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Immigrants as a Potential Source of Growth for New England's Highly Skilled Workforce

By Tara Watson, Visiting Scholar

In recent decades, growth in New England's college-educated workforce has lagged behind that in the nation as a whole.¹ Attraction and retention of college graduates, especially those trained in STEM (science, technology, engineering, and mathematics) fields, is therefore a policy priority. As noted by Sasser Modestino (2013), New England has both a higher share of students coming to college from outside the Census division and a lower retention rate of out-of-division students than other divisions. How do foreign-born college students and graduates fit into this picture?

This brief analyzes young adults in the American Community Survey (ACS) 2006–2011 5-year Public Use Microdata Sample, with a particular focus on attraction and retention of foreign-born college graduates. The analysis examines two groups of immigrants: those arriving in the United States between the ages of 16 and 20 (college-age arrivals, called “CAA immigrants” below), and those arriving in the United States between the ages of 21 and 29 (young adult arrivals, called “YAA immigrants” below). CAA immigrants are likely to have attended college in the United States, while YAA immigrants are likely to have attended a non-U.S. institution for undergraduate study.²

The analysis indicates that the foreign-born make up a substantial fraction of young

college graduates in New England. Furthermore, compared with other college graduates, CAA and YAA immigrants are more likely to have studied a STEM field in college and more likely to have earned an advanced degree. Therefore, the foreign-born offer important skills for New England's workplaces.

The analysis suggests that New England does a particularly good job of attracting the foreign-born to the region for college or after graduation. However, many of these students (a comparatively high fraction) exit the region and move elsewhere in the United States.³ On net, New England benefits disproportionately from foreign-born college graduates, but the region could be doing better if it retained more of them. Helping the foreign-born secure employment in New England would allow the region to more fully take advantage of the fact that so much young, foreign-born talent passes through.

The Importance to the Region of Young, Foreign-Born Talent

Examining the 2006–2011 American Community Survey offers the following insights about the importance of immigrants in New England's young (ages 21 to 29) college graduate population:

- **Immigrants arriving in the United States at age 16 or older represent 9.9 percent of all young college graduates in New England**

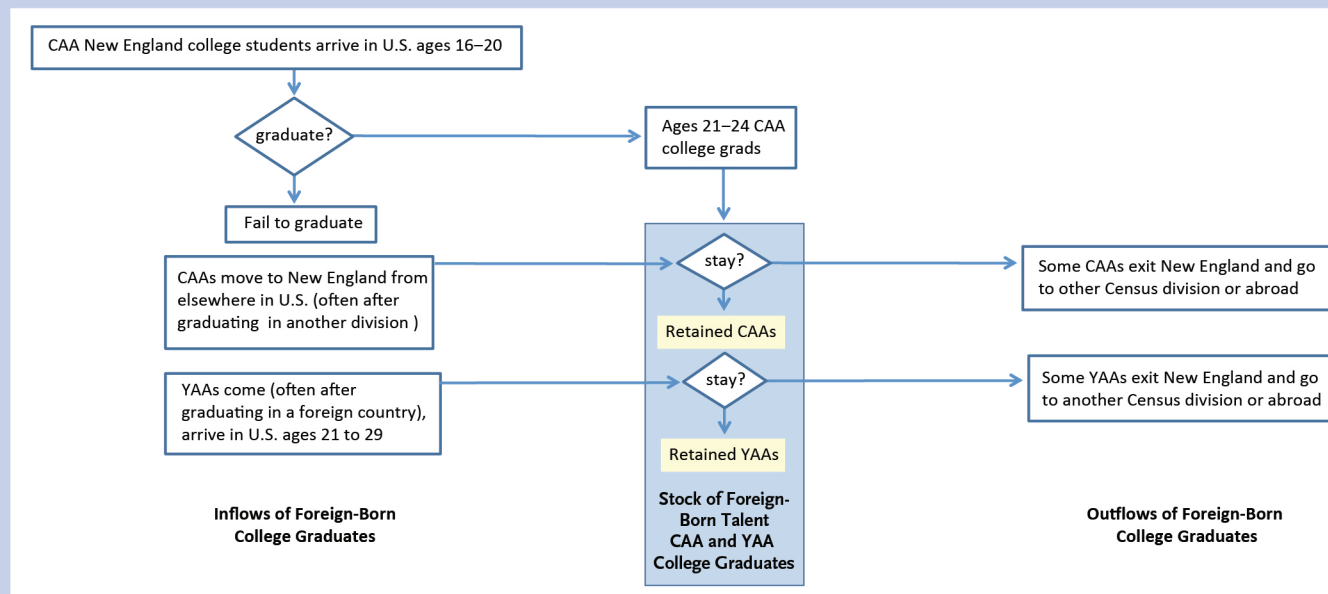
Though this figure is lower than the 12.6 percent in the Pacific division and the 10.4 percent in the Middle Atlantic division, it is higher than in other parts of the country.

