Working Paper Series

WP 15-1 FEBRUARY 2015

The Economic Scope and Future of US-India Labor Migration Issues

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Abstract

This paper empirically investigates US-India labor migration and finds that it dominates permanent and temporary employment-based migration to the United States. The true economic value of temporary high-skilled Indian workers in the United States, based on a new visa data based methodology, is estimated to exceed $45 billion in recent years, surpassing the value of US cross-border imports of goods or services from India. The paper analyzes the impact of a potential US immigration reform on US-India bilateral labor migration relations and finds the 2013 Senate Bill S-744 to ease access for Indian individuals to the US labor market, while making it harder for some Indian high-tech firms to operate in the US markets.

JEL codes: F16, F24, F66, J61

Keywords: Temporary Labor Migration, High-Skilled Workers, US-India Relations, Immigration Reform

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Note: The author is residing in the United States on a category E-16 green card sponsored by the Peterson Institute and has previously held H-1B initial, H-1B continuing, and O-1A temporary visas sponsored by the Peterson Institute. This research was partially supported by the Smith Richardson Foundation and the United States-India Business Council as part of a broader Institute project on economic relations between India and the United States.

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Labor is prior to and independent of capital. Capital is only the fruit of labor, and could never have existed if labor had not first existed. Labor is the superior of capital, and deserves much the higher consideration.

—Abraham Lincoln, State of the Union Address, 1861

A potential free trade agreement (FTA)[1] or enhanced economic cooperation pact between the United States and India will, quite appropriately for the world's two largest democracies, be perhaps the most *people-focused* free trade and economic agreement ever negotiated. With substantial GDP per capita differentials and India's large, globally competitive, English-speaking, geographically mobile services sector workforce—a principal asset in its capacity to benefit from globalization—labor mobility and the exchange of people will be a key part of a successfully concluded US-India FTA. Indeed, without a substantial liberalization of labor mobility between the two countries, it will not be possible to conclude a deeper economic relations agreement.

This paper presents analysis of the prospects for successful negotiation of labor mobility issues between the United States and India. Section II sets the stage with a review of the latest available data on bilateral immigration, services trade, and US high-skilled visa issuance to Indian nationals. I estimate the economic value of the US-India labor migration relationship and investigate methodological concerns about these data and associated "urban trade myths." The next section presents my analysis of the complex political process of negotiating an FTA with a substantial labor mobility component in a traditional trade negotiation framework. It includes an evaluation of the effects on US-India labor relations of the most recent comprehensive immigration reform proposal passed by the US Senate. In section IV the prospects for a *totalization agreement* between the United States and India are investigated. Although such an agreement falls outside the traditional trade negotiation framework, it will be of critical importance to a successful US-India FTA negotiation. Section V presents my conclusions.

II WHAT THE DATA REVEAL ABOUT US-INDIA LABOR MOBILITY ISSUES

Empirical analysis of bilateral labor migration relations is necessarily dependent on the timely availability of often expensive-to-collect and politically contentious migration data. When the two countries are of very dissimilar levels of economic development and administrative capacity, data are available only from the more advanced economy. So it is with data on US and Indian labor migration, for which there does not appear to be any readily available official Indian source of visa issuance data in the United States.[2] I

1. In this paper an FTA refers to any bilateral economic and political agreement that may be negotiated between the United States and India.

2. In 2007 the Indian embassy in the United States outsourced the processing of Indian visas in the United States to the private company Travisa Outsourcing, from which very limited data are available. The company's early promotional material said that it "processes more than 350,000 Indian visa applications annually with that number expected to increase to more than 400,000 in

therefore rely solely on bilateral visa and labor migration data from official US sources, and my analysis is subject to the availability, structure, and limitations of these data.

American immigration law distinguishes between *permanent immigrant* and *temporary nonimmigrant* visas. The former grant permanent legal residence status (e.g., green cards), and the latter only a time-limited period of residence in the United States (e.g. tourist, business, student, or temporary worker visas). The two categories are linked in a very important way, as legal permanent resident status can be acquired not only by classification as a *new arrival* entering the United States directly from a foreign country but also by an *adjustment of status* for a foreigner already living and perhaps working in the United States on a temporary nonimmigrant visa. In the latter case, if it concerns a temporary worker, no increase in the US labor force occurs, merely a change in the immigration status of the person involved.

Legal Permanent Migration to the United States from India

Before exploring the details of legal permanent migration from India to the United States, it must be stressed that migration is far broader than the bilateral labor migration and mobility focus of this paper. This distinction is clearly illustrated in table 1, which lists the annual number of green cards given to foreigners in fiscal years 2007–12.[3] The numbers are broken down by type and class of admission, extending beyond employment-based preferences to include family-sponsored preferences and relatives, refugees and asylees, and others that altogether accounted for 86 percent of those accorded legal permanent resident status in the United States in FY2012.

Table 1 shows that the United States issues just over 1 million green cards per fiscal year and that the majority (55–60 percent) are for adjustment of status transitions for foreigners in the country on temporary visas. About 450,000 to 500,000 foreigners arrive in the United States each year on a newly issued green card, the vast majority of them (on average 96 percent from 2007-2012) in nonemployment-related categories of permanent immigration—family-sponsored, immediate relatives, diversity-based, and refugees . This was the legislative intent of the US Congress, which in the Immigration and Naturalization Act of 1990 (INA) designed the country's permanent migration system to focus on families. The INA reserves only 140,000 green cards annually for employment-based immigration, but the prior fiscal year's unused family-based immigrant visas can be used for employment-based purposes.[4]

2008." See Travisa website at https://indiavisa.travisaoutsourcing.com/press?page=locations-fact-sheet (accessed on February 15, 2015).

3. All reported immigration data in the United States are collected and reported by federal government fiscal year (October 1–September 30).

4. Some family-based permanent immigration visas are almost always unused in a given year, so the annual number of employment-based green cards tends to exceed the INA's 140,000 limit.

There are five categories for US employment-based green cards[5]:

1. priority workers (aliens with extraordinary ability, outstanding professors or researchers, and multinational executives or managers),
2. professionals with advanced degrees or aliens of exceptional ability,
3. skilled workers, professionals, and needed unskilled workers,
4. certain special immigrants (broadcast employees, ministers, employees of US government abroad, foreign medical school graduate who was licensed to practice in the United States on January 9, 1978, retired employees of international organizations, juvenile court dependents, retired NATO-6 civilian employees, and religious workers), and
5. employment creation (investors).

The first three categories account for the overwhelming majority of employment-based permanent migration to the United States (table 1), and, in contrast to family-sponsored permanent migration, are predominantly associated with adjustments of status rather than new arrivals. In other words, most permanent employment-based "migrants to" the United States already reside in and are probably employed in the United States when they receive their green cards. The US temporary visa system thus seems to function as an early stage in the process toward legal permanent residence for foreign workers in the United States.

However, it is important to note that a large number of the green cards in the top three categories actually go to the workers' dependents (e.g., spouses and children) and should therefore be considered family-sponsored migration, reducing the total number of priority workers granted green cards. Table 2 breaks out the share of priority workers and their dependents for the first three employment-based permanent migration categories in FY2007–12.

Less than half (45 percent) of the green cards for workers in the top three employment-based preference groups go to the workers themselves; 55 percent of them go to their dependents. This imbalance is slightly greater for workers in the first preference group, where just over 40 percent of the permits are for to the workers. In effect, most employment-based green cards in the United States benefit the dependents of the sought-after workers!

Turning to the US-India permanent migration relationship, table 3 shows that, in contrast to overall US permanent migration, among green card holders of Indian origin employment-based preference is the biggest single reason for permanent migration, applying to about half of the Indians who received green cards in recent years. Permanent Indian migrants to the United States are hence far more likely to

5. Preference categories are detailed by the Department of Homeland Security at the US Citizenship and Immigration Services website, www.uscis.gov/working-united-states/permanent-workers (accessed on February 1, 2015).

(already) be gainfully employed and contribute to the US economy at the time of receiving their green card, than are is the heavily family-sponsored total group of permanent migrants.

Table 4 provides further data on the characteristics of recent Indian permanent migrants in the United States. There are almost equal numbers of men and women, most are of prime age (25–44 years old), and the number of family-based green cards indicates that most Indian green card holders are married. However, there is a significant difference in the employment of male and female permanent Indian migrants to the United States: Far more men are employed than women, a large number of whom are homemakers outside the US labor force. Among the Indian permanent migrants who are employed, management and professional occupations dominate, clearly suggesting the role of Indian permanent migrants in potentially tradable services in the US workforce. In addition, a sizable and roughly similar number of male and female Indian green card holders are students at US educational institutions.

Summarizing, this section has established several key features of permanent migration from India to the United States:

- Most of the 140,000 annual employment-based green cards are granted to foreigners who are already in the United States and in all probability employed.
- More than half of the 140,000 green cards go to the dependents of priority workers rather than to the workers themselves.
- Indian nationals are by far the largest single national group of recipients—about half—of employment-based green cards.
- Over 70 percent of Indian employment-based green card recipients are employed in management and professional occupations.

Temporary Migration to the United States from India

The US nonimmigrant visa system covers a variety of rapidly rising temporary exchanges of people between the United States and India—businesspeople and tourists, students, and temporary workers and their dependents. Figure 1 shows that the number of US temporary visas issued to Indian nationals rose from about 250,000 in FY1997 to nearly 650,000 in FY2007; the global recession caused a decline, but the numbers have since risen and were about 550,000 in FY2012.

A sizable majority of Indians temporarily visiting the United States are businesspeople or tourists (about 300,000 annually since 2009) and temporary workers and dependents (about 175,000 annually since 2009). Some 35,000 Indian students and exchange visitors also come to the United States each year, together with a roughly similar number in the residual "other category[6]." Temporary workers thus account for just under one third of the total nonimmigrant flow from India to the United States.

6. This category includes approximately 75 different individual visa categories, including athletes, crewmembers, treaty investors, scholars, religious workers and many others.

The two main temporary work visa categories in the United States are the H-1B, for specialty occupations, US Department of Defense R&D workers, and fashion models ,[7] and the L-1, for intracompany transferees who are executives or managers or possess specialized knowledge .[8] The L-1 visa is initially valid for 3 years but can be extended by up to two 2-year periods for a maximum duration in the United States of 7 years.[9] The H-1B is a 3-year visa and is renewable once for a total stay of 6 years.[10] Both the L-1 and H-1B are employer-sponsored visas, meaning that it is the US-located employer that applies with US immigration authorities for the visa on behalf of the foreign national recipient. A foreign worker's stay in the United States on either visa is therefore generally tied to continued employment with the petitioning employer; the worker may switch jobs provided that the new US employer files a new H-1B application with the US immigration authorities.[11]

There are two principal US data sources for the analysis of these two temporary worker categories. First, the US Department of State's annual *Report of the Visa Office* and the US Department of Homeland Security's annual *Year Book of Immigration Statistics* provide data on the number of visas issued at US consular offices abroad by the nationality of the recipient. However, as is the case for green cards discussed above, it may be misleading to look only at the numbers of new L-1 and H-1B visas issued by the US State Department as they do not include the sizable number of H-1B visas acquired by foreigners already residing and often working in the United States through an adjustment of status. This is less a concern for the L-1 visa, as it is given only to intracompany transferees and requires that the recipient have "been working for a qualifying organization abroad for one continuous year within the three years immediately preceding his or her admission to the United States."[12]

The second source of information about temporary workers in the United States is the annual US Citizenship and Immigration Services (USCIS) report to the US Congress, *Characteristics of H1B Specialty Occupation Workers*.[13] This report provides a more comprehensive picture, with data on new recipients

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7. See appendix A for a detailed description of the requirements for the H-1B visa.

8. See appendix B for a detailed description of the requirements for the L-1 visa, which are also available at www.uscis.gov/working-united-states/temporary-workers/l-1a-intracompany-transferee-executive-or-manager (accessed on February 15, 2015).

9. The L-1A visa for intracompany executives and managers can be extended by two 2-year periods to a total of 7 years, while the L-1B visa for intracompany employees with specialized knowledge is extendable by only one 2-year period to 5 years. Qualified employees in either category who enter the United States to establish a new office are allowed a maximum initial stay of 1 year, though the maximum 7- and 5-year L-1 duration in the United States cannot be exceeded. See appendix B for details.

10. A few exceptions to the 6-year maximum exist under sections 104(c) and 106(a) of the American Competitiveness in the Twenty-First Century Act (AC21).

11. The L-1 visa can be sought by a non-US-located employer for the purposes of establishing a new US-located office of the foreign firm.

12. See appendix B.

13. Available at www.uscis.gov/sites/default/files/USCIS/Resources/Reports%20and%20Studies/H-1B/h1b-fy-12-characteristics.pdf (accessed on February 1, 2015).

of H-1B visas both from abroad and already in the United States as well as wage levels and industry/occupational categories of these recipients.

Figure 2 shows the number of L-1 visas issued to Indian nationals annually at US consular offices abroad in FY1997–2012. The number rose dramatically from fewer than 2,000 in 1997 to more than 40,000 in 2007–08, after which it fell to just below 20,000 in 2012. Over the same period, the share of Indians among all L-1 recipients rose from trivial levels to around 50 percent in FY2007–10, before declining to about 30 percent in 2012. Considering that UK nationals are the second largest national recipient group, with 5,000–6,000 annual L-1 visa recipients, India is far and away the most significant individual user country of the US L-1 intracompany transferee visa. These data underscore the critical importance of labor migration provisions in a US-India FTA: The two countries constitute each other's most important high-skilled cross-border labor relationship.

Figure 2 also presents annual data for L-2 visas (given to the family dependents of L-1 visa recipients) and shows a roughly similar trend for Indian L-2 visa recipients as for Indian L-1s.[14] This may matter for temporary worker migration as L-2 spouses are eligible to apply for US employment authorization. In fact, a sizable number of Indian L-2 spouses may enter the US labor force each year and, if their employment authorization is approved, they are not subject to any employment restrictions, giving them a labor force status that is actually superior to that of the L-1 recipient, whose employment is linked directly to the original petitioning employer. Furthermore, an L-2 visa, unlike the L-1, can be acquired through a change in status while already in the United States, meaning that the number of annual L-2 recipients of Indian nationality may be higher than the number shown in figure 2.[15]

Turning to H-1B visas, analysis becomes more complicated because of the ability of Indians in the United States to switch into H-1B status from other temporary visa categories (most often student visas) and/or to renew (rather than simply extend) the H-1B visa (once) upon expiration. Table 5 breaks down the number of new annual H-1B visa petitions granted by USCIS into *continuing* and *initial employment* H-1Bs (rows 2–3) and, for the latter, shows numbers of foreigners (and specifically Chinese and Indians) in and outside the United States at the time of the H-1B petition.

Table 5 shows H-1B visas granted in FY1999–2012. Total issuance (line 1) peaked in FY2001 (ahead of the dotcom bust), dropped dramatically in FY2002, then recovered until the late-2008 global financial crisis, from which it rebounded by FY2011. The decline was substantially greater (about 135,000) in

14. There is usually a delay between workers' arrival and that of their dependents , hence the lag in the rise in numbers of Indian L-2 recipients as the post-2010 decline in L-1 visas is not fully reflected in the L-2 numbers for 2012. This explains why figure 2 shows that Indian L-2 visas exceed L-1 visas in 2012.

15. However, as most such changes in status are for L-2 recipients already employed in the United States, they are likely to effect a very limited number of additions to the US labor force. For this analysis of temporary worker flows between the United States and India, they are of trivial importance and therefore ignored.

FY2002 than when the global financial crisis struck (about 83,000 all told), vividly illustrating the tight links between the US technology sector and the H-1B visa program. The decline in H-1B visa issuance after the dotcom bust was also almost certainly amplified by the effects of the 2001 terrorist attacks on 9/11, which had a broad short-term dampening effect on all approved immigration (and travel) to the United States. However, the effects of these events are difficult to disentangle, as the 9/11-related tightening of US immigration rules took place concurrent with the attacks' amplification of the country's economic downturn.

The number of H-1B visas for continuing employment (table 5, line 2) was relatively stable (roughly 100,000–150,000) in FY2000–12 and accounted for about 60 percent of the total in FY2006–11 . H-1B visas granted for initial employment (line 3) are somewhat more sensitive to the US economic business cycle—and the technology sector cycle in particular: From a high of more than 200,000 in FY2001 they dropped sharply by almost half in FY2002 and recovered in fits and starts to about 137,000 in FY2012. The volatility in new H-1B visas in this category is almost wholly concentrated in the issuance of H-1B visas for "aliens outside the United States" (line 4), which fell nearly 70 percent in FY2001–02 and 40 percent in FY2008–09. In contrast, initial employment H-1B visas for "aliens inside the United States" (line 5) have in absolute numbers remained relatively stable, about 50,000–70,000 annually.

In other words, the most cyclical element of the H-1B program is the part that brings in new workers from outside the United States, whereas the elements that either keep H-1B workers in the United States (e.g., H-1B visas for continuing employment) or confer H-1B status on foreigners already in the country (such as recently graduated students) are much less affected by the broader economic or technology sector business cycles.

Lines 6–9 in table 5 show the numbers of H-1B-holding workers from India and China, the two largest country users of the program. Indians are, by a sizable margin, the largest recipient group of H-1B visas for both continuing and initial employment, accounting for roughly half of the total in the two categories since FY2000, and about two-thirds in FY2012. Again, the number of Indians approved for H-1B visas for initial employment is more cyclically sensitive than for continuing employment. While it is not possible to disentangle these data further, the clear correlation between variations in the numbers of H-1B visas for initial employment of all aliens outside the United States and of Indian nationals suggests that the latter account for a very large share of the first group.

