07

\*Estimates based on the CBO's analysis of S.744.  
Source: TD Economics, Congressional Budget Office

## Appendix B

### Text Box: Comparing Recent Congressional Immigration Reform Bills

Last year, the Senate passed the “Border Security, Economic Opportunity, and Immigration Modernization Act (S.744),” which proposes a comprehensive overhaul of the U.S. immigration system. Among the changes, the legislation recommends an array of amendments to employment-based immigration and visa programs. With respect to employment-based immigration, the Senate bill would maintain the annual cap at its current level of 140,000 per year, but offer substantial new exemptions from the cap. Among the groups exempted from the cap are: foreign-born workers with doctorate degrees, individuals of “extraordinary ability”, multinational executives, professors and researchers, advanced STEM degree graduates from U.S. universities, and the spouses and children of the principal applicant. The law also eliminates per-country limits.

The bill also proposes changes to the H-1B visa program, raising the cap from 65,000 to 115,000 for general applicants and from 20,000 to 25,000 for graduates from U.S. universities with degrees in STEM fields. The bill would also provide work authorization for spouses.

In addition, the act proposes to create a new merit-based immigration program based on applicants’ education, job skills, occupation and other parameters such as ability to speak English. The program will grant 120,000 to 250,000 permanent residences each year, with the final number varying depending on the number of applications in the previous year and the unemployment rate. Half of the permanent resident visas will be allocated to higher-skilled workers, while the other half will be used to eliminate the current backlog of applications and later will be used for issuing permanent residence to lower-skilled applicants. According to the Congressional Budget Office’s (CBO) analysis of the bill, this will be the main source of additional population growth over the next decade.<sup>8</sup> Combined, the two tracks for merit-based immigration are projected to increase the U.S. population by 2023 by 7.1 million (assuming the bill was enacted in 2013).<sup>vii</sup>

On the other side of the aisle, the Republican-sponsored “Supplying Knowledge-based Immigrants and Lifting Levels of STEM Visas (SKILLS) Act”, also known as the SKILLS Visas Act, also contains changes to employment-based immigration. In particular, it raises the cap from 140,000 to 235,000, and offers an additional 95,000 visas to STEM graduates, entrepreneurs and advanced degree holders, and 25,000 for spouses and children of primary applicants. With respect to H-1B visas, the SKILLS Act would increase the cap from 65,000 to 155,000 for general applicants, from 20,000 to 40,000 for U.S. universities graduates with advanced degrees, and provides work authorization for spouses (in line with the Senate bill). However, unlike the Senate bill, the House bill does not contain a merit-based program or an adjustment mechanism to account for labor market conditions. Therefore, it would result in a smaller increase in total immigration. The CBO estimates that as a result of the changes outlined in the bill, the U.S. population would be increased by slightly less than 1 million by 2024 (assuming the legislation is enacted in 2014).<sup>13</sup>

## Endnotes

- i. This is consistent with the scope of the immigration reform bill passed in the Senate in 2013.
- ii. Organic population growth is defined as population increase due to the natural increase in population (births less deaths) and net-migration from other U.S. states.
- iii. Results are based on administrative data reported by the U.S. department of Homeland Security (<http://www.dhs.gov/yearbook-immigration-statistics>) and may differ from international immigration estimates reported by the U.S. Census Bureau.
- iv. Labor force projections are based on the most recent age-specific participation rates.
- v. Fashion models “of distinguished merit and ability” also qualify for H-1B visas, but these are a tiny fraction – less than 1% of the total.
- vi. We used the Congressional Budget Office’s analysis of the Senate bill because it contained detailed economic projections of the economic impact of the reform.
- vii. In total, the Senate immigration reform bill would increase the size of the U.S. population by 10.4 million by 2023.

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