1 Sasser Modestino (2013) shows that between 1990 and 2010 the number of individuals aged 22–27 years with a bachelor's degree or higher grew by only 12.1 percent in New England. This figure is less than one-third the national increase.

2 Because migration patterns of immigrants arriving before age 16 more closely resemble those of the native-born, they are not examined here.

3 Migration outside of the United States cannot be observed in the ACS

Figure 1. A Simplified Representation of Migration of Young, Foreign-Born College Graduates into and Out of New England



Source: Author's conceptualization.

- **Foreign-born college graduates are more likely than native-born grads to have studied a STEM field in college**

Fifty-three percent of young New England CAA and YAA college graduates have a STEM degree, compared with 27 percent of young New England college graduates in general.⁴ About 14 percent of employed (non-student) STEM young college graduates in New England arrived in the United States at age 16 or older. Among graduate students with a STEM background, 25 percent are CAAs or YAAs. The foreign-born are therefore a key part of the region's STEM workforce and STEM graduate student population.

- **Immigrants are more likely to have an advanced degree than other college graduates in New England**

Twenty percent of young New England college graduates hold an advanced degree such as a master's, professional degree, or doctorate. In contrast, 26 percent of CAA college graduates and 43 percent of YAA college graduates have an advanced degree. Over 19 percent of young, advanced degree holders in New England are CAAs or YAAs.

Attracting and Retaining CAA and YAA immigrants

Given the valuable skills that foreign-born college graduates offer the region, it is important

to understand attraction and retention of this population. These flows are illustrated in Figure 1. The ACS suggests the following facts:

- **New England colleges do well in attracting foreign-born college students**

Recent immigrants appear to be somewhat more likely to attend college in New England than the U.S.-born population. More than 7 percent of 18-to-21-year-old CAA college students (7.2 percent) are located in New England, compared with 5.9 percent of similarly aged U.S.-born students.⁵ New England has about half a million 18-to-21-year-old college students in a typical sample year, and about 13,000 of these are recent arrivals to the nation.⁶

- **Immigrants are also a key contributor to young college-graduate inflows to New England**

More than a quarter of all young college graduates moving to New England are individuals who migrated to the nation at age 16 or older. In a typical year, about 50,000 college graduates ages 21 to 29 move to New England, and

⁴ Definition is based on degree fields listed in IPUMS-USA, matched as closely as possible to Department of Homeland Security definitions; see www.ice.gov/doclib/sevis/ for details.

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⁶ The New England Board of Higher Education estimates there are nearly one million college students of all ages in the region—roughly twice the ACS estimate for total enrollment of 18-to-21-year-olds. A large fraction of New England college students are part-time students, who are more likely to be enrolled outside the ages of 18 to 21. See <http://www.nebhe.org/thejournal/trends-indicators-enrollment-period/>.

almost 13,000 of them are recently arrived immigrants. Most of these recent arrivals are YAA college graduates, who likely graduated from a non-U.S. institution. Attracting new, foreign-born migrants is a key way that New England maintains a presence of young college graduates.

- **Many immigrant college grads come to New England for graduate school**

About 15 percent of New England graduate students ages 21 to 29 arrived in the United States at age 16 or older, a figure higher than in competitor divisions (see Figure 2). Almost 24 percent of all CAA and YAA college graduates ages 21 to 29 in New England report being enrolled in a graduate program; this figure is also higher than in competitor divisions (see Figure 3).

- **Young college graduates leave New England for elsewhere in the United States at high rates**

New England has an unusually high rate of exit to other divisions among young college grads among both the foreign-born and the non-foreign-born. For example, 8.2 percent of all young college graduates and 8.4 percent of CAA and YAA college graduates move to a different U.S. Census division each year⁷ (see Figure 4). As a result, immigrants are no more likely to be represented in the division's young college graduate workforce than in those of other divisions (see Figure 2). New England is not fully capitalizing on its undergraduate or graduate student populations after graduation.