The data in table 5 indicate that (1) a large number of Indian nationals enter the US workforce for the first time on an H-1B visa for initial employment for aliens outside the United States, and (2) the H-1B program provides employment opportunities for many foreign students in the United States and in all probability already employed through the USCIS one-year postgraduation Optional Practical Training

(OPT) program for foreign graduates at US universities.[16] The assumption that most newly arrived Indian workers take up employment in the IT services sectors hints at a further dual function for the US H-1B visa program: to both enable the inflow of large numbers of new Indian workers and retain foreigners already lawfully employed (Kirkegaard 2007).

Lines 10 and 11 in table 5 show the annual congressional H-1B cap and the date on which it was reached[17] (and/or the number of petitions filed on the first of day of visa availability). It is clear that the cap is of limited importance to the actual number of H-1B petitions approved each year: the numbers reported in line 1 show the approval of 3–4 times as many H-1B visas as stipulated by the cap. This is by legislative intent, as the law exempts all H-1B visas for continuing employment (grey-shaded areas in table 5), as well as H-1Bs for initial employment, if the petitioner is an institution of higher education (or its affiliated or related nonprofit entities), a nonprofit research organization, or a government research organization.[18] In other words, the H-1B cap is applied almost exclusively to private businesses hiring new foreign employees on H-1B visas. And as table 5 shows, even those for initial employment can exceed the congressional cap substantially; indeed, the only time this was not the case was in FY2010. These data further highlight the importance of the H-1B program to nonprofit, research, and higher education organizations in the United States.

Since the mid-2000s, H-1B visas have become available on April 1 for the following fiscal year. The data (line 11) show that the congressional cap is frequently met within months—and in 2008 and 2009, during the Great Recession, the allocated number was exhausted on the very first day of availability.[19] Thus in recent years US-located firms have, often for a number of months, not had access to new foreign high-skilled employees on H-1B visas. So although the actual number of H-1B visas exceeds the cap, it is a mistake to assume that the effects of the cap are uniform or that its economic impact is negligible.

Firm-level data for the individual recipient businesses of H-1B visas for initial employment are occasionally available[20] and shed further light on which firms are most affected. In FY2009 just over

16. Information about the OPT program is available at the USCIS website, www.uscis.gov (accessed on February 2, 2015).

17. In cases of two different dates shown, the first date refers to the day in which H-1B visas especially for foreign graduates of U.S. universities became exhausted, and the second date for the general H-1B visas to be exhausted.

18. Information is available at the USCIS website (www.uscis.gov).

19. In recent years for which detailed data are not available, the access for firms to H-1B visas under the congressional cap has become gradually more limited. For FY2012, the cap was reached on November 23, 2011, FY2013 on June 12, 2012, and most recently for FY2014 immediately upon availability in April 2013. USCIS reported that it had received 124,000 applications for the available 85,000 H-1B visas in FY2014. For Fiscal Year 2015, USCIS received 172,500 petitions between April 1 and April 7, 2014, meaning that H-1B will only once again become available on April 1, 2015. See http://www.uscis.gov/news/uscis-reaches-fy-2015-h-1b-cap-0.

20. These data are occasionally released by some congressional offices.

85,000 H-1B visas were granted for initial employment to almost 28,000 US-based petitioners.[21] Although this suggests an average of just over 3 visas per firm, a relatively small number of firms account for a far higher number of initial employment H-1B visas. Table 6 shows that the top 25 H-1B petitioners each had more than 200 visas approved in FY2009, accounting for 11,265 visas, or 13 percent of total issuance that year. Indian IT services firms are heavily represented in this group, accounting for half of the 11,265 H-1B visas and 10 of the top 25 companies, including the top recipient of initial employment visas in FY2009, Wipro Ltd.[22]

However, keeping things in perspective concerning often heard media characterization of the H-1B visa as "the outsourcing visa," the most intensive corporate user of the program, Wipro, received just over 2 percent of all visas for initial employment in FY2009. Numerous smaller firms account for the greatest share of users of the program. As such, although the services trade business model of a limited number of Indian IT firms places them at the top of H-1B users, the program as a whole seems to fulfill the purpose of enabling a large number of US-based businesses to recruit needed high-skilled foreign workers. It should further be noted that the US firms listed in table 6 are generally among the most widely recognized and most competitive US global technology firms. So to the extent that the H-1B program fulfills a dual function—both enabling a specific onsite delivery business model in the IT services sector and providing US-based employers with access to high-skilled foreign workers—the latter dominates.

Differences between the two categories in the degree to which foreign workers subsequently pursue a US green card cannot be discerned from the official visa data used here. Some studies have reported that the rate of US green card applications is lower among Indians than other foreign workers entering the US workforce on H-1B visas (see, e.g., Salzman, Kuehn, and Lowell 2013). Recalling the critical importance of the adjustment of status category for employment-based green card applications shown in table 2, this might be seen as a potentially significant economic issue, as it is in America's long-term interest to retain high-skilled foreigners in its workforce permanently. But when viewed in the context of the limited role in the total program of H-1B recipients from Indian IT services firms, the relevance of this concern is revealed to be limited.

Summarizing, this section has established the following key features of temporary worker migration from India to the United States:

- As holders of 40–50 percent of H-1B and L-1 visas issued, Indian nationals dominate the main US temporary worker visa categories.

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21. The total of 85,133 includes the 27,287 individual firms on the list. Recalling the 86,300 in table 5 as the aggregate number for initial employment H-1B issuance in FY2009, this list does not seem complete. The reasons for the discrepancy are unknown to the author.

22. The largest Indian IT services and software firm, TCS, is not shown in table 6 because in FY2009 it relied largely on L-1 rather than H-1B visas for its new US-based workforce. It was able to do this because it has a lot of qualified employees with more than one year of employment with the firm outside the United States.

- The H-1B (and likely the L-1) visa program both enables a relatively limited number of intense user firms in the IT services and software industry to employ a large number of foreign technology workers on temporary visas and, much more broadly, supports a very large and diverse group of US-based corporations, school systems, and nonprofit organizations.

Understanding the Economic and Trade Impacts of US-India Labor Migration

The preceding two sections illustrate that US-India labor migrations are the most important regularized bilateral relationship for both countries.[23] This will probably not come as a surprise to anyone who has followed the debate since the early 2000s about outsourcing and offshoring in the United States,[24] though the scale of Indian dominance in US permanent and temporary employment migration might be news to some.

The next pressing question for an FTA negotiation is, what is the dollar value of US-India labor migration? Without a quantitative estimate for the value of this relationship, it is highly improbable that policymakers and trade negotiators will attach adequate importance to it during a negotiation process.

However, severe data availability deficiencies and fundamental conceptual issues bedevil attempts at such an estimate. At least two are worth mentioning here:

1. Because bilateral migration data are available only from official US sources, any estimate of the economic value of the bilateral labor migration relationship will be a gross figure rather than a net value for the two-way relationship. With access only to US migration data, US imports/Indian exports can be captured in trade terms only.
2. The US-India labor migration relationship involves both permanent and temporary migration. However, for FTA purposes it is appropriate to follow the IMF (2011) balance of payment and General Agreement on Trade in Services (GATS)[25] methods, which focus exclusively on transactions between residents and nonresidents. Such methods do not permit quantification of the value of permanent migration (i.e., residents) between the United States and India ; only temporary migration related to nonresidents is quantified. Recalling the close relationship revealed in section II.a between employment-based permanent and temporary migration into the United States, this approach would ignore a sizable economic advantage to the United States and India from their bilateral labor migration.

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23. Although it is not possible to draw concrete inferences about the economic impact of illegal immigration to the United States from any individual country, the total economic impact of illegal immigration from Mexico to the United States may make that bilateral labor relationship larger than the US-India labor migration relationship.

24. See Kirkegaard (2004, 2005, and 2007) for examples of this debate.

25. The GATS method is explained in the *Manual on Statistics of International Trade in Services* (MSITS 2010), http://unstats.un.org/unsd/tradeserv/tfsits/manual.htm (accessed on February 10, 2015).

The economic value of one side of the bilateral labor migration relationship can be approximated by a preliminary method that estimates the value of US mode 4[26] computer and information services imports (Kirkegaard 2008). The majority of temporary worker flows from India to the United States are in the services sectors, covered by the GATS, although in principle temporary workers can be employed throughout the economy. GATS distinguishes four modes of supply ., For purposes of quantifying the entire US-India labor migration relationship, the specific mode of transaction makes little difference as long as temporary work is involved. The latest *Manual on Statistics of International Trade in Services* (MSITS 2010), for instance, draws distinctions between mode 3—commercial presence, where temporary workers are mostly employed at foreign affiliates and thus deliver their services via a resident firm—and mode 4, the presence of natural persons. In the latter, temporary workers can be self-employed, contractual services suppliers, intracompany transferees, or services sellers entering a country to set up a commercial presence. Available L-1 and H-1B visa data for Indian temporary workers in the United States fall primarily in mode 4, but no modal distinction can be made from available visa issuance data, which are simply "single category" in terms of modes of supply Moreover, the data are bound by the definition in US immigration law of "temporary residence" for L-1 and H-1B visa durations[27]: 2 × 3 years for the H-1B visa and 3 + 2 or 4 years for the L-1 visa.

Until FY2011 the US Citizenship and Immigration Services published an annual report called the *Characteristics of Specialty Occupation Workers (H-1B)*, which included among other things the median wages earned by H-1B recipients in various sectors of the US economy. However, as no data exist for the actual number of H-1B or L-1 visa holders in the United States at any given point in time, a number of important assumptions need to be made about the numbers and wages earned by Indian temporary workers to enable quantification of the value of the US-Indian labor migration relationship.

No information is available by individual nationalities, but under the assumption that most Indian H-1B workers are employed in "computer-related occupations,"[28] median wages for this category are a reasonable proxy[29] for the wages earned by Indian H-1B workers in the United States.[30] Data on

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26. GATS mode 4 refers to the "movement of natural persons", which covers natural persons who are either service suppliers (such as independent professionals) or who work for a service supplier and who are present in another WTO member to supply a service. See WTO http://www.wto.org/english/tratop_e/serv_e/mouvement_persons_e/mouvement_persons_e.htm

27. IMF (2011) defines workers located in a country for more than one year as resident, whereas GATS leaves it to the host country to define the duration of "temporary." This paper follows the GATS approach.

28. This category includes jobs in the Bureau of Labor Statistics' Occupational Employment Survey (OES) group 15-0000 Computer and Mathematical Occupations. A description of this category is available on the BLS website, www.bls.gov/oes/current/oes150000.htm (accessed on February 19, 2015).

29. The median annual wage for computer-related occupations in 2002–11 was $2,000–4,000 higher than that of all H-1B visa holders for whom wages are known.

30. H-1B wages are subject to a "prevailing wage requirement," which serves as a de facto wage floor. There is no upper limit, and a sizable number of H-1B workers earn substantially more than prevailing US wages (Kirkegaard 2005). The H-1B wage

median H-1B wages are available for workers on both initial and continuing employment, with the latter wages typically about $15,000 higher than the former, reflecting the experience and higher seniority of temporary H-1B workers employed on their second 3-year visa.[31]

No similar wage information is available for L-1 visa recipients, so a further assumption about the substitutability of the H-1B and L-1 visa has to be made.[32] Indian L-1 workers are assigned a median wage equal to the average of annual median wages earned by H-1B workers in computer-related occupations in initial and continuing employment. As the L-1 visa is renewable for up to 7 years and includes many senior executives, this is a conservative assumption about wages earned by Indian L-1 recipients.

No departure data exist for H-1B or L-1 visa holders, so all data are treated as gross data and it is assumed that all H-1B recipients remain employed in the United States for the 3-year duration of their visa.[33] Indian L-1 visa holders are assumed to be employed for on average 5 years in the United States after initial visa issuance. This assumption makes no allowance for Indian H-1B or L-1 visa holders that are granted multiple visas during their time in the United States, if for instance they change employers one or more times, so estimates of the total number of visa holders are biased upward.

Wage costs account for the majority of total cost of goods sold (COGS)[34] for Indian firms that rely on temporary workers in the United States to staff their onsite delivery services. They do not, however, account for the entire value of the transaction embodied in the presence of Indian temporary workers in the United States. a company's gross profit margin[35] must be added to the COGS to capture the full value of the trade flow. In the IT services industry gross profit margins of 30–40 percent are common (Kirkegaard 2008), making a 20 percent gross margin for Indian temporary workers in the United States

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distribution is thus skewed to the top-tail, making median wage estimates likely substantially lower than average H-1B wages. Consequently, estimates for the entire wages earned by H-1B visa holders will be conservative and indeed likely biased significantly downward.

31. Annual nominal wage increases of 5 percent are assumed for all H-1B visa holders during their 3-year stays, a conservative wage growth estimate. This is in relation to the roughly $15,000 difference in wages between initial and continuing employment H-1B workers.

32. In the annual 10-K filings of the large Indian IT services firms at the top of table 6, both H-1B and L-1 visa holder numbers for the firm are published. This lends credence to the assumption of visa substitutability between the two categories. See also Kirkegaard (2007).

33. Considering that table 5 showed a very large number of Indian nationals applying for their second continuing employment H-1B visa, this is probably a realistic assumption.

34. COGS refers to the costs of production directly attributable to the product sold (i.e., variable costs), including direct labor costs and materials but not indirect (fixed) costs, such as buildings, distribution, and administration. For the purposes of Indian temporary workers in the United States, such fixed costs can by definition be expected to be relatively small.

35. Gross profit margin refers to company revenues minus COGS. Given the assumed low level of company fixed costs related to the presence of Indian temporary workers in the United States, operating with gross profit margins is appropriate.

a conservative assumption for the total value of the related economic value of the temporary migration trade flow.

Table 7 shows data for Indian H-1B and L-1 temporary workers in the United States in FY2002–12 and their median wages earned to approximate the value—subject to the caveats and assumptions discussed—of one side of the US-India labor migration relationship.

The estimated Indian H-1B population employed in the United States averaged about 364,000 in FY2002–12, with a high of 432,500 in FY2008 and a low of 267,700 in FY2004. In contrast, the estimated number of Indian L-1 visa holders rose rapidly from 45,500 in FY2002 to almost 174,000 in FY2011. It seems probable that the rise in the unrestricted L-1 visa holder numbers is related to the congressional cap on H-1B visas after FY2004, resulting in a degree of leakage from the H-1B to L-1 visa programs.

Estimated wages paid to Indian temporary workers in the United States increased from about $25 billion early in the period to around $40 billion in FY2008–12. The total embedded economic value of the temporary labor migration relationship between the United States and India rose from $25–30 billion annually in FY2002–05 to $47–52 billion in FY2008–12.

In comparison, recorded US imports of private services from India, although they rose rapidly over the period, amounted to just $19 billion in (calendar year) 2012.[36] And recorded US goods imports (on an IMF balance of payments, or BOP, basis) from India were $41 billion in FY2012, also lower than the fairly conservative table 7 estimate for the economic value of the temporary worker relationship from Indian workers in the United States that year. The discrepancies between estimated total wages paid to Indian temporary workers in the United States—based on comprehensive visa issuance data and reported BOP-compliant compensation of employees plus private remittances and other transfers (e.g., workers' remittances) to Indian nationals from the United States—are even more glaring.[37] Total recorded

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36. The discrepancy between recorded Indian services exports to the United States (reported by the Reserve Bank of India) and recorded Indian services imports to the United States (reported by the US Bureau of Economic Analysis) is a well-known statistical discrepancy in international trade. Generally, reported Indian services exports are substantially larger than reported US imports because of the statistical collection methods relied upon by the Reserve Bank of India, which uses firm surveys of Indian IT services exporters' sales in the United States. Such firm-level data are typically reported on the basis of US generally accepted accounting principles (GAAP), not collected according to the IMF BOP manual. As a result, Indian software export data have since 1997–98 included the value of things such as onsite development costs, expenditure on employees, and office maintenance expenses in the United States. Indian software and IT services export numbers are therefore likely substantially inflated when compared to fully BOP-compliant data. For these reasons, only US BEA data (which have their own flaws) are reported here. See also GAO (2005), OECD (2006), and Kirkegaard (2008).

37. In principle, the IMF BOP captures wage payments to nonresidents in a country as long as H-1B and L-1 visas are valid. Employee compensation comprises wages, salaries, and other benefits (in cash or in kind) earned by individuals—in economies other than those in which they are residents (e.g., according to BOP principles, less than 12 months)—for work performed for and paid for by residents of those economies. Workers' remittances cover transfers by migrants who are employed in another economy and considered residents there (e.g., living there for more than 12 months).

compensation paid to Indian nationals earning wages in the United States was less than $1 billion annually in FY2002–12; it was private remittances and other transfers that accounted for a rise from about $1 billion in FY2002 to just over $8 billion in FY2012. Total recorded BOP-compliant annual wage compensation flows from the United States to India are thus less than a quarter of total estimated temporary worker wages at the end of the period shown in table 7.

Last, table 7 reports the total value of the US-India temporary worker relationship to Indian gross national income. Its share declines from a sizable 6 percent in FY2002 to 3 percent in FY2012, as the (US dollar) denominator rises with Indian economic growth.[38]

There are large natural overlaps between recorded BOP services trade data and the estimated value of the bilateral temporary labor relationship, so the two numbers must not be viewed as additive. The question is rather which best captures the true value of the bilateral economic relationship. Several methodological reasons exist for this large discrepancy in recorded data values, though the bilateral BOP data from the US BEA generally seem to significantly underestimate the total scale of the US-India labor migration relationship. There are three main reasons for the much larger estimated wages paid to Indian temporary workers in the United States based on visa rather than BOP data.