- **On net, recruitment of the foreign-born is strong, but retention could be stronger**

New England has a disproportionate share of immigrants among recent college graduates in the region. However, the “churning” caused by entry and exit means that New England is not fully capitalizing on foreign-born talent that passes through its doors. More than 15,000 CAA and YAAs from a typical graduating class live in New England at some point during their twenties, but fewer than 10,000 remain by age 29. Given labor market demands in STEM fields, attracting and retaining foreign-born college graduates deserves further attention.

Conclusions

Attraction and retention of college graduates is a priority for New England. New England has a strong record of recruiting both native-born

Figure 2. Share of Graduate Students and Employed Nonstudents Ages 21 to 29 Who Are CAA and YAA Immigrants

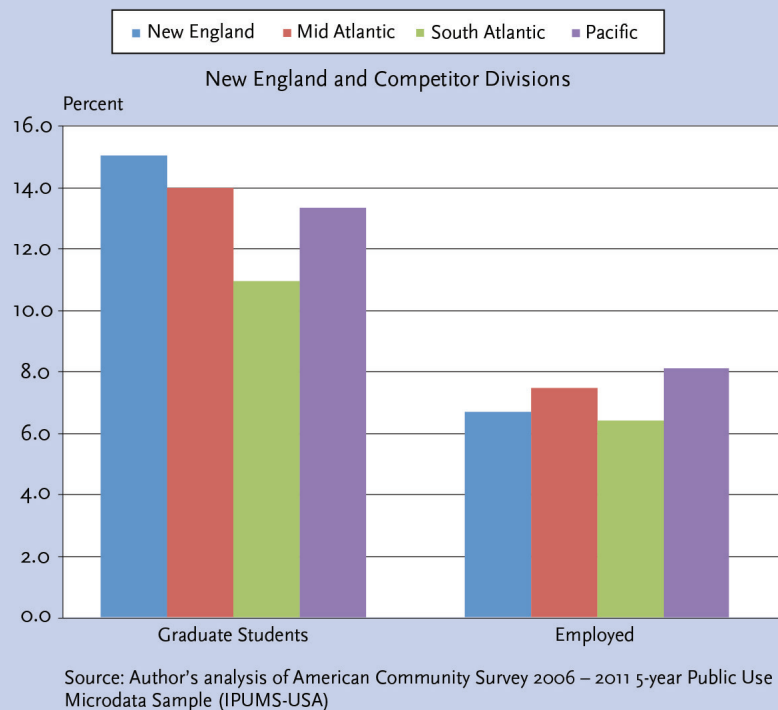
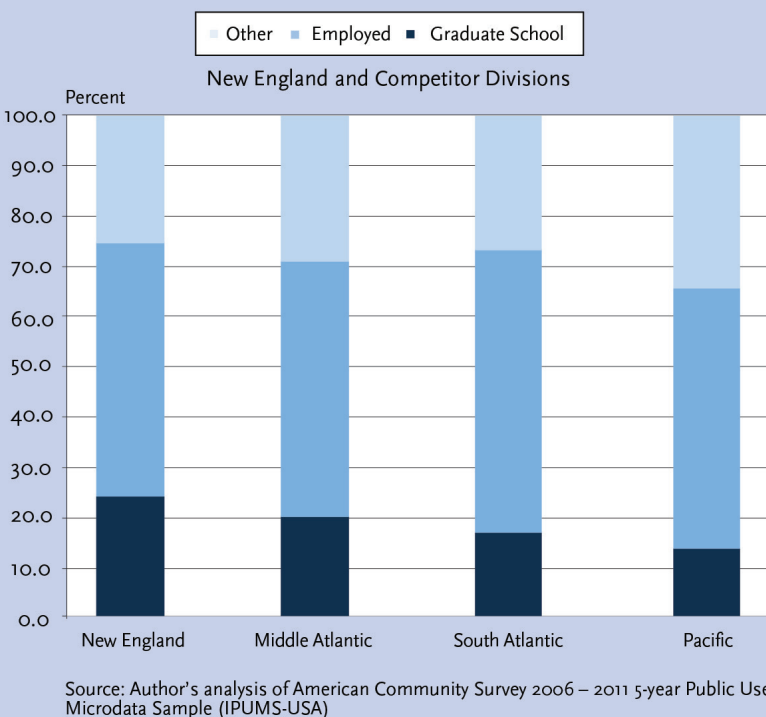


Figure 3. Distribution of YAA and CAA College Graduates Ages 21 to 29 Across Activities



and foreign-born college graduates, but retention of both groups could be stronger. Foreign-born graduates are more likely than natives to have a degree in a STEM field and more likely to have an advanced degree. Thus, growing the foreign-born workforce is a potentially important component of a strategy to address skill

⁷ These figures are conditional on remaining in the United States.

gaps and strengthen the innovation economy in New England.