First, visa data are compulsory and comprehensive, and therefore include all Indians temporarily working in the United States. BOP data, in contrast, are based on surveys of US businesses and financial transaction records and so are by definition subject to significant sampling uncertainty. Visa-based wage estimates are therefore likely to be more accurate than BOP data for estimating the population of Indians working in the United States.

Second, the definitional period of "temporary nonresidency" in the visa-based estimates in table 7 is the period of legal residency granted by the visa category (5 or 6 years) rather than the 12 months specified by the IMF BOP. The recorded level of "compensation for employees" of Indian nationality covers in principle only the first year of their stay in America and hence should be much lower than the estimate in table 7. Yet the recorded annual BOP-compliant flows from the United States to India are less than $1 billion, which, based on the estimated number of temporary Indian workers in their first year of employment in the United States, is an implausibly low number.

Third, the lion's share of wages paid to Indian temporary workers in the United States will likely be spent in the United States, rather than across international borders, and will be captured in financial transaction records and BOP data in the form of worker remittances. Consequently, one would expect recorded remittances to be substantially smaller than estimated wages received by Indian temporary workers.

38. As the estimates in table 7 do not include Indian working spouses (L-2) of L-1 visa holders, this number is biased downward.

All told, in economic terms, the US-India labor migration relationship is a very big deal, even if traditional official data for US-Indian cross-border economic relations fail to adequately capture it. The estimates prepared in this section suggest not only that this relationship is far larger than traditional BOP data suggest, but that, at $45–50 billion annually in recent years, it surpasses the value of both US goods or services imports from India.

While it could be argued that the substantial scale of the US-Indian labor migration relationship implies that there is no reason to "fix what isn't broken" in a future FTA negotiation, this is a fallacy. The economic importance of the bilateral relationship makes it clear that a meaningful FTA cannot be negotiated without including an ambitious labor migration section.

The next section presents analysis of the feasibility of t such a negotiation, as Congress is at the time of this writing considering a once-in-a-generation overhaul of America's immigration laws.

III INTERSECTION OF FTA NEGOTIATIONS, US IMMIGRATION LAW, AND POTENTIAL IMMIGRATION REFORM

Sovereign nations typically seek to retain the right to regulate temporary access to their labor markets, so temporary migration provisions in bilateral, multilateral, and regional trade agreements have generally been limited in scope (see Nielson and Cattaneo 2002, Dawson 2013). Only deep regional trade and economic arrangements among "like units"—advanced economies such as the European Union or the Australia–New Zealand Closer Economic Relations Trade Agreement (ANZCERTA)—have succeeded in implementing (nearly) free movement across most labor categories among the participating member states.[39]

Such "free movement" arrangements appear to be a politically unrealistic goal for a US-India FTA, given the differences of economic development between the two countries and political controversies surrounding their large temporary migration relationship. But there is evidence that an FTA could nonetheless result in meaningful temporary labor liberalization between the two countries. India is pursuing ambitious temporary migration/mode 4 commitments in its FTA negotiations with the European Union.[40] And the United States—in NAFTA[41] and other FTAs such as the US-Australia FTA,

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39. Free movement of labor from the newer EU members has been "temporarily" restricted by many of the richer members since 2004. This reveals the political difficulties in liberalizing labor movement even among politically and economically similar countries.

40. These negotiations have been stalled since the last bilateral trade ministerial held in June 2012. See http://trade.ec.europa.eu/doclib/press/index.cfm?id=812 (accessed on February 18, 2015).

41. NAFTA contains provisions in mode 4 concerning the so-called Trade NAFTA (TN) visa, which allows Canadian and Mexican citizens to take up professional occupations on the NAFTA Professional Job List in the United States, provided that several specific provisions are met. The NAFTA visa is valid for one year but can in theory be renewed indefinitely. See Kirkegaard (2008) and Hufbauer and Schott (2005).

with its E-3 visa,[42] and the US-Chile and US-Singapore FTAs with their carve-outs of H-1B visas[43]—has included provisions relating directly to US temporary migration law.[44]

It will not be easy, though. Despite, or more likely because of, the economic importance of the bilateral temporary worker flow, India will, in any FTA negotiation, have substantial additional trade interests to push. Indian businesses are globally competitive in IT services and related fields and have perfected the onsite services delivery model, in which Indian workers are temporarily stationed at the client's location (in the United States and other advanced economies). At the firm level this business model relies heavily on the availability of temporary US work visas, and as table 6 showed several Indian IT services firms are consequently among the most intensive users of the H-1B (and likely L-1) visa programs.

More broadly, India and the United States would have several naturally opposing interests in an FTA negotiation of temporary migration. India would be seeking maximum access for temporary Indian workers to US visas and employment locations to maximize the natural high-skilled labor cost arbitrage for Indian firms that recruit in India to place workers in the United States. India would also strive to have as many of its high-skilled workers return to India with valuable connections and work experiences from the more advanced US marketplace. But, although the American economy overall would benefit from ensuring that as many temporary high-skilled Indian workers as possible remain permanently in the United States, US labor advocates (unlike US business interests) would seek to shield native workers from wage competition from Indian temporary workers.

Indeed, despite the inclusion of such provisions in some earlier US FTAs, temporary immigration provisions in trade agreements have been highly controversial. Congress has repeatedly made it clear to the executive branch/office of the US Trade Representative (USTR, which negotiates FTAs with other countries) that it will not ratify more FTAs with such provisions. Instead, Congress reserves the right to draft such immigration legislation exclusively for itself. A bipartisan letter from representatives F. James Sensenbrenner (R-WI) and John Conyers Jr. (D-MI) to then US Trade Representative Rob Portman in 2005 makes this explicit (quoted in Wallach and Tucker 2006, 5–6):

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42. The E-3 visa was defined in the 2005 US-Australia FTA as essentially an H-1B visa "only for 10,500 Australians" a year. Unlike the H-1B carve-outs for Chile and Singapore, Australia got its own new visa category. The E-3 indicates that, at least for "allied developed countries," high-skilled visas and indeed entirely new visa categories are becoming a bargaining chip in FTA negotiations. See http://canberra.usembassy.gov/e3visa/qualifying.html (accessed on February 18, 2015).

43. Nationals from Chile and Singapore have first access to 6,800 out of the currently legislated 65,000 annual H-1B visas. Unused numbers in this pool are made available for H-1B use for the next fiscal year. See appendix A.

44. The United States also made limited horizontal commitments for temporary migration in the GATS. See Nielson and Cattaneo (2002).

> Article I, section 8, clause 4 of the Constitution gives Congress the power to "establish a uniform Rule of Naturalization." [Sic] The Supreme Court has long held that this provision of the Constitution grants Congress plenary power over immigration policy. As the Court found in Galvan v. Press 347 US 522, 531 (1954), "…[that] the formulation of policies [pertaining to the entry of aliens and their right to remain here] is entrusted exclusively to Congress has become about as firmly imbedded in the legislative and judicial tissues of our body politic as any aspect of our government." And, as the Court found in Kleindienst v. Mandel 408 US 753, 766 (1972) (quoting Boutilier v. INS, 387 US 118, 123(1967)), "[t]he Court without exception has sustained Congress' plenary power to make rules for the admission of aliens and to exclude those who possess those characteristics which Congress has forbidden…."
>
> The inclusion of immigration matters in bilateral or multilateral trade agreements undermines congressional authority to exercise its exclusive authority over this subject. In addition, consideration of immigration and antitrust matters in bilateral or multilateral trade agreements strips Congress of its ability to subject these proposals to the debate and amendment process so vital to creating sound policy. In fact, the constitutional basis of congressional immigration authority specifically requires the establishment of a "uniform" immigration policy—a constitutional mandate that is fundamentally assaulted whenever immigration provisions are negotiated on an ad hoc, bilateral, or multilateral basis in trade agreements. Finally, immigration provisions in trade agreements cannot be later modified by Congress without placing the United States in violation of those agreements. This limitation on congressional powers deprives Congress of the authority to revisit agreements to which the United States has acceded despite fundamentally changed national or international circumstances. This arrogation of power and divestiture of congressional authority is something that we and our colleagues have forcefully and repeatedly opposed. Additionally, while it has not presented itself as a problem to date, we further expect that USTR would refrain from negotiating intellectual property provisions, requiring substantive changes to US law, within the framework of bi-lateral and multi-lateral trade agreements.
>
> We were gratified that Ambassador Zoellick agreed with these principles and agreed that any changes to American immigration or antitrust law be only considered through the normal legislative process. It was only because of Ambassador Zoellick's commitment that many members of the House and Senate agreed to support passage in the 108th Congress of legislation implementation the US-Chile and US-Singapore Free Trade Agreements. Having made this point sufficiently clear, we again extend an invitation to the Administration and to America's international trading partners to submit to Congress their legislative proposals to liberalize temporary entry requirements, to make other changes to the Immigration and Nationality Act, or to alter America's antitrust laws.

As any meaningful FTA negotiations of temporary worker rules would encompass visa numbers far exceeding those involved in the Chile and Singapore FTAs, it is evident that Congress would oppose any agreement in which such changes to the US immigration legislation were "not considered through the normal legislative process." In other words, at a minimum the relevant congressional committees—the House and Senate Judiciary Committees—would have to be directly involved in FTA negotiations, which

could no longer be handled exclusively by USTR. Any US FTA negotiation of temporary worker issues would therefore have to be a multiagency/multigovernment branch undertaking. The process would thus resemble that of America's megaregional FTA negotiations in the Trans-Pacific Partnership (TPP) and the Transatlantic Trade and Investment Partnership (TTIP), in which multiple US independent regulatory agencies, as well as to some extent the US Congress, are directly involved in the negotiations side by side with USTR.

Such an arrangement certainly presents a complicating factor for any FTA negotiation and invites congressional scrutiny and politicking during the process. Direct congressional involvement by relevant committees will in any event be required when the permitting legislation is written (e.g., the ex ante trade promotion authority legislation) and when the final agreement has to be ratified. Close liaison with the two judicial committees throughout the process seems a sine qua non for success.

Impact of US Immigration Reform Proposals on US-India Temporary Migration

Section II showed the vast economic scale of the current US-India temporary migration relationship, due in part to the onsite delivery services model pioneered by India's highly competitive IT services and software firms. The current levels have been reached despite repeated attempts by Congress (and US state governments), since shortly after the dotcom bubble burst in 2001, to explicitly or implicitly restrict the access of Indian temporary workers to the US labor market.

The annual 65,000 congressional cap on visas for initial employment H-1B visas since 2004 is one obvious example. The cap is not specifically targeted at Indian temporary workers, but it is clear from table 6 that it disproportionately affects Indian IT services and software firms as heavy users of the H-1B program.[45] Since the program and the 65,000 visas are part of US horizontal mode 4 GATS commitments, an explicit targeting of Indian nationals would be in violation of America's WTO nondiscrimination commitments (see Nielson and Cattaneo 2002).

Another de facto impediment to temporary migration to the United States is the rapidly rising filing fees for H-1B and L-1 visas. The H-1B visa now entails a $325 filing fee, a $500 Fraud Prevention and Detection Fee, a petitioning employer sponsorship fee of $750 (if the employer has 25 or fewer FTEs) or $1500 (more than 25 FTEs).[46] In other words, each H-1B visa requires an "import tariff" of $1,575–

45. There is evidence that the congressional cap in some ways penalizes smaller US-based firms more, as SMEs will be much less likely to be able to afford the several thousand dollars in legal and filing fee s associated with each H-1B application (Kirkegaard 2007). In contrast, Indian multinational IT services firms, for which access to temporary visas is a business imperative, can and will be willing to pay such upfront costs. The introduction of the USCIS lottery for the allocation of available H-1B initial employment visas is an obvious attempt to try to overcome some of these distortions. See USCIS website for the latest FY2014 "lottery" description at www.uscis.gov/news/alerts/uscis-reaches-fy-2014-h-1b-cap (accessed on February 19, 2015).

46. Some types of institutions (e.g., educational, nonprofit, and research organizations) are exempt from the petitioning employer sponsorship fee. See USCIS website at www.uscis.gov/i-129 (accessed on February 19, 2015).

2,325,[47] which amounts to an implicit 2–3 percent ad valorem import tariff.[48] Moreover, with Public Law 111-230 (August 2010), an additional $2,000–2,250 fee was applied to H-1B or L-1 petitioning companies with 50 or more employees in the United States, of which more than 50 percent are in H-1B or L-1 nonimmigrant status,[49] raising the implied ad valorem import tariff to 6–9 percent. The proceeds from PL 111-230 go to fund supplemental border security expenses.[50] Again, while written in a way that does not explicitly target Indian workers, Indian IT services and software firms in the United States are predominantly affected.

With this legislative history in mind, it is important, for the temporary migration components of any FTA negotiation, to consider how the current, once-in-a-generation[51] comprehensive immigration reform debate in Congress might affect temporary workers in general and US-India labor migration in particular. During the 113th Congress the Senate overwhelmingly passed a bipartisan immigration reform bill. Although its prospects in the House of Representatives and the new 114th Congress are uncertain, in this paper I assume that the relevant parts of S-744 will survive congressional debate and use it as the basis of my analysis.[52]

As a comprehensive reform proposal for US immigration law, S-744 includes large changes to both the permanent and temporary migration system in the United States. The focus here is temporary migration, but given the close linkages between permanent and temporary employment–based US migration (discussed in section II), it is pertinent to mention some of the envisioned changes to the permanent US migration system as they will disproportionately affect (benefit) Indian nationals:

1. Creation of a new "merit-based" category that would apply to 120,000–250,000 immigrants each fiscal year. This essentially introduces a "point-based" system for self-selection among would-be immigrants: Points are awarded for things like educational attainment, US employment experience, entrepreneurship, civic involvement, and English language proficiency (Section 2301ff). A great

47. These fees apply to visas issued in or outside the United States.

48. H-1B visa fees divided by the average median wage for initial and continuing H-1B visa holders.

49. See USCIS at www.uscis.gov/archive/archive-news/uscis-implements-h-1b-and-l-1-fee-increase-according-pl-111-230 (accessed on February 19, 2015).

50. The Text of the Emergency Border Security Supplemental Appropriations Act, 2010, is available at www.govtrack.us/congress/bills/111/hr5875/text (accessed on February 10, 2015).

51. The last comprehensive US immigration reform was in the late 1980s, culminating in the 1990 Immigration and Nationality Act (text available at http://library.uwb.edu/guides/usimmigration/104%20stat%204978.pdf [accessed on February 19, 2015]).

52. The main political sticking points in the House of Representatives refer to the prospects for a "path to citizenship" for illegal immigrants currently living in the United States and the scope of US-Mexican border security. Neither is relevant for the US-India temporary migration relationship. The text of S-744 is available at www.gpo.gov/fdsys/pkg/BILLS-113s744pap/pdf/BILLS-113s744pap.pdf (accessed on February 19, 2015).

number of Indian nationals and temporary workers in the United States will likely be eligible to apply under this new category, facilitating their access to permanent US residency.

2. Elimination of country-specific caps of 140,000 per fiscal year on existing employment-based immigration (Section 2306ff); previous country-specific caps were 7 percent of the total number, creating multiyear backlogs, especially for Indian and Chinese nationals. In addition, unused green cards in 1992–2013 would be recaptured and used to reduce the existing waiting list (composed overwhelmingly of Chinese and Indian nationals) for employment-based permanent residency. This reform would facilitate the transition of numerous Indian nationals—many currently in the United States—to permanent US residency.
3. Automatic access to green cards for graduates (upon receiving a job offer) with a master's degree or higher in science, technology, engineering, or mathematics (STEM) from an accredited US institution of higher education (Section 2307ff). Given the large number of Indian STEM students at US universities, this will provide a sizable number of Indian nationals with direct access to US permanent residency.

All told, S-744 introduces a shift from the current family-based permanent migration toward a somewhat more employment-/skill-based system. This will make it easier for many Indian nationals to become permanent US residents, and as such may negatively affect the supply of Indian temporary workers in the United States.

The Senate bill calls for a number of important changes to the H-1B and L-1 visa programs, several of which are of particular relevance to India and potential FTA negotiations:

1. An increase in the annual congressional cap for initial employment H-1B visas to 110,000–180,000 each fiscal year (Section 4101). A new High-Skilled Jobs Demand Index will determine the annual H-1B cap level based on, among other things, the previous year's H-1B petition numbers and relevant US unemployment levels.
2. A 5,000 increase, to 25,000 per fiscal year, in the congressional cap for initial employment H-1B visas available to foreign STEM graduates at accredited US institutions of higher education (Section 4101).
3. The right of alien spouses of H-1B recipients to work in the United States (Section 4102).[53]
4. Establishment of a $500 STEM Education and Training Fee, payable by all employers petitioning for an H-1B and L-1 visa (Section 4104).

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53. The Obama administration is now implementing this change. See Laura Meckler, "U.S. to Grant Work Permits to Spouses of Some Skilled Immigrants," Wall Street Journal Law Blog, February 24, 2015, http://blogs.wsj.com/law/2015/02/24/u-s-to-grant-work-permits-to-spouses-of-some-skilled-immigrants (accessed on February 25, 2015).

5. Tightened requirements and documentation for companies that hire H-1B workers to pay "100 percent of prevailing US wages," actively seek to hire US nationals before extending an offer to a foreign H-1B recipient, and ensure nondisplacement of US nationals if an H-1B worker is hired (Section 4211).[54]
6. Redefinition of an "H-1B/L-1–dependent employer" to mean any for-profit business (excluding some healthcare businesses) that, (i) if fewer than than 25 FTEs, employs more than 7 H-1B/L-1 visa holders; (ii) if 26–50 FTEs, employs more than 12 H-1B/L-1 visa holders; or (iii) if more than 51 FTEs, employs more than 15 percent of the total workforce on H-1B/L-1 visas.[55]
7. Prohibition of H-1B/L-1–dependent US employers to outplace, lease, or otherwise contract for the services of an H-1B/L-1 employee.[56]
8. A firm-level cap on H-1B/L-1 visa holders among firms that employ more than 50 FTEs in 75 percent of the total workforce in FY2015, 65 percent in FY2016, and 50 percent in FY2017 (Section 4213).
9. Annual Department of Labor compliance audits of each employer with more than 100 employees in the United States, if more than 15 percent of the workforce are H-1B/L-1 visa holders, and doubled fines up to $10,000 for each found working condition violation (Section 4221ff).
10. A new H-1B/L-1 filing fee for employers dependent on these visas: $5,000 in FY2015–24 if they employ more than 50 FTEs and between 30 and 50 percent of them are H-1B/L-1 visa holders (Section 4234).[57]

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54. In principle, the requirement to pay 100 percent of US prevailing wages (defined as the average wage paid to similarly employed workers in a specific occupation in the area of intended employment) would seem to eliminate any opportunity for labor cost arbitrage from relying on Indian H-1B workers for onsite delivery of IT and software services in the United States. However, as the 100 percent requirement has been in place since the H-1B Visa Reform Act of 2004 (before 2004, companies were required to pay 95 percent of prevailing wages) and no sectorwide and material underpayment of Indian H-1B visa holders has been found at US workplaces, it is clear that it has not thwarted the growth of the onsite delivery model of Indian firms. This is likely because of several competitive strengths at India's leading technology firms (unrelated to the direct labor cost arbitrage): their managerial capabilities and expertise in slicing the workload into a cost-efficient offshore and onshore portion; higher technical skills among Indian technology workers being paid at US prevailing wages compared to the local workforce; and related here, the willingness of Indian workers to accept "below their normal reservation wages" at Indian firms, provided they get the opportunity to gain personally valuable professional experiences at US workplaces. See US Department of Labor (2008), Kirkegaard (2005), and the DOL website, www.dol.gov/compliance/guide/h1b.htm (accessed on February 1, 2015).

55. Section 4211. Intending immigrants (e.g., would-be green card holders) among H-1B/L-1 visa holders are excluded from these estimates.

56. Section 4211. Non-H-1B/L-1–dependent employers may outplace visa holders by paying a fee of $500 per visa holder.

57. Intending immigrants (e.g., would-be green card holders) among H-1B/L-1 visa holders are excluded from these estimates.

11. A new H-1B/L-1 filing fee for employers dependent on these visas: $10,000 in FY2015–17 if they employ more than 50 FTEs and between 50 and 75 percent of them are H-1B/L-1 visa holders (Section 4234).[58]
12. US State Department approval of no more than 5,000 applications per fiscal year for "specialty occupation workers" (e.g., H-1B workers) for each country with which the United States has entered into an FTA (Section 4402).[59]

S-744 generally seeks to expand the availability of H-1B visas (note that the number of L-1 visas is uncapped) to US-based employers, enables H-1B spouses to work (many of whom will also be high-skilled), while instituting a new $500/visa fee to support STEM education in the United States. At the same time, the bill tightens wage and reporting requirements for US H-1B and L-1 employers. Overall, viewed from the perspective of US employers seeking to hire H-1B and L-1 visa–based foreign workers, S-744 represents a substantial liberalization of the law and improvement of access to high-skilled foreign workers, especially when combined with the proposed changes to the US permanent migration system noted above. It is therefore likely that the US business community seeking better access to high-skilled foreign workers will strongly support S-744.

But the improvement in access to foreign high-skilled workers for US businesses is combined with substantial new restrictions for large and intensive users of the H-1B and L-1 visa programs, many of which are Indian IT services and software firms (table 6).

Yet despite the adverse effects of S-744 on opportunities for some Indian services firms to operate in the United States, the law's large increases in the H-1B cap and access to both H-1B visas and green cards for STEM graduates at US universities will facilitate the access of Indian nationals to the US labor market. Thus, although the bill may hurt Indian IT services and software firms and national Indian trade interests in the United States, it is good news for individual Indians looking to live and work in the United States.

Intensive users of the H-1B/L-1 visa programs will no longer be able to "outplace" their foreign workers, effectively ruling out a key aspect of the onsite services delivery model. They will often also have to pay $5,000–10,000 in extra fees for new H-1B/L-1 visa holders, which will likely be enough to eliminate most of the potential labor cost arbitrage in the onsite delivery model reliant on temporary Indian workers. And by 2017 they will be barred from having more than 50 percent of their US workforce on temporary H-1B and L-1 visas, which will further reduce the ability of Indian IT services

58. Intending immigrants (e.g., would-be green card holders) among H-1B/L-1 visa holders are excluded from these estimates.

59. This does not include nationals from Chile, Singapore, Australia, or Korea, which have special arrangements in their FTAs with the United States. The 5,000 cap includes only principal aliens, not their children or spouses, and is subject to relevant Department of Labor wage and attestation requirements.

and software firms to exploit labor arbitrage opportunities. Intensive users of the H-1B and L-1 visa programs will thus be the big losers if the relevant provisions of S-744 become law.

On the other hand, the bill may incentivize Indian IT services and software firms to rapidly increase their on-shore non-H-1B/L-1 workforce in the United States, by, for instance, acquiring US IT services and software firms with more native US workers on the payroll. This would enable Indian companies to avoid being labeled an H-1B/L-1–dependent firm. They might also be incentivized to offer more of their Indian workers US green card sponsorship to avoid the bill's new temporary worker restrictions. They would still be able to bring in new Indian workers to the US labor market, but they would lose leverage over them once they arrived: With a green card, rather than an H-1B or L-1 visa, Indian nationals working in the United States would be free to pursue alternative employment opportunities in the country. This would again reduce the opportunities for labor arbitrage open to Indian IT services and software firms operating in the United States.

Alternatively, S-744 might incentivize Indian firms to shift more of their services provisions to locations in India, relying instead of digital delivery through mode 1. Such a shift might ultimately push firms to rely more on outright software automation, too, and set back their capability to offer the most high-end value-added services in the US market. This is another development that would suit US competitors.

In sum, S-744 is likely to raise the cost to US firms of purchasing IT services and software.

Impact of US Immigration Reform Proposals on US-India FTA Negotiations

In the context of a prospective FTA negotiation, the impact of S-744 is superficially ambiguous. On the one hand, the bill might sour US-India economic relations to the point that a bilateral FTA loses political support in India. On the other hand, the bill's numerous costs and restrictions on Indian IT services and software firms would create a higher incentive for India to enter into an FTA negotiation with the United States. And many US purchasers of IT services and software facing higher post-S-744 costs will have an interest in pushing for an FTA.

A major new Indian economic policy objective would then be to reverse many of the obstacles associated with S-744 for Indian companies to reinstate (or maintain) the current (pre-S-744) situation for Indian IT services and software firms. But the prospects for an FTA negotiation to roll back many of the bill's provisions affecting Indian firms look highly problematic for several reasons.

First, S-744 makes it clear than an FTA with the United States should grant a country merely 5,000 "specialty occupation visas," a fraction of the number of H-1B and L-1 visas Indian firms have relied on in recent years. With this bill Congress clearly seeks to restrict the availability of high-skilled visas to potential US FTA counterparties, and at levels far below what would be attractive to India.

Second, it is of course possible that India might offer the United States something so economically and politically valuable in return that USTR and Congress would be willing to exempt Indian nationals and/or firms from many S-744 provisions. However, it is not apparent what such a valuable quid pro quo would consist of and whether it would be politically feasible in India.

Last, the provisions of S-744 that are so restrictive to Indian firms operating in the United States make it clear that there is no political willingness in Congress to go beyond the current temporary migration system. The political prospects of an FTA negotiation to further liberalize US-India temporary worker practices (as was done with the new E-3 visa category in the US-Australia FTA) through, for instance, the creation of bilateral "visa categories for services or knowledge workers" seem nonexistent.

A US-India FTA looks to be in danger of becoming collateral damage from the political haggling required to pass comprehensive US immigration reform. S-744 is likely to be a major plus for the US economy as a whole, but will almost certainly have a significant negative impact on US-India economic relations. And it may well make a meaningful US-India FTA, with an ambitious temporary worker chapter, politically impossible (box 1).

IV PROSPECTS FOR A US-INDIA TOTALIZATION AGREEMENT

The most important nontraditional trade issue raised by the large US-India temporary migration relationship in an FTA is the question of a bilateral *totalization agreement* (TA). A TA generally serves two purposes.

First, it eliminates dual social contributions/taxation, a situation that occurs when a worker from one country works in another country and is required to pay such taxes to both countries on the same earnings. A TA can reduce the tax burden faced by both the employer and employee working in more than one country. Dual social contributions/taxation liabilities are a problem for American multinationals, as the US Social Security program includes expatriate workers, both in the United States and at foreign affiliates, far more often than similar social safety net programs in other countries. This extraterritoriality of US Social Security includes US citizens and nonresidents working abroad for US firms, irrespective of the duration of the employee's foreign assignment and whether the employee was hired outside the United States. As most countries also impose domestic social contributions/taxation on employers and employees residing in their territory, dual taxation requirements are created.

Second, a TA protects workers from pension benefit losses incurred from having divided their careers between two countries.[60] Workers who have split their professional working life between the United States and another country may fail to fully qualify for their retirement, survivors, or disability insurance benefits from one or both countries, as they may not have worked long enough in each country to meet

60. See the SSA overview of existing US Totalization Agreements at www.ssa.gov/international/agreements_overview.html (accessed on February 19, 2015).

minimum eligibility requirements. Under a TA, such workers may qualify for American or other country benefits based on combined, or "totalized," social contributions from both countries.

Because of these issues and to protect individual Americans against dual taxation and promote international commerce, the United States has since 1977 entered into TAs with 24 other OECD countries.[61] In 2004 it also signed a TA with Mexico, but this deal has not been submitted to and voted on by Congress and hence has not come into effect.[62]

From the data reviewed in section II, it is obvious that India, with hundreds of thousands of temporary workers in the United States, has a strong interest in negotiating a TA with Washington. This is particularly so as most US old age, survivors, and disability insurance (OASDI) benefits require 10 years (40 quarters of coverage) for individuals to qualify for benefits.[63] Indians temporarily working in the United States on H-1B or L-1 visas are prevented from residing long enough to become eligible for their US social benefits. This ineligibility sets up a very uneven bilateral social security contribution relationship between the United States and India, as acknowledged by Robert Blake, then US Assistant Secretary of State for South and Central Asian Affairs, at the US-India Strategic Dialogue in June 2012.[64]

No data exist on the precise number of US nationals working in India and contributing to the Indian social security system, but Indian government sources have publicly mentioned their social security contributions to be in the range of $150 million annually.[65] In relation to the estimated taxable earnings for temporary Indian workers in the United States on H-1B/L-1 visas (table 7), they pay 6.2 percent of their wages (below the US income threshold[66]) in Social Security taxes and 1.45 percent in Medicare tax; and in 2008–11, 7.65 percent of their total estimated wages earned (table 7, row 3) amounted to roughly $3 billion in annual contributions to US social insurance funds—a ratio of about $1 to $20, compared to similar payments by US workers in India.

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61. The countries are (in chronological order of the TA coming into force) Italy, Germany, Switzerland, Belgium, Norway, Canada, the United Kingdom, Sweden, Spain, France, Portugal, the Netherlands, Austria, Finland, Ireland, Luxembourg, Greece, South Korea, Chile, Australia, Japan, Denmark, the Czech Republic, and Poland. See SSA website for detailed provisions at www.ssa.gov/international/status.html (accessed on February 19, 2015).

62. See details at www.ssa.gov/international/Agreement_Texts/mexico.html (accessed on February 19, 2015).

63. Old age Social Security benefits are vested only after 40 quarters of contributions (QCs), while certain survivor benefits are payable upon the insured worker's death with less than 40 QCs. To be eligible for disability benefits, contribution periods are lower (though medical requirements must also be met). Workers must be fully insured and must meet a test of substantial recent covered work—that is, they must have credit for work in covered employment for at least 20 of the 40 calendar quarters ending with the quarter the disability began. See the SSA's 1999 report on Social Insurance Programs for details; available at www.ssa.gov/policy/docs/progdesc/sspus/oasdi.pdf (accessed February 3, 2015).

64. See remarks by Robert Blake at the press conference on June 20, 2012, at www.state.gov/p/sca/rls/rmks/2012/193054.htm (accessed on February 19, 2015).

65. See the *Economic Times*, June 20, 2011, "Indians in US may get to bring back social security contribution."

66. In 2013 the Social Security threshold was $113,700, meaning that the vast majority of temporary Indian workers in the United States (with median wages of around $72,000 for H-1B workers on continuing employment visas) pay Social Security taxes on their entire wage income.

A TA has been on the US-India policy agenda for almost a decade, but very limited progress has been made to date because of the unwillingness of the US government to seriously discuss it. During President Obama's recent visit to India, however, the issue was revisited and a new dialogue may be in the pipeline.[67]

In economic terms, the reason for the uncommitted US stance is easy to understand from the vast discrepancies between current contribution levels by temporary Indian workers in the United States and vice versa. Even allowing for some flexibility in the implementation of a US-India TA, an agreement would almost certainly impose sizable if indirect economic losses on the United States.

US TAs do not allow individual workers to choose the system to which they would like to contribute. Rather, they exempt workers from coverage under the system of one country (e.g., in the case of Indian temporary workers, the US Social Security system) according to a prenegotiated set of circumstances. US losses would be incurred from the negotiated loss of contributions of Indian temporary workers to US social insurance funds during their time in the United States or, less likely, from negotiated Social Security benefit eligibility for temporary Indian workers.

Almost all US TAs are with OECD countries[68] with long-established and comprehensive social safety nets. The US government has thus far refused to acknowledge that India has a comprehensive social security system, making it conveniently legally impossible to negotiate a TA with the country. It is beyond the scope of this paper to contemplate what a "comprehensive social security system" in India would have to include to overcome this obstacle to a bilateral TA. Such an assessment is ultimately of a political nature and thus subject to the broader quid pro quo of a potential FTA negotiation process. However, based on the US TAs with other advanced economies, it is clear that the scope of a reciprocal social security system must be comprehensive, generous, and generally comparable to the Social Security system for the United States to realistically contemplate a TA. It seems improbable that India can implement such a social insurance system in the foreseeable future. Moreover, given the sizable economic issues at stake, it is obvious, as with S-744, that the United States would have to receive a valuable Indian economic and political concession in return to be incentivized to enter into a TA negotiation process.

Other complicating political issues cloud the prospects for a US-India TA:

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67. Press Trust of India, "India, US to restart talks on social security pact: Modi—PM says the two countries have also established effective bilateral mechanisms to identify opportunities and help their businesses trade," January 25, 2015; at www.business-standard.com/article/pti-stories/india-us-to-restart-talks-on-social-security-pact-modi-115012500493_1.html (accessed on February 7, 2015).

68. Chile's totalization agreement with the United States came into force in 2001, almost a decade before the country joined the OECD. While Chile was thus not a member of the OECD at the time, its social security system has been a source of widespread international focus since the reforms implemented by the Chilean government in the 1980s. The existence and operation of the Chilean social security system was well known internationally at the time of the US-Chile TA in 2001, despite the country's lack of OECD membership.

1. As mentioned, US TAs are with advanced economies that have relatively few temporary workers in the United States, and relatively more US expatriates work in these countries. Because mandatory social safety nets in other advanced economies are more generous than in the United States, America probably economically benefits from its TAs with these partner countries.
2. Given the negotiated exemption, in existing US TAs, of temporary workers from one country's social security contributions, a US-India TA would mean that many Indian temporary workers would not have to pay these taxes on their wages while in the United States. But a FICA tax exemption for Indian H-1B/L-1 workers would materially increase their competitiveness versus fully taxable US nationals in the US labor market. Recalling the provisions of S-744 discussed above, substantial US congressional opposition to such a TA with India seems certain.
3. All US TAs have to be approved by Congress, which since 2004 has refused to consider, much less ratify, the negotiated US-Mexican TA.[69] Given concerns about the long-term financial sustainability of OASDI funds, strong congressional opposition to any TA that would impose additional net costs on the funds must be expected.

In sum, the merits of a US-India TA, given the scope of the bilateral temporary worker relationship, are obvious on standard economic efficiency and welfare grounds—and indeed individual fairness. A large number of Indian temporary workers are compelled to contribute to the US Social Security system while being legally barred from collecting these benefits. S-744's provisions making it easier for Indians to get a green card may allay this injustice by enabling more Indians to work the required 40 quarters in the United States.

Overall, the uneven starting point for the United States and India and the economic benefits of the status quo for the United States make for a very tough negotiation. The domestic political and economic costs to India of a quid pro quo to induce the US government to negotiate a totalization agreement—and get Congress to vote for it—will be very high. Perhaps prohibitively so.

V CONCLUDING REMARKS

This paper has explored US-India labor mobility issues and their role in a future FTA negotiation. The US-India migration relationship is easily the most important regulated labor mobility association for both countries. Lack of official Indian migration data prevents the full estimation of the bilateral relationship, but US immigration data show that India is by far the most important partner country for both permanent and temporary US employment-based migration: Indian nationals account for about half of all US employment-based permanent migration (e.g., green cards) in recent years. They also make up

69. In the meantime, however, Congress has approved TAs with Japan (effective 2004), Denmark (effective 2008), Poland (effective 2009), and the Slovak Republic (effective 2014). Data from the SSA International Programs website, Status of Totalization Agreements (www.ssa.gov/international/status.html#D [accessed on February 7, 2015]).

half or more of the entrants on the two main high-skilled temporary US visa categories, H-1B and L-1, although the most recent data show a decline in the Indian share of L-1 visa recipients.