The recent immigrant population faces particular issues in that the visa system directly affects their ability to live and work in New England. College or advanced degree graduates typically must find an employer willing to sponsor their visa application or enroll in a graduate program within a short time after graduation. Thus, migration decisions are closely tied to employment prospects, and a recent graduate may take the first reasonable job offer she receives, even if her preference would be to stay in New England. National policies that offered more flexibility for foreign-born college graduates would likely benefit New England.

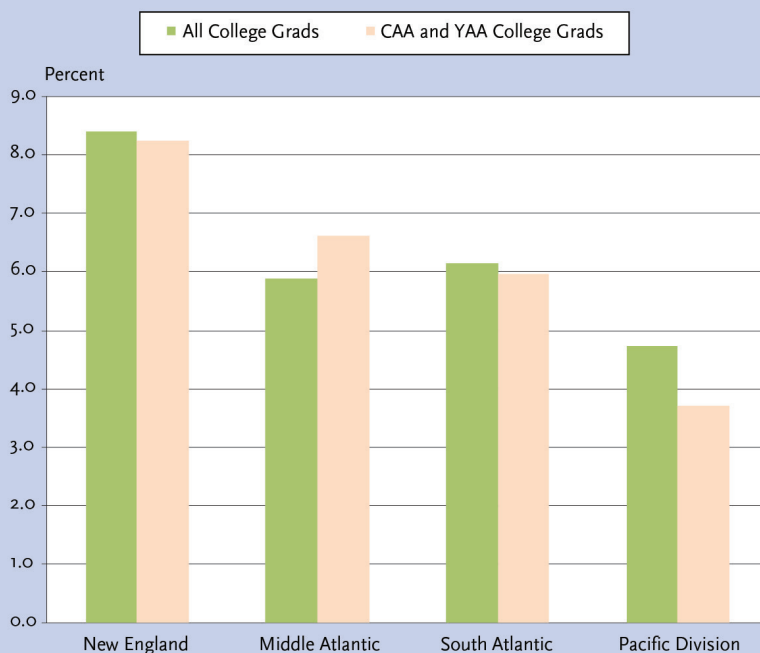
Under current law, the H-1B visa program is a primary way that foreign-born college graduates can stay in New England after graduation. Visas are issued on a first-come first-serve basis (or, in some years, allocated by lottery) to companies requesting them. The Occupational Practical Training (OPT) visa, which allows certain foreign-born students to work for 12 months to get practical training in their field of study (up to 29 months for certain STEM students) is another promising national policy tool. Because OPT visas facilitate internship-like experiences for the foreign-born prior to or after graduation, they may result in better ties with employers and improve retention of immigrant students.

States may benefit by helping their firms and residents access the H-1B and OPT visa programs. The structure and legal expense of the H-1B application process means that small firms may not seek H-1B visas even when facing high vacancy rates. If New England faces particular skill shortages, states may wish to consider assisting selected firms with the visa process. Similarly, states could help foreign-born students apply for the OPT program and develop connections with employers. More generally, programs that link students with employers have the potential to improve retention of both immigrants and natives, as noted by Sasser Modestino.

States and localities can also make residing in New England more or less attractive for the foreign-born. For example, Watson (2013) shows that college graduates exit local areas where there is aggressive street enforcement of immigration laws. Given that college graduates are less likely to be undocumented, migration decisions presumably respond to harassment and the cultural climate rather than to the perceived threat of deportation. Maintaining New England's relatively favorable climate for immigrants is another way to promote retention of the talent embodied in foreign-born college graduates.

Retention of foreign-born graduates poses a unique set of policy challenges. Because immigration policy is set at the national level, New England states and municipalities have a limited set of policy tools at their disposal. Furthermore, any policy initiative must take care to limit displacement of native-born workers. Nevertheless, creative policy solutions that encourage retention of foreign-born college graduates have the potential to strengthen New England's workforce.

Figure 4. Annual Exit Rates of 21-to-29-Year-Olds from New England and Competitor Divisions (Conditional on Remaining in the U.S.)



Source: Author's analysis of American Community Survey 2006 – 2011 5-year Public Use Microdata Sample (IPUMS-USA)

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