There is a duality of use in the H-1B visa categories. On the one hand, a relatively small number of US and Indian IT services, software, technology, and consulting firms account for a very high number of firm-level visa applications. On the other hand, the majority of the total H-1B visas are granted to a large number of US-based entities that apply for only a small number of visas. The H-1B (and by inference the L-1) visa program consequently plays a key role in several sectors in which Indian multinational firms are globally competitive, but predominantly serves a large number of US-based entities with the ability to hire foreign high-skilled workers.

The (one-sided) economic value of temporary worker flows from India to the United States, based on comprehensive US H-1B and L-1 visa issuance data to Indian nationals, is estimated to rise to $45–50 billion annually in 2008–12, thus exceeding the total recorded value (by US statistical authorities) of Indian exports of goods and services to the United States in recent years. The estimated economic value is also more than five times the combined recorded bilateral balance of payment flows in the compensation of employees and worker remittances categories.

This paper presents an evaluation of the effects of the recently passed Senate bill (S-744) on comprehensive US immigration reform for the US-India labor migration relationship. While the bill is generally of economic benefit to the United States, its provisions on temporary migration are likely to be highly detrimental to the US-India temporary labor migration relationship, restricting both the ability of Indian IT services and software firms to continue their onsite services delivery and the scope of economic transactions with the United States. Given the fact that a bipartisan majority wrote S-744, a very high political price seems certain for India to simply return to the pre-S-744 scope. The Senate bill will thus probably lower the attractiveness of an FTA for India, reducing the likelihood of an FTA negotiation to liberalize US-India temporary worker rules in the foreseeable future.

The prospects of a US-India totalization agreement for social contributions/taxation as part of an FTA are evaluated. A TA is likely to result in indirect economic losses to the United States from the loss of payroll taxes paid but never claimed by temporary Indian workers in the United States. The substantial political and economic quid pro quo that India would have to commit to in order to incentivize the United States to negotiate a TA would be daunting and seems likely to diminish the attractiveness of an FTA to India.

The US-India labor migration relationship is so significant that it will have to be meaningfully addressed in any economically relevant FTA negotiation. Yet, as shown in this paper, the unevenness of the current US-India temporary worker situation and the political controversies surrounding immigration-related issues may well prohibitively raise the political costs for India of meaningful inclusion of these issues.

Table 1 Persons obtaining legal permanent resident status, by type and class of admission, FY2007–FY2012

Type and class of admission	FY2012 Total	FY2012 Adjustments of status	FY2012 New arrivals	FY2011 Total	FY2011 Adjustments of status	FY2011 New arrivals
Total, all immigrants	**1,031,631**	**547,559**	**484,072**	**1,062,040**	**580,092**	**481,948**
Family-sponsored preferences	202,019	18,560	183,459	234,931	28,346	206,585
Immediate relatives of US citizens	478,780	239,986	238,794	453,158	243,174	209,984
Diversity	40,320	1,356	38,964	50,103	1,617	48,486
Refugees and asylees	150,614	150,614	—	168,460	168,460	—
Other	15,900	11,027	4,873	16,049	14,111	1,938
Total nonemployment based	887,633	421,543	466,090	922,701	455,708	466,993
Total nonemployment based, percent share of total	86%	77%	96%	87%	79%	97%
Total nonemployment based, breakdown (percent)		47%	53%		49%	51%
Total employment-based preferences	143,998	126,016	17,982	139,339	124,384	14,955
		88%	12%		89%	11%
First: Priority workers	39,316	37,799	1,517	25,251	23,605	1,646
		96%	4%		93%	7%
Second: Professionals with advanced degrees or aliens of exceptional ability	50,959	49,414	1,545	66,831	65,140	1,691
		97%	3%		97%	3%
Third: Skilled workers, professionals, and needed unskilled workers	39,229	31,208	8,021	37,216	29,757	7,459
		80%	20%		80%	20%
Fourth: Certain special immigrants	7,866	6,644	1,222	6,701	5,306	1,395
		84%	16%		79%	21%
Fifth: Employment creation (investors)	6,628	951	5,677	3,340	576	2,764
		14%	86%		17%	83%

Type and class of admission	FY2010 Total	FY2010 Adjustments of status	FY2010 New arrivals	FY2009 Total	FY2009 Adjustments of status	FY2009 New Arrivals
Total, all immigrants	**1,042,625**	**566,576**	**476,049**	**1,130,818**	**667,776**	**463,042**
Family-sponsored preferences	214,589	26,279	188,310	211,859	39,787	172,072
Immediate relatives of US citizens	476,414	252,842	223,572	535,554	309,073	226,481
Diversity	49,763	1,571	48,192	47,879	1,277	46,602
Refugees and asylees	136,291	136,291	—	177,368	177,368	—
Other	17,225	13,583	3,642	14,124	13,136	988
Total nonemployment based	894,282	430,566	463,716	986,784	540,641	446,143
Total nonemployment based, percent share of total	86%	76%	97%	87%	81%	96%
Total nonemployment based, breakdown (percent)		48%	52%		55%	45%
Total employment-based preferences	148,343	136,010	12,333	144,034	127,135	16,899
		92%	8%		88%	12%
First: Priority workers	41,055	39,070	1,985	40,924	39,420	1,504
		95%	5%		96%	4%
Second: Professionals with advanced degrees or aliens of exceptional ability	53,946	52,388	1,558	45,552	44,336	1,216
		97%	3%		97%	3%
Third: Skilled workers, professionals, and needed unskilled workers	39,762	34,433	5,329	40,398	33,525	6,873
		87%	13%		83%	17%
Fourth: Certain special immigrants	11,100	9,384	1,716	13,472	8,869	4,603
		85%	15%		66%	34%
Fifth: Employment creation (investors)	2,480	735	1,745	3,688	985	2,703
		30%	70%		27%	73%

(continued)

Table 1 Persons obtaining legal permanent resident status, by type and class of admission, FY2007–FY2012 *(continued)*

Type and class of admission	FY2008 Total	FY2008 Adjustments of status	FY2008 New arrivals	FY2007 Total	FY2007 Adjustments of status	FY2007 New arrivals
Total, all immigrants	**1,107,126**	**640,568**	**466,558**	**1,052,415**	**621,047**	**431,368**
Family-sponsored preferences	227,761	56,899	170,862	194,900	52,059	142,841
Immediate relatives of US citizens	488,483	251,090	237,393	494,920	277,188	217,732
Diversity	41,761	1,440	40,321	42,127	1,360	40,767
Refugees and asylees	166,392	166,392	—	136,125	136,125	—
Other	16,218	15,205	1,013	22,167	21,216	951
Total nonemployment based	940,615	491,026	449,589	890,239	487,948	402,291
Total nonemployment based, percent share of total	85%	77%	96%	85%	79%	93%
Total nonemployment based, breakdown (percent)		52%	48%		55%	45%
Total employment-based preferences	166,511	149,542	16,969	162,176	133,099	29,077
		90%	10%		82%	18%
First: Priority workers	36,678	35,082	1,596	26,697	23,802	2,895
		96%	4%		89%	11%
Second: Professionals with advanced degrees or aliens of exceptional ability	70,046	68,832	1,214	44,162	42,991	1,171
		98%	2%		97%	3%
Third: Skilled workers, professionals, and needed unskilled workers	48,903	38,981	9,922	85,030	62,642	22,388
		80%	20%		74%	26%
Fourth: Certain special immigrants	9,524	6,316	3,208	5,481	3,349	2,132
		66%	34%		61%	39%
Fifth: Employment creation (investors)	1,360	331	1,029	806	315	491
		24%	76%		39%	61%

Source: Department of Homeland Security, *Yearbook of Immigration Statistics 2007-2012*.

Table 2 Persons obtaining legal permanent resident status in first, second and third employment-based preferences, by entry group and detailed category, FY2007–FY2012

Type and class of admission	FY2012 Total	FY2012 Adjustments of status	FY2012 New arrivals	FY2011 Total	FY2011 Adjustments of status	FY2011 New arrivals
First, second, and third employment-based preferences	129,504	118,421	11,083	129,298	118,502	10,796
Total priority workers	58,694	55,328	3,366	59,808	56,903	2,905
Total dependents (spouses and children)	70,802	63,088	7,714	69,087	61,200	7,887
Total priority workers, share of total	45%	47%	30%	46%	48%	27%
Total dependents (spouses and children), share of total	55%	53%	70%	53%	52%	73%
First preference: Priority workers	39,316	37,799	1,517	25,251	23,605	1,646
First preference workers	16,286	15,770	516	10,665	10,097	568
Total dependents (spouses and children)	23,030	22,029	1,001	14,586	13,508	1,078
First preference workers, share of total	41%	42%	34%	42%	43%	35%
Total dependents (spouses and children), share of total	59%	58%	66%	58%	57%	65%
Second preference: Professionals with advanced degrees or aliens of exceptional ability	50,959	49,414	1,545	66,831	65,140	1,691
Second preference workers	24,719	24,261	458	33,577	33,055	522
Total dependents (spouses and children)	26,240	25,153	1,087	33,254	32,085	1,169
Second preference workers, share of total	49%	49%	30%	50%	51%	31%
Total dependents (spouses and children), share of total	51%	51%	70%	50%	49%	69%
Third preference: Skilled workers, professionals, and needed unskilled workers	39,229	31,208	8,021	37,216	29,757	7,459
Third preference workers	17,689	15,297	2,392	15,566	13,751	1,815
Total dependents (spouses and children)	21,532	15,906	5,626	21,247	15,607	5,640
Third preference workers, share of total	45%	49%	30%	42%	46%	24%
Total dependents (spouses and children), share of total	55%	51%	70%	57%	52%	76%

	FY2010 Total	FY2010 Adjustments of status	FY2010 New arrivals	FY2009 Total	FY2009 Adjustments of status	FY2009 New arrivals
First, second, and third employment-based preferences	134,763	125,891	8,872	126,874	117,281	9,593
Total priority workers	59,962	57,805	2,157	57,263	54,721	2,542
Total dependents (spouses and children)	74,714	68,081	6,633	69,603	62,556	7,047
Total priority workers, share of total	44%	46%	24%	45%	47%	26%
Total dependents (spouses and children), share of total	55%	54%	75%	55%	53%	73%
First preference: Priority workers	41,055	39,070	1,985	40,924	39,420	1,504
First preference workers	17,117	16,369	748	16,806	16,264	542
Total dependents (spouses and children)	23,938	22,701	1,237	24,118	23,156	962
First preference workers, share of total	42%	42%	38%	41%	41%	36%
Total dependents (spouses and children), share of total	58%	58%	62%	59%	59%	64%

(continued)

Table 2 Persons obtaining legal permanent resident status in first, second and third employment-based preferences, by entry group and detailed category, FY2007–FY2012 *(continued)*

Type and class of admission	FY2010 Total	FY2010 Adjustments of status	FY2010 New arrivals	FY2009 Total	FY2009 Adjustments of status	FY2009 New arrivals
Second preference: Professionals with advanced degrees or aliens of exceptional ability	53,946	52,388	1,558	45,552	44,336	1,216
Second preference workers	26,131	25,656	475	22,098	21,660	438
Total dependents (spouses and children)	27,815	26,732	1,083	23,454	22,676	778
Second preference workers, share of total	48%	49%	30%	49%	49%	36%
Total dependents (spouses and children), share of total	52%	51%	70%	51%	51%	64%
Third preference: Skilled workers, professionals, and needed unskilled workers	39,762	34,433	5,329	40,398	33,525	6,873
Third preference workers	16,714	15,780	934	18,359	16,797	1,562
Total dependents (spouses and children)	22,961	18,648	4,313	22,031	16,724	5,307
Third preference workers, share of total	42%	46%	18%	45%	50%	23%
Total dependents (spouses and children), share of total	58%	54%	81%	55%	50%	77%

	FY2008 Total	FY2008 Adjustments of status	FY2008 New arrivals	FY2007 Total	FY2007 Adjustments of status	FY2007 New arrivals
First, second, and third employment-based preferences	155,627	142,895	12,732	155,889	129,435	26,454
Total priority workers	70,315	67,675	2,640	69,809	63,012	6,797
Total dependents (spouses and children)	85,308	75,216	10,092	85,864	66,207	19,657
Total priority workers, share of total	45%	47%	21%	45%	49%	26%
Total dependents (spouses and children), share of total	55%	53%	79%	55%	51%	74%
First preference: Priority workers	36,678	35,082	1,596	26,697	23,802	2,895
First preference workers	15,184	14,638	546	10,967	9,958	1,009
Total dependents (spouses and children)	21,494	20,444	1,050	15,730	13,844	1,886
First preference workers, share of total	41%	42%	34%	41%	42%	35%
Total dependents (spouses and children), share of total	59%	58%	66%	59%	58%	65%
Second preference: Professionals with advanced degrees or aliens of exceptional ability	70,046	68,832	1,214	44,162	42,991	1,171
Second preference workers	34,535	34,054	481	22,303	21,843	460
Total dependents (spouses and children)	35,511	34,778	733	21,859	21,148	711
Second preference workers, share of total	49%	49%	40%	51%	51%	39%
Total dependents (spouses and children), share of total	51%	51%	60%	49%	49%	61%
Third preference: Skilled workers, professionals, and needed unskilled workers	48,903	38,981	9,922	85,030	62,642	22,388
Third preference workers	20,596	18,983	1,613	36,539	31,211	5,328
Total dependents (spouses and children)	28,303	19,994	8,309	48,275	31,215	17,060
Third preference workers, share of total	42%	49%	16%	43%	50%	24%
Total dependents (spouses and children), share of total	58%	51%	84%	57%	50%	76%

Source: Department of Homeland Security, *Yearbook of Immigration Statistics 2007-2012*.

Table 3 Persons born in India obtaining legal permanent resident status, by broad class of admission, FY2007–FY2012

Fiscal year	Total	Family-sponsored preferences	Immediate relatives of US citizens	Diversity	Refugees and asylees	Other	Employment-based preferences	Employment-based preferences, share of total (percent)
2007	65,353	15,551	18,205	57	2,680	157	28,703	44%
2008	63,352	15,042	19,116	65	3,423	129	25,577	40%
2009	57,304	12,911	21,532	63	2,228	306	20,264	35%
2010	69,162	14,636	21,831	58	1,324	195	31,118	45%
2011	69,013	13,527	20,472	51	1,217	159	33,587	49%
2012	66,434	11,433	20,497	27	895	174	33,408	50%

Source: Department of Homeland Security, *Yearbook of Immigration Statistics 2007-2012*.

Table 4 Select characteristics of persons obtaining legal permanent resident status born in India, FY2007–FY2011

	FY2011			FY2010		
Characteristic	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**
Total	69,013	34,308	34,703	69,162	34,010	35,152
New arrivals	25,440	11,677	13,762	27,830	12,978	14,852
Adjustments of status	43,573	22,631	20,941	41,332	21,032	20,300
Age						
Under 18 years	7,670	4,103	3,567	8,327	4,518	3,809
18 to 24 years	4,812	2,019	2,793	5,224	2,141	3,083
25 to 34 years	24,864	10,987	13,876	23,574	10,289	13,285
35 to 44 years	15,824	9,765	6,059	15,028	8,918	6,110
45 to 54 years	5,900	2,909	2,991	6,559	3,257	3,302
55 to 64 years	5,504	2,382	3,121	5,963	2,665	3,298
65 years and over	4,438	2,142	2,296	4,487	2,222	2,265
Unknown	1	1	—	—	—	—
Marital status						
Single	13,934	8,418	5,516	14,215	8,443	5,772
Married	51,944	25,231	26,711	51,783	24,925	26,858
Other	2,931	551	2,380	2,990	548	2,442
Unknown	204	108	96	174	94	80
Employment occupation						
Total in employment	23,976	18,684	5,291	23,326	16,012	5,118
Management, professional, and related occupations	19,026	14,404	4,622	17,545	13,176	4,369
Service occupations	1,069	777	292	1,200	873	327
Sales and office occupations	1,656	1,369	287	1,950	1,589	361
Farming, fishing, and forestry occupations	1,786	1,757	28	2,142	D	D
Construction, extraction, maintenance and repair occupations	37	33	4	54	D	D
Production, transportation, and material moving occupations	397	339	58	432	371	61
Military	5	5	—	3	3	—
No occupation/not working outside home, total	30,104	8,657	21,447	31,721	9,443	22,278
Homemakers	13,802	167	13,635	14,415	144	14,271
Students or children	11,045	5,757	5,288	11,634	6,141	5,493
Retirees	946	588	358	1,004	610	394
Unemployed	4,311	2,145	2,166	4,668	2,548	2,120
Unknown occupation	14,933	6,967	7,965	14,115	6,390	7,725
Broad class of admission						
Family-sponsored preferences	13,527	7,033	6,494	14,636	7,669	6,967
Immediate relatives of US citizens	20,472	8,973	11,498	21,831	9,496	12,335
Diversity	51	25	26	58	25	33
Refugees and asylees	1,217	645	572	1,324	720	604
Other	159	77	82	195	78	117
Employment-based preferences	33,587	17,555	16,031	31,118	16,022	15,096
Employment-based preferences, percent share of total	49%	51%	46%	45%	47%	43%

(continued)

Table 4 Select characteristics of persons obtaining legal permanent resident status born in India, FY2007–FY2011 *(continued)*

	FY2009			FY2008		
Characteristic	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**
Total	57,304	28,185	29,119	63,352	31,861	31,490
New arrivals	25,324	11,593	13,731	27,385	12,864	14,520
Adjustments of status	31,980	16,592	15,388	35,967	18,997	16,970
Age						
Under 18 years	7,258	3,941	3,317	8,613	4,610	4,003
18 to 24 years	5,011	1,912	3,099	5,061	2,116	2,945
25 to 34 years	18,331	8,546	9,785	20,067	9,499	10,568
35 to 44 years	11,100	6,394	4,706	12,873	7,480	5,393
45 to 54 years	5,991	2,939	3,052	6,921	3,463	3,457
55 to 64 years	5,311	2,377	2,934	5,641	2,600	3,041
65 years and over	4,301	2,075	2,226	4,176	2,093	2,083
Unknown	1	1	—	—	—	—
Marital status						
Single	11,937	6,971	4,966	14,139	8,150	5,989
Married	42,545	20,666	21,879	46,442	23,116	23,325
Other	2,691	480	2,211	2,595	501	2,094
Unknown	131	68	63	176	94	82
Employment occupation						
Total in employment	18,463	14,405	4,061	22,111	17,419	4,748
Management, professional, and related occupations	12,815	9,577	3,238	15,682	11,936	3,746
Service occupations	1,132	812	320	1,374	989	385
Sales and office occupations	1,980	1,584	396	2,231	1,753	478
Farming, fishing, and forestry occupations	1,896	1,872	24	1,932	1,911	21
Construction, extraction, maintenance and repair occupations	D	D	3	D	56	D
Production, transportation, and material moving occupations	640	560	80	892	774	118
Military	D	D	—	D	—	D
No occupation/not working outside home, total	27,555	8,277	19,278	30,144	9,132	21,011
Homemakers	12,558	111	12,447	13,697	138	13,558
Students or children	10,060	5,298	4,762	11,789	6,161	5,628
Retirees	821	538	283	764	498	266
Unemployed	4,116	2,330	1,786	3,894	2,335	1,559
Unknown occupation	11,215	5,435	5,780	11,038	5,310	5,728
Broad class of admission						
Family-sponsored preferences	12,911	6,768	6,143	15,042	7,753	7,288
Immediate relatives of US citizens	21,532	9,377	12,155	19,116	8,590	10,526
Diversity	63	27	36	65	26	39
Refugees and asylees	2,228	1,311	917	3,423	1,958	1,465
Other	306	165	141	129	75	54
Employment-based preferences	20,264	10,537	9,727	25,577	13,459	12,118
Employment-based preferences, percent share of total	35%	37%	33%	40%	42%	38%

(continued)

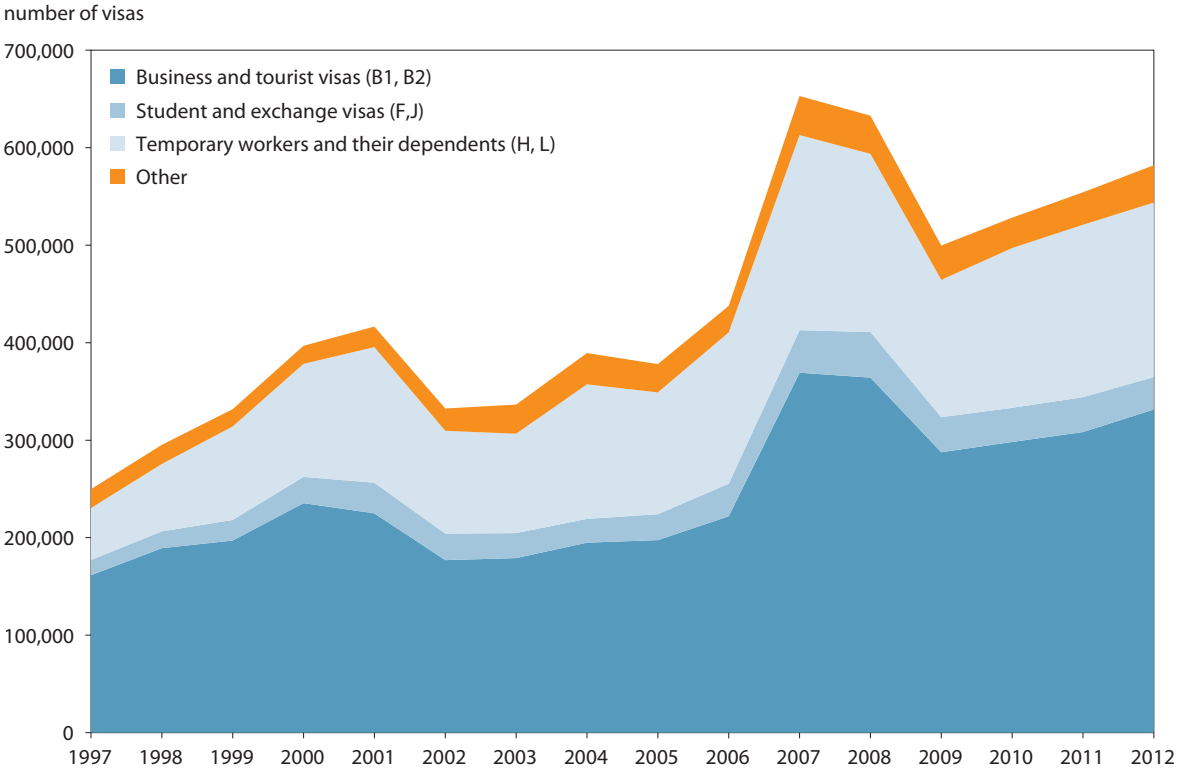
Table 4 Select characteristics of persons obtaining legal permanent resident status born in India, FY2007–FY2011 *(continued)*

	FY2007		
Characteristic	**Total**	**Male**	**Female**
Total	65,353	32,159	33,194
New arrivals	30,815	14,378	16,437
Adjustments of status	34,538	17,781	16,757
Age			
Under 18 years	9,755	5,183	4,572
18 to 24 years	5,732	2,357	3,375
25 to 34 years	20,170	9,198	10,972
35 to 44 years	12,771	7,225	5,546
45 to 54 years	7,374	3,710	3,664
55 to 64 years	5,523	2,558	2,965
65 years and over	4,028	1,928	2,100
Unknown	—	—	—
Marital status			
Single	16,286	9,334	6,952
Married	46,189	22,254	23,935
Other	2,734	493	2,241
Unknown	144	78	66
Employment occupation			
Total in employment	21,967	16,963	5,004
Management, professional, and related occupations	15,103	11,100	4,003
Service occupations	1,620	1,212	408
Sales and office occupations	2,391	1,928	463
Farming, fishing, and forestry occupations	2,129	2,103	26
Construction, extraction, maintenance and repair occupations	64	56	8
Production, transportation, and material moving occupations	660	564	96
Military	—	—	—
No occupation/not working outside home, total	32,523	9,908	22,615
Homemakers	14,705	152	14,553
Students or children	13,288	6,932	6,356
Retirees	685	442	243
Unemployed	3,845	2,382	1,463
Unknown occupation	10,863	5,288	5,575
Broad class of admission			
Family-sponsored preferences	15,551	8,029	7,522
Immediate relatives of US citizens	18,205	7,668	10,537
Diversity	57	27	30
Refugees and asylees	2,680	1,362	1,318
Other	157	95	62
Employment-based preferences	28,703	14,978	13,725
Employment-based preferences, percent share of total	44%	47%	41%

"D" = data withheld to limit disclosure. "—" = zero. Sum of genders may not equal total due to exclusion of "unknown category" from table.

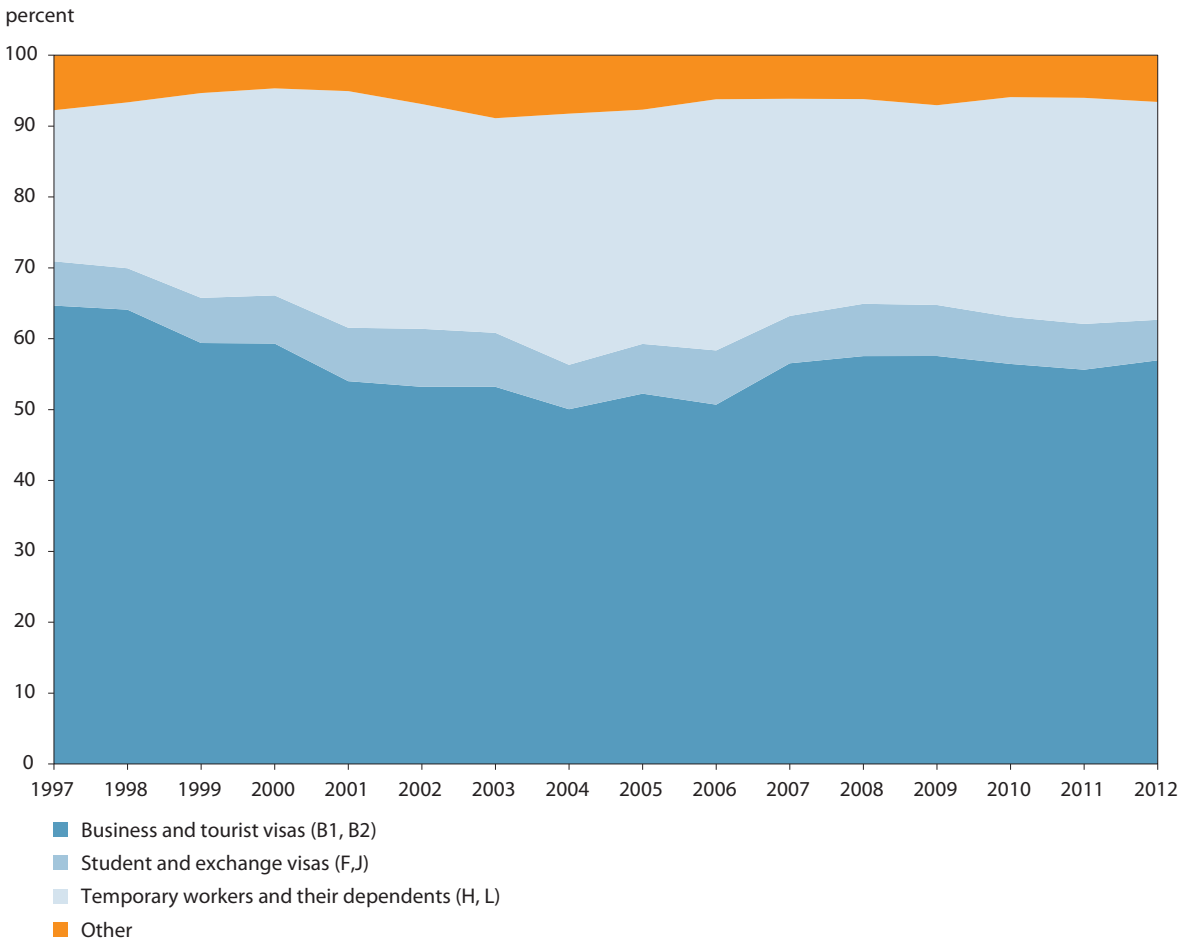
Source: Department of Homeland Security, www.dhs.gov/profiles-legal-permanent-residents.

Figure 1a US temporary visa issuance to Indian nationals, FY1997–FY2012



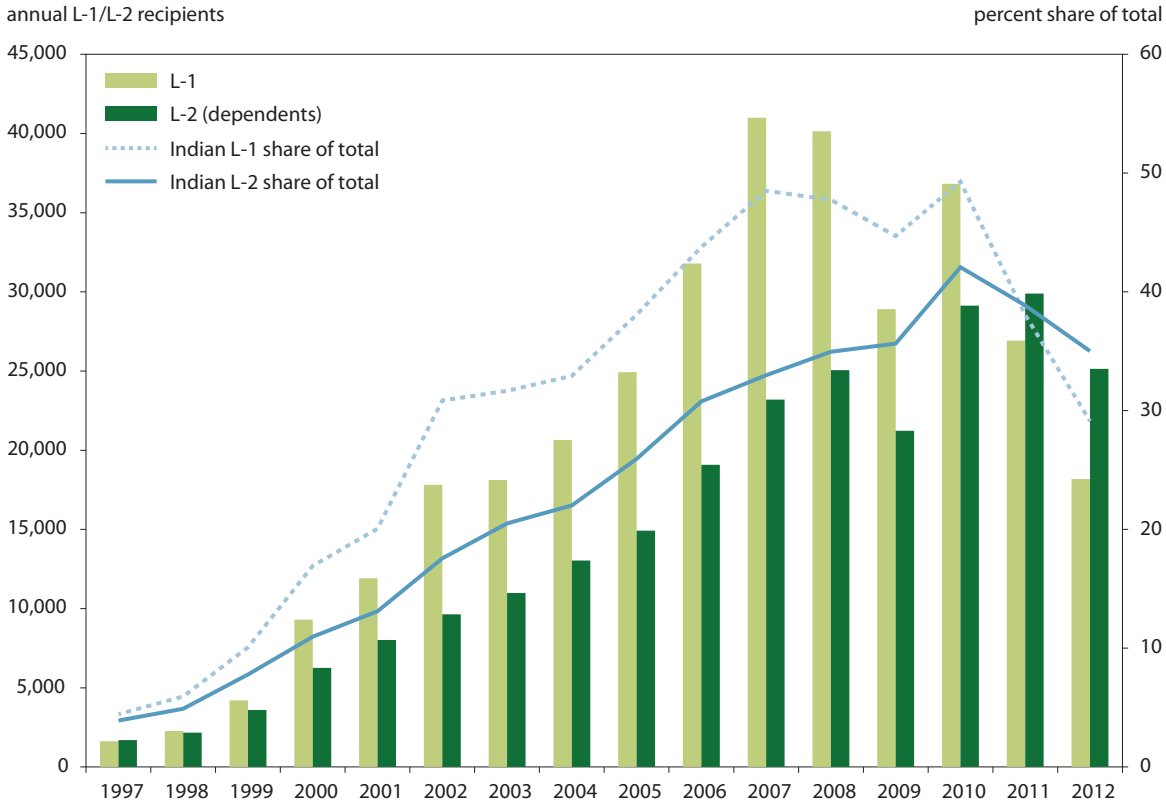
Source: US Department of State, *Report of the Visa Office*.

Figure 1b US temporary visa issuance to Indian nationals, share of total, FY1997–FY2012



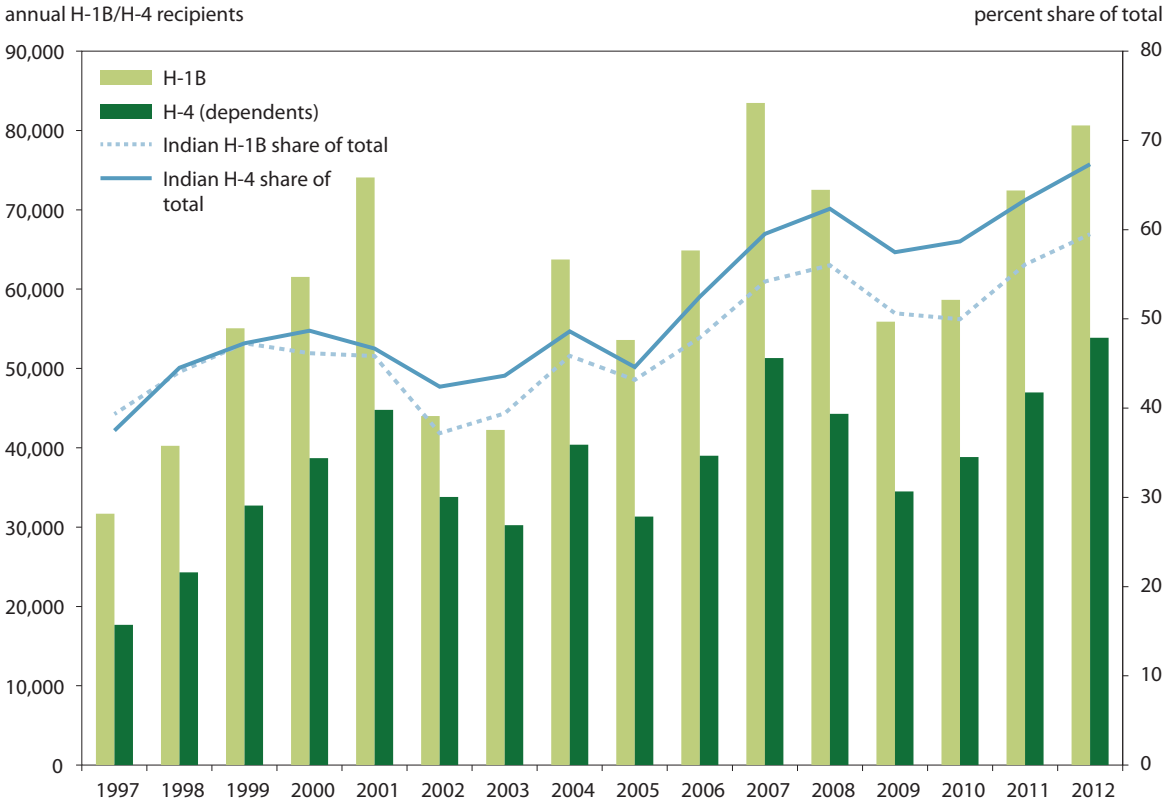
Source: US Department of State, *Report of the Visa Office*.

Figure 2 L-1/L-2 visas issued to Indian nationals, FY1997–FY2012



Source: Department of Homeland Security, *Yearbook of Immigration Statistics, 2007-2012.*

Figure 3 H-1B/H-4 visas issued to Indian nationals, FY1997–FY2012



Source: Department of Homeland Security, *Yearbook of Immigration Statistics, 2007-2012.*

Table 5 Successful petitions for H-1B visas granted by USCIS, FY1999–FY2012

Line	Category	1999[a]	2000	2001	2002	2003	2004	2005
1	**Total number of H-1B petitions approved**	n.a.	257,640	331,914	197,537	217,340	287,418	267,131
2	**- Of which were for "continuing employment"**	n.a.	120,853	130,127	93,953	112,026	156,921	150,204
		n.a.	47%	39%	48%	52%	55%	56%
3	**- Of which were for "initial employment"**	134,400	136,787	201,787	103,584	105,314	130,497	116,927
		n.a.	53%	61%	52%	48%	45%	44%
4	Number/percent share of total "initial employment" aliens outside the United States	81,100	75,785	115,759	36,494	41,895	60,271	54,635
		60%	55%	57%	35%	40%	46%	47%
5	Number/percent share of total "initial employment" aliens inside the United States	53,300	61,002	85,320	67,090	63,419	70,226	62,292
		40%	45%	42%	65%	60%	54%	53%
6	Number of Indian nationals approved for "continuing employment"	n.a.	63,940	70,893	43,914	49,897	63,505	61,171
	Indian share of total (percent)	n.a.	53%	54%	47%	45%	40%	41%
7	Number of Chinese nationals approved for "continuing employment"	n.a.	10,237	10,483	7,009	8,919	14,893	13,918
	Chinese share of total (percent)	n.a.	8%	8%	7%	8%	9%	9%
8	Number of Indian nationals approved for "initial employment"	63,900	60,757	90,668	21,066	29,269	60,062	57,349
	Indian share of total (percent)	48%	44%	45%	20%	28%	46%	49%
9	Number of Chinese nationals approved for "initial employment"	12,400	12,333	16,847	11,832	11,144	11,365	10,643
	Chinese share of total (percent)	9%	9%	8%	11%	11%	9%	9%
10	Annual congressional H-1B cap	115,000	115,000	195,000	195,000	195,000	65,000	85,000[b]
11	Date on which H-1B cap was reached/number of H-1B filings on first day	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Line	Category	2006	2007	2008	2009	2010	2011	2012
1	**Total number of H-1B petitions approved**	270,981	281,444	276,252	214,271	192,990	269,653	262,569
2	**- Of which were for "continuing employment"**	161,367	161,413	166,917	127,971	116,363	163,208	125,679
		60%	57%	60%	60%	60%	61%	48%
3	**- Of which were for "initial employment"**	109,614	120,031	109,335	86,300	76,627	106,445	136,890
		40%	43%	40%	40%	40%	39%	52%
4	Number/percent share of total "initial employment" aliens outside the United States	57,264	60,785	55,335	33,283	34,848	48,665	74,997
		52%	51%	51%	39%	45%	46%	55%
5	Number/percent share of total "initial employment" aliens inside the United States	52,350	59,246	53,442	53,017	41,779	57,780	61,893
		48%	49%	49%	61%	55%	54%	45%
6	Number of Indian nationals approved for "continuing employment"	75,717	81,055	87,890	69,098	68,294	100,345	81,890
	Indian share of total (percent)	47%	50%	53%	54%	59%	61%	65%
7	Number of Chinese nationals approved for "continuing employment"	13,779	13,607	15,017	11,866	9,621	13,622	8,441
	Chinese share of total (percent)	9%	8%	9%	9%	8%	8%	7%

(continued)

Table 5 Successful petitions for H-1B visas granted by USCIS, FY1999–FY2012 *(continued)*

Line	Category	2006	2007	2008	2009	2010	2011	2012
8	Number of Indian nationals approved for "initial employment"	59,612	66,504	61,739	33,961	34,617	55,972	86,477
	Indian share of total (percent)	54%	55%	56%	39%	45%	53%	63%
9	Number of Chinese nationals approved for "initial employment"	9,859	10,890	9,157	8,989	7,480	10,165	11,409
	Chinese share of total (percent)	9%	9%	8%	10%	10%	10%	8%
10	**Annual congressional H-1B cap**	85,000	85,000	85,000	85,000	85,000	85,000	85,000
11	Date on which H-1B cap was reached/number of H-1B filings on first day	August 12, 2005/ January 18, 2006	June 1, 2006/n.a.	123,480	163,000	December 21, 2009/ April 1, 2009	January 27, 2011/ December 22, 2010	November 22, 2011/ October 19, 2011

n.a. = not available

a. Period from May 1998 to July 1999.
b. Includes in 2005 and subsequent years 20,000 H-1B visas for foreign graduates of U.S. universities. Shaded parts denominate H-1B petition categories wholly excluded from the H-1B annual Congressional cap.

Source: Kirkegaard (2005); US Citizenship and Immigration Services.

Table 6 H-1B petitions approved by USCIS in FY2009 for initial employment, top-25 firms

Employer	Petitions	Share of top-25 (percent)	Share of total (percent)
Wipro Ltd.	1,964	17	2.3
Microsoft	1,318	12	1.5
Intel	723	6	0.8
IBM India	695	6	0.8
Patni Americas	609	5	0.7
Larsen and Toubro InfoTec Ltd.	602	5	0.7
Ernsr & Young LLP	481	4	0.6
Infosys technologies Ltd.	440	4	0.5
UST Global Inc.	344	3	0.4
Deloitte Consulting LLP	328	3	0.4
Qualcomm Inc.	320	3	0.4
Cisco Systems Inc.	308	3	0.4
Accenture Technology Solitions	287	3	0.3
KPMG LLP	287	3	0.3
Oracle Inc.	272	2	0.3
Polaris Software Lab India Ltd.	254	2	0.3
Rite Aid Corp.	240	2	0.3
Goldman Sachs	236	2	0.3
Deloitte and Touche Corp.	235	2	0.3
Cognizant Tech Solutions US Corp.	233	2	0.3
Mphasis Corp.	229	2	0.3
Satyam Computer Services Ltd.	219	2	0.3
Bloomberg	217	2	0.3
Motorola Inc.	213	2	0.3
Google Inc.	211	2	0.2
Top-25 total	11,265	100	13.2
Total H-1Bs[a]	85,133		100.0

a. Total number of H-1B visas issued for initial employment in FY2009 for which employer can can be individually identified. Hence the discrepancy with the 86,300 aggregate number listed in table 5.

Source: ComputerWorld, based on USCIS data, www.computerworld.com/s/article/9142152/List_of_H_1B_visa_employers_for_2009.

Table 7 Estimated value, number of, and wages earned by Indian temporary workers in the United States, FY2002–FY2012

	2002	2003	2004	2005	2006	2007
Total estimated Indian H-1B visa holders	**351,238**	**305,707**	**267,713**	**321,253**	**377,416**	**401,408**
Total estimated Indian L-1 visa holders	**45,508**	**61,356**	**77,798**	**93,418**	**113,297**	**136,486**
Total estimated wages earned by Indian H-1B visa holders (billions of US dollars)	22.0	19.4	16.4	19.6	23.8	26.3
Total estimated wages earned by Indian L-1 visa holders (billions of US dollars)	2.7	3.5	4.5	5.5	7.1	8.7
Total wages earned in the United States by temporary Indian H-1B/L-1 workers (billions of US dollars)	24.7	22.9	20.9	25.1	30.9	35.1
Total value of embedded economic bilateral US-India temporary worker relationship, including 20% gross profit margin (billions of US dollars)	29.6	27.4	25.0	30.1	37.1	42.1
US recorded services imports from India, annual total (billions of US dollars)	1.8	2.0	2.8	5.0	7.5	9.9
US recorded goods imports from India, annual total (billions of US dollars)	11.8	13.1	15.6	18.9	22.0	24.2
Reported US "compensation of employees" of Indian nationality (billions of US dollars)	0.1	0.1	0.2	0.2	0.2	0.3
Reported US "private remittances and other transfers" to Indian nationals (billions of US dollars)	1.2	1.4	1.6	1.8	2.1	2.8
Total value of embedded economic bilateral US-India temporary worker relationship, percent share of current $US Indian GNI (calendar year)	5.7%	4.5%	3.5%	3.6%	3.9%	3.4%
Addendum:						
Reported median annual wages for H-1B workers (US dollars)						
Initial employment, first year	$55,000	$50,500	$50,000	$50,000	$55,000	$55,000
Continuing employment, first year	$64,739	$63,000	$65,000	$68,000	$70,000	$73,000
Assumed median wages, L-1 workers	$59,870	$56,750	$57,500	$59,000	$62,500	$64,000

	2008	2009	2010	2011	2012
Total estimated Indian H-1B visa holders	**432,517**	**400,247**	**355,599**	**362,287**	**427,595**
Total estimated Indian L-1 visa holders	**158,501**	**166,766**	**178,661**	**173,794**	**150,975**
Total estimated wages earned by Indian H-1B visa holders (billions of US dollars)	29.7	28.4	26.2	27.2	32.5
Total estimated wages earned by Indian L-1 visa holders (billions of US dollars)	10.6	11.2	12.5	12.4	10.9
Total wages earned in the United States by temporary Indian H-1B/L-1 workers (billions of US dollars)	40.3	39.6	38.7	39.6	43.4
Total value of embedded economic bilateral US-India temporary worker relationship, including 20% gross profit margin (billions of US dollars)	48.4	47.5	46.5	47.6	52.1

(continued)

Table 7 Estimated value, number of, and wages earned by Indian temporary workers in the United States, FY2002–FY2012 *(continued)*

	2008	2009	2010	2011	2012
US recorded services imports from India, annual total (billions of US dollars)	12.5	12.5	14.6	17.5	18.6
US recorded goods imports from India, annual total (billions of US dollars)	25.9	21.3	29.7	36.3	40.7
Reported US "compensation of employees" of Indian nationality (billions of US dollars)	0.3	0.6	0.6	0.7	0.7
Reported US "private remittances and other transfers" to Indian nationals (billions of US dollars)	4.1	8.0	8.7	8.3	8.1
Total value of embedded economic bilateral US-India temporary worker relationship, percent share of current $US Indian GNI (calendar year)	4.0%	3.5%	2.7%	2.6%	2.9%
Addendum:					
Reported median annual wages for H-1B workers (US dollars)					
Initial employment, first year	$60,000	$60,000	$63,000	$64,000	$65,000
Continuing employment, first year	$74,000	$74,000	$77,000	$79,000	$80,000
Assumed median wages, L-1 workers	$67,000	$67,000	$70,000	$71,500	$72,500

Sources: US Citizenship and Immigration Services; US Bureau of Economic Analysis; US Census Bureau; World Bank, *World Development Indicators*.

Box 1 Will they stay or will they go? Foreign STEM graduates in the United States

Senate bill S-744 introduces a provision for automatic green cards to foreign graduates who have at least a master's degree in science, technology, engineering, or mathematics (STEM) and a job offer from an accredited US institution of higher education, and it raises the number of annual employment-based H-1B visas available to this group by 5,000 to 25,000. With the number of STEM graduate green cards uncapped, Congress evidently wished to prioritize permanent migration to the United States for this group.

The number of foreign full-time graduate students on temporary visas at US institutions in these categories is approximately 145,000 in 2010 (figure B.1), so even assuming that a share of this group never graduates or fails to land a US job offer, the potential inflow of STEM graduates to the US labor markets from S-744's provisions is high—probably in excess of 100,000 STEM graduates annually.

Relatively few data are collected on the full population of graduate-level (master's and doctoral) students on temporary visas at US universities, though more information is available on doctoral students. Table B.1 shows that Indian nationals are the second (after China) largest national group among science and engineering PhDs, at about 2,000 annually since 2007. Assuming that these graduates can land a job offer in the United States, S-744 will provide automatic green cards/H-1B visas for about 2,000 Indian STEM doctoral students.

For the United States the key economic issue associated with its global dominance of top university rankings is student retention. Unless foreign students (especially in science and engineering) remain in the United States after graduation, their economic value to the US economy is reduced. They will not pay taxes in America or otherwise add to the GDP (e.g., for instance by launching start-ups and creating new jobs), though they may well add to US GNI by working at US multinationals in other countries.

S-744 is evidently designed to maximize STEM student retention by automatically granting such students permanent or temporary access to the US labor market. Recent retention rates show that S-744 will add to a rising trend, as more and more foreign doctoral students since 2000 have stayed in the United States after graduation (figure B.2). From 1990 to 2010, as the share of temporary visa holders among US doctoral students in STEM categories rose from 26 to 46 percent,[1] US retention of these students rose from 57 to 73 percent. By eliminating visa and green card concerns, S-744 should push this retention rate up even further.

Table B.2 breaks out retention rates in 2004–11 for all doctoral students in the United States on temporary visas, broken down by nationality. Data are not available by field of study and nationality, but there is no reason to believe that national preferences for staying in the United States will vary greatly across fields of study.

Table B.2 shows that Indian nationals (along with Chinese), at a US retention rate of around 85 percent in recent years, are among those most likely to stay in the United States after receiving their doctorate. The fact that two-thirds of nationals from other advanced countries also remain in the United States after graduation indicates that high US retention rates are relatively insensitive to standards of living in other countries. Most Indian nationals who receive their doctorate in the United States can therefore be expected to remain in the country even as India grows rapidly richer in the coming years. S-744 will help to ensure that this is the case.

Because S-744 offers green cards to both master's and doctoral STEM graduates, it seems likely that it will help boost the retention rate for Indian STEM graduates. Assuming that Indian nationals today account for a slightly higher share of temporary visa–holding STEM master's graduates as doctoral graduates (15 percent, whereas the share in 1989–2009 was 11.1 percent, including green card holders[2]), S-744 may provide green cards to 10,000–15,000 more Indian STEM graduates at US universities each year.

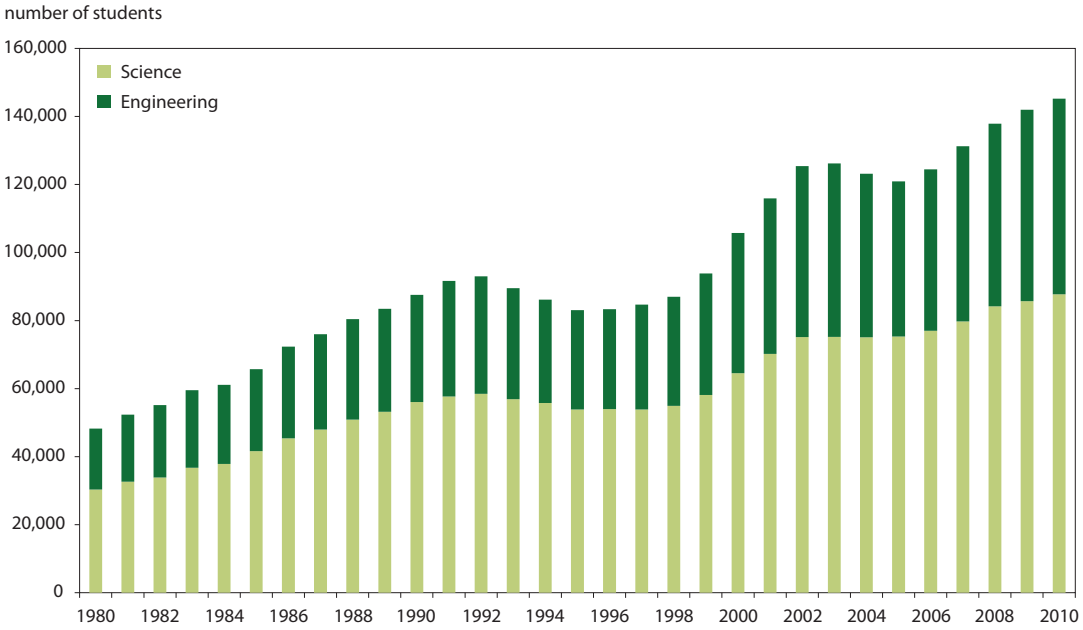
(continued)

1. Data include the physical sciences and engineering. Data are from table 18 in the 2010 NSF Survey at www.nsf.gov/statistics/sed/2011/data_table.cfm (accessed on February 19, 2015).

2. Data from NSF Science and Engineering Indicators 2012 at www.nsf.gov/statistics/seind12/tables.htm#c2. Accessed February 19, 2015.

Box 1 Will they stay or will they go? Foreign STEM graduates in the United States *(continued)*

Figure B.1 Full-time graduate students with temporary visas in science and engineering, 1980–2010



Source: NSF (2013a).

Table B.1 Top 10 countries/economies of origin of temporary visa holders earning science and engineering doctorates at US colleges and universities, 2001–11

Country/economy	2001	2002	2003	2004	2005	2006
China (including Hong Kong)	2,196	2,170	2,323	2,769	3,346	4,121
India	744	630	718	832	1,093	1,496
South Korea	833	820	936	1,030	1,136	1,197
Taiwan	534	457	447	395	443	452
Canada	266	265	290	356	330	326
Turkey	276	322	355	324	321	321
Thailand	270	317	339	302	281	218
Japan	137	144	180	170	187	194
Mexico	188	176	201	168	196	173
Germany	181	166	158	154	145	130

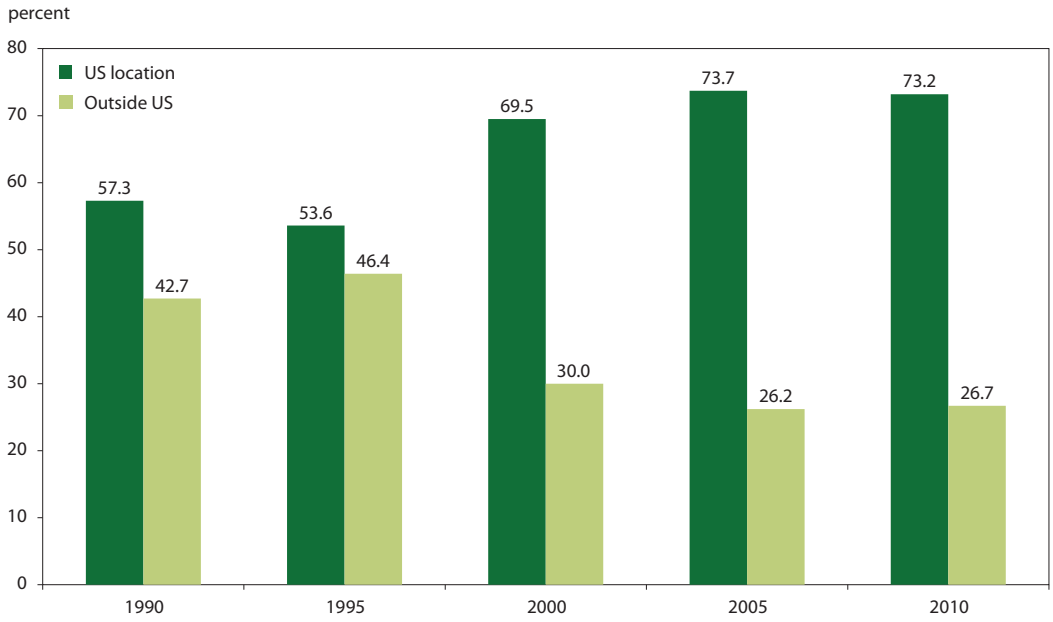
Country/economy	2007	2008	2009	2010	2011
China (including Hong Kong)	4,308	4,141	3,748	3,451	3,640
India	1,921	2,156	2,107	1,991	2,033
South Korea	1,128	1,150	1,173	1,075	1,079
Taiwan	477	462	543	501	570
Canada	352	370	385	339	305
Turkey	409	466	445	404	422
Thailand	235	290	219	182	235
Japan	210	209	190	172	177
Mexico	172	161	171	169	160
Germany	128	140	170	155	158

Source: NSF (2013b).

(continued)

Box 1 Will they stay or will they go? Foreign STEM graduates in the United States *(continued)*

Figure B.2 Postgraduation location of doctorate recipients with temporary visas and definite postgraduation commitments, selected years from 1990–2010



Source: NSF/NIH/USED/USDA/NEH/NASA (2010).

Table B.2 Doctorate recipients with temporary visas intending to stay in the United States after doctorate receipt, by country of citizenship, 2004–10 and 2011

	Total, 2004–10		2011	
Place of origin	**Number**	**Percent staying**	**Number**	**Percent staying**
All temporary visa holders	97,439	71.2	14,245	70.1
By region				
East/South Asia	60,483	77.1	9,034	74.7
Europe	12,236	67.3	1,484	65.5
North/South America	10,310	55.2	1,454	57.4
West Asia	8,761	61.4	1,459	64.0
Africa	3,500	63.7	511	64.4
Pacifica/Australia	1,434	62.8	187	61.0
By country				
China (including Hong Kong)	28,085	87.4	3,978	82.0
India	12,499	86.7	2,161	84.6
South Korea	10,116	64.6	1,442	59.9
Taiwan	4,678	54.5	693	65.5
Canada	3,429	56.9	454	55.9
Turkey	3,285	62.3	493	61.9
Thailand	1,995	26.5	266	25.9
Japan	1,796	50.1	243	50.6
Mexico	1,472	47.1	186	56.5

(continued)

Box 1 Will they stay or will they go? Foreign STEM graduates in the United States *(continued)*

Table B.2 Doctorate recipients with temporary visas intending to stay in the United States after doctorate receipt, by country of citizenship, 2004–10 and 2011

	Total, 2004–10		2011	
Place of origin	Number	Percent staying	Number	Percent staying
Germany	1,336	61.2	203	65.5
Russia	1,267	77.7	120	72.5
Brazil	1,154	44.7	149	42.3
Italy	1,021	62.1	137	60.6
France	898	66.7	125	64.8
Argentina	786	62.7	110	62.7
United Kingdom	780	64.0	103	54.4
Israel	701	59.3	90	57.8
Spain	688	59.6	101	62.4
Other	595	58.7	52	61.5
Saudi Arabia	560	8.9	50	14.0
Other	533	62.1	81	61.7
Singapore	486	47.9	71	50.7
Bangladesh	471	77.9	77	83.1
Indonesia	420	56.4	67	49.3
Philippines	419	74.9	68	72.1
Pakistan	381	70.3	91	46.2
Vietnam	295	59.7	99	64.6

Note: Percentages based on all doctorate recipients on temporary visas who indicated where they intended to stay after graduation (United States versus foreign location), not just those with definite commitments for employment or postdoctoral position.

Source: NSF/NIH/USED/USDA/NEH/NASA (2010).

APPENDIX A DETAILED DESCRIPTION OF H-1B REQUIREMENTS[70]

H-1B SPECIALTY OCCUPATIONS, DOD COOPERATIVE RESEARCH AND DEVELOPMENT PROJECT WORKERS, AND FASHION MODELS

This visa category applies to people who wish to perform services in a specialty occupation, services of exceptional merit and ability relating to a Department of Defense (DOD) cooperative research and development project, or services as a fashion model of distinguished merit or ability.

Eligibility Criteria

Visa category	General requirements	Labor condition application required?
H-1B Specialty Occupations	The job must meet one of the following criteria to qualify as a specialty occupation:	Yes. The prospective employer must file an approved Form ETA-9035, Labor Condition Application (LCA), with the Form I-129, Petition for a Nonimmigrant Worker. See the links to the Department of Labor's (DOL) Office of Foreign Labor Certification and USCIS forms to the right.
	· Bachelor's or higher degree or its equivalent is normally the minimum entry requirement for the position	For more information see the "Information for Employers & Employees" link to the left.
	· The degree requirement for the job is common to the industry or the job is so complex or unique that it can be performed only by an individual with a degree	
	· The employer normally requires a degree or its equivalent for the position	
	· The nature of the specific duties is so specialized and complex that the knowledge required to perform the duties is usually associated with the attainment of a bachelor's or higher degree.	
	For you to qualify to accept a job offer in a specialty occupation you must meet one of the following criteria:	
	· Have completed a US bachelor's or higher degree required by the specific specialty occupation from an accredited college or university	
	· Hold a foreign degree that is the equivalent to a US bachelor's or higher degree in the specialty occupation	
	· Hold an unrestricted state license, registration, or certification which authorizes you to fully practice the specialty occupation and be engaged in that specialty in the state of intended employment	
	· Have education, training, or progressively responsible experience in the specialty that is equivalent to the completion of such a degree, and have recognition of expertise in the specialty through progressively responsible positions directly related to the specialty.	

(continued)

70. *Source:* USCIS website at www.uscis.gov/portal/site/uscis/menuitem.eb1d4c2a3e5b9ac89243c6a7543f6d1a/?vgnextoid=73566811264a3210VgnVCM100000b92ca60aRCRD&vgnextchannel=73566811264a3210VgnVCM100000b92ca60aRCRD.

Eligibility Criteria *(continued)*

Visa category	General requirements	Labor condition application required?
H-1B2 DOD Researcher and Development Project Worker	The job must meet both of the following criteria to qualify as a DOD cooperative research and development project: · The cooperative research and development project or a coproduction project is provided for under a government-to-government agreement administered by the US Department of Defense · A bachelor's or higher degree, or its equivalent is required to perform duties. To be eligible for this visa category you must meet one of the following criteria: · Have completed a US bachelor's or higher degree required by the specific specialty occupation from an accredited college or university · Hold a foreign degree that is the equivalent to a US bachelor's or higher degree in the specialty occupation · Hold an unrestricted State license, registration, or certification which authorizes you to fully practice the specialty occupation and be engaged in that specialty in the state of intended employment · Have education, training, or progressively responsible experience in the specialty that is equivalent to the completion of such a degree, and have recognition of expertise in the specialty through progressively responsible positions directly related to the specialty.	No
H-1B3 Fashion Model	The position/services must require a fashion model of prominence. To be eligible for this visa category you must be a fashion model of distinguished merit and ability.	Yes. The prospective employer must file an approved LCA with the Form I-129. See the links to the Department of Labor's Office of Foreign Labor Certification and USCIS forms to the right.

APPLICATION PROCESS

Step 1: (only required for specialty occupation and fashion model petitions): Employer Submits LCA to DOL for certification.

The employer must apply for and receive DOL certification of an LCA. For further information regarding LCA requirements and DOL's inert process, see the "Foreign Labor Certification, Department of Labor" link to the right.

Step 2: Employer Submits Completed Form I-129 to USCIS.

The employer should file Form I-129, Petition for a Nonimmigrant Worker, with the correct USCIS Service Center. Please see our I-129 Direct Filing Chart page. The DOL-certified LCA must be submitted with the Form I-129 (only for specialty occupation and fashion models). See the instructions to the Form I-129 for additional filing requirements.

Step 3: Prospective Workers Outside the United States Apply for Visa and/or Admission.
Once the Form I-129 petition has been approved, the prospective H-1B worker who is outside the United States may apply with the US Department of State (DOS) at a US embassy or consulate abroad for an H-1B visa (if a visa is required). Regardless of whether a visa is required, the prospective H-1B worker must then apply to US Customs and Border Protection (CBP) for admission to the United States in H-1B classification.

LABOR CONDITION APPLICATION (LCA)

Prospective specialty occupation and distinguished fashion model employers must obtain a certification of an LCA from the DOL. This application includes certain attestations, a violation of which can result in fines, bars on sponsoring nonimmigrant or immigrant petitions, and other sanctions to the employer. The application requires the employer to attest that it will comply with the following labor requirements:

- The employer will pay the beneficiary a wage which is no less than the wage paid to similarly qualified workers or, if greater, the prevailing wage for your position in the geographic area in which you will be working.
- The employer will provide working conditions that will not adversely affect other similarly employed workers. At the time of the labor condition application there is no strike or lockout at the employer place of business. Notice of the filing of the labor condition application with the DOL has been given to the union bargaining representative or has been posted at the place of business.

PERIOD OF STAY

As an H-1B nonimmigrant, you may be admitted for a period of up to three years. Your time period may be extended, but generally cannot go beyond a total of six years, though some exceptions do apply under sections 104(c) and 106(a) of the American Competitiveness in the Twenty-First Century Act (AC21).

Your employer will be liable for the reasonable costs of your return transportation if your employer terminates you before the end of your period of authorized stay. Your employer is not responsible for the costs of your return transportation if you voluntarily resign your position. You must contact the Service Center that approved your petition in writing if you believe that your employer has not complied with this requirement.

H-1B CAP

The H-1B visa has an annual numerical limit "cap" of 65,000 visas each fiscal year. The first 20,000 petitions filed on behalf of beneficiaries with a US master's degree or higher are exempt from the cap. Additionally, H-1B workers who are petitioned for or employed at an institution of higher education or

its affiliated or related nonprofit entities or a nonprofit research organization, or a government research organization are not subject to this numerical cap.

FAMILY OF H-1B VISA HOLDERS

Your spouse and unmarried children under 21 years of age may seek admission in the H-4 nonimmigrant classification. Family members in the H-4 nonimmigrant classification may not engage in employment in the United States.

APPENDIX B DETAILED DESCRIPTION OF L-1 REQUIREMENTS[71]

L-1A INTRACOMPANY TRANSFEREE EXECUTIVE OR MANAGER

The L-1A nonimmigrant classification enables a US employer to transfer an executive or manager from one of its affiliated foreign offices to one of its offices in the United States. This classification also enables a foreign company which does not yet have an affiliated US office to send an executive or manager to the United States with the purpose of establishing one. The employer must file a Form I-129, Petition for a Nonimmigrant Worker with fee, on behalf of the employee.

The following information describes some of the features and requirements of the L-1 nonimmigrant visa program.

GENERAL QUALIFICATIONS OF THE EMPLOYER AND EMPLOYEE

To qualify for L-1 classification in this category, the employer must:

- Have a qualifying relationship with a foreign company (parent company, branch, subsidiary, or affiliate, collectively referred to as *qualifying organizations*); and
- Currently be, or will be, *doing business* as an employer in the United States and in at least one other country directly or through a qualifying organization for the duration of the beneficiary's stay in the United States as an L-1. While the business must be viable, there is no requirement that it be engaged in international trade.

Doing business means the regular, systematic, and continuous provision of goods and/or services by a qualifying organization and does not include the mere presence of an agent or office of the qualifying organization in the United States and abroad.

To qualify, the named employee must also:

- Generally have been working for a qualifying organization abroad for one continuous year within the three years immediately preceding his or her admission to the United States; and
- Be seeking to enter the United States to provide service in an *executive* or *managerial capacity* for a branch of the same employer or one of its qualifying organizations.

Executive capacity generally refers to the employee's ability to make decisions of wide latitude without much oversight.

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71. *Source:* USCIS website at www.uscis.gov/portal/site/uscis/menuitem.eb1d4c2a3e5b9ac89243c6a7543f6d1a/?vgnextoid=64d34b65bef27210VgnVCM100000082ca60aRCRD&vgnextchannel=64d34b65bef27210VgnVCM100000082ca60aRCRD.

Managerial capacity generally refers to the ability of the employee to supervise and control the work of professional employees and to manage the organization, or a department, subdivision, function, or component of the organization. It may also refer to the employee's ability to manage an essential function of the organization at a high level, without direct supervision of others.

NEW OFFICES

For foreign employers seeking to send an employee to the United States as an executive or manager to establish a new office, the employer must also show that:

- The employer has secured sufficient physical premises to house the new office;
- The employee has been employed as an executive or manager for one continuous year in the three years preceding the filing of the petition; and
- The intended US office will support an executive or managerial position within one year of the approval of the petition.

PERIOD OF STAY

Qualified employees entering the United States to establish a new office will be allowed a maximum initial stay of one year. All other qualified employees will be allowed a maximum initial stay of three years. For all L-1A employees, requests for extension of stay may be granted in increments of up to an additional two years, until the employee has reached the maximum limit of seven years.

FAMILY OF L-1 WORKERS

The transferring employee may be accompanied or followed by his or her spouse and unmarried children who are under 21 years of age. Such family members may seek admission in L-2 nonimmigrant classification and, if approved, generally will be granted the same period of stay as the employee.

Change/Extend Nonimmigrant Status

If these family members are already in the United States and seeking change of status to or extension of stay in L-2 classification, they may apply collectively, with fee, on an Form I-539, Application to Change/Extend Nonimmigrant Status.

Spouses

Spouses of L-1 workers may apply for work authorization by filing a Form I-765, Application for Employment Authorization with fee. If approved, there is no specific restriction as to where the L-2 spouse may work.

L-1B INTRACOMPANY TRANSFEREE SPECIALIZED KNOWLEDGE

The L-1B nonimmigrant classification enables a US employer to transfer a professional employee with specialized knowledge relating to the organization's interests from one of its affiliated foreign offices to one of its offices in the United States. This classification also enables a foreign company which does not yet have an affiliated US office to send a specialized knowledge employee to the United States to help establish one. The employer must file Form I-129, Petition for a Nonimmigrant Worker with fee, on behalf of the employee.

GENERAL QUALIFICATIONS OF THE EMPLOYER AND EMPLOYEE

To qualify for L-1 classification in this category, the employer must:

- Have a qualifying relationship with a foreign company (parent company, branch, subsidiary, or affiliate, collectively referred to as qualifying organizations); and
- Currently be, or will be, doing business as an employer in the United States and in at least one other country directly or through a qualifying organization for the duration of the beneficiary's stay in the United States as an L-1. While the business must be viable, there is no requirement that it be engaged in international trade.

Doing business means the regular, systematic, and continuous provision of goods and/or services by a qualifying organization and does not include the mere presence of an agent or office of the qualifying organization in the United States and abroad.

To qualify, the named employee must also:

- Generally have been working for a qualifying organization abroad for one continuous year within the three years immediately preceding his or her admission to the United States; and
- Be seeking to enter the United States to provide services in a specialized knowledge capacity to a branch of the same employer or one of its qualifying organizations.

Specialized knowledge means either special knowledge possessed by an individual of the petitioning organization's product, service, research, equipment, techniques, management, or other interests and its application in international markets, or an advanced level of knowledge or expertise in the organization's processes and procedures.

L-1 VISA REFORM ACT OF 2004

The L-1 Visa Reform Act of 2004 applies to all petitions filed on or after June 6, 2005, and is directed particularly to those filed on behalf of L-1B employees who will be stationed primarily at the worksite of an of an employer other than the petitioning employer or its affiliate, subsidiary, or parent. In order for the employee to qualify for L-1B classification in this situation, the petitioning employer must show that:

- The employee will not be principally controlled or supervised by such an unaffiliated employer; and
- The work being provided by the employee is not considered to be labor for hire by such an unaffiliated employer.

NEW OFFICES

For foreign employers seeking to send an employee with specialized knowledge to the United States to be employed in a qualifying new office, the employer must show that:

- The employer has secured sufficient physical premises to house the new office ; and
- The employer has the financial ability to compensate the employee and begin doing business in the United States.

PERIOD OF STAY

Qualified employees entering the United States to establish a new office will be allowed a maximum initial stay of one year. All other qualified employees will be allowed a maximum initial stay of three years. For all L-1B employees, requests for extension of stay may be granted in increments of up to an additional two years, until the employee has reached the maximum limit of five years.

FAMILY OF L-1 WORKERS

The transferring employee may be accompanied or followed by his or her spouse and unmarried children who are under 21 years of age. Such family members may seek admission in L-2 nonimmigrant classification and, if approved, generally will be granted the same period of stay as the employee.

Change/Extend Status

If these family members are already in the United States and seeking change of status to or extension of stay in L-2 classification, they may apply collectively, with fee, using Form I-539, Application to Extend/ Change Status.

Spouses

Spouses of L-1 workers may apply for work authorization by filing a Form I-765, Application for Employment Authorization with fee. If approved, there is no specific restriction as to where the L-2 spouse may work.

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