Ganguly, Debjani

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BARRIERS TO MOVEMENT OF NATURAL PERSONS: A STUDY OF FEDERAL, STATE, AND SECTOR-SPECIFIC RESTRICTIONS TO MODE 4 IN THE UNITED STATES OF AMERICA

Debjani Ganguly

SEPTEMBER 2005
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Foreword

The role of movement of skilled professionals (mode 4 in GATS parlance) for circulating knowledge and promoting technological development is widely recognized today. Such movement enables countries to sustain fast growth without being limited by shortages of key workers, particularly in skill-intensive sectors. While on the one hand, temporary migration enables developed countries to have access to working age and skilled immigrants who have a positive impact on host country economies, such movement also benefits developing countries like India by enhancing foreign exchange earnings as well as bringing in knowledge of new technologies and global practices.

Traditionally India has been a large source country for labour flows, and in recent years, Indians have provided the lion’s share of high-tech temporary migrant workers in the major receiving countries. Despite the increase in immigration flows, international migration remains highly regulated. Even for temporary migration, there are several restrictive immigration and administrative procedures. However, many of the barriers faced by foreign service suppliers are often not apparent. Specific sectors are subject to many aspects of domestic regulation that restrict temporary movement in the sector.

The US is the main destination market for Indian professionals. In the past, there have been several studies on barriers to movement of people but none of them have specifically addressed the barriers faced by Indian professionals across different service sectors in the US at Federal and State levels. This paper attempts to fill this lacuna.

This paper examines the barriers to entry for Indian service providers. The study centers on the United States, and determines the volume and nature of barriers to movement of professionals in the United States. The focus of the study is on the barriers in key service sectors and professions that are of export interest to India. Data indicates that temporary movement in most visa categories in the US has recorded a substantial increase in recent times; however, there are several restrictions on the temporary movement of foreign persons for work. The study finds that in the United States, domestic regulations and recognition issues such as licensing requirements, nationality and residency conditions are often the most significant barriers in regulated professions, such as medicine and law.

The study also examines intermodal linkages, and analyses how recent US trends of increasing restrictions in modes such commercial presence (mode 3) and outsourcing (mode 1) can affect mode 4 trade. Rising legislation related to use of foreign labor, their qualifications, labor standards in multiple sectors does impact mode 4 trade and raises the costs of entry and operation for temporary service providers. This therefore should be factored into the GATS negotiating strategies of the Government of India.

This study is important for the Government of India not only in the context of the on-going Doha Round of GATS negotiations but also if India and US decided to enter into a bilateral agreement.

We are very grateful to the Sir Ratan Tata Trust for supporting our research on WTO issues.

Arvind Virmani
Director & Chief Executive
ICRIER

September 2005
Introduction

The role of movement of skilled professionals for circulating knowledge and promoting technological development is widely recognized today. Such movement enables countries to sustain fast growth without being limited by shortages of key workers, particularly in skill-intensive sectors. In the late 1990s, a large number of countries changed their laws to facilitate the entry of skilled foreign workers. For instance, the United Kingdom created a new type of visa to allow highly qualified persons, selected on the basis of a point system, to enter the United Kingdom to seek work. Similarly, Canada amended its point-based selection system in June 2002 so that candidates likely to find a stable place in the labour market were identified clearly. ¹ Evidence from various countries also points to the growing importance of temporary immigration. For instance, the entry of temporary workers in US increased from about 100,000 to nearly 400,000 between 1992 and later years and temporary immigration in Australia rose from about 40,000 to nearly 100,000 over this same period.² The main objective of governments in allowing temporary or fixed-term employment related immigration is to meet the human resource needs of their national economies. Temporary migration enables developed countries to have access to working age and skilled immigrants who have a positive impact on host country economies, without establishing any permanent benefit entitlements. Temporary movement benefits developing countries like India since it can enhance foreign exchange earnings as well as bring in knowledge of new technologies and global practices.

The General Agreement on Trade in Services (GATS) plays a significant role in creating further opportunities for temporary workers. The GATS allows Member countries to assume legally binding commitments concerning their use of trade-related measures in individual service sectors. These commitments are laid down in country schedules for each Member. The presence of natural persons, referred to as mode 4, is one of the four possible ways of trading a service under the GATS.³ Mode 4 is defined in Article I:2(d) as entailing "the supply of a service … by a service supplier of one Member, through presence of natural persons of a Member in the territory of any other Member". The Annex on Movement of Natural Persons Supplying Services under

¹ SOPEMI (2002)
² OECD (2002)
³ The other ways of trading services are through Mode 1 or “cross-border supply,” which is analogous to trade in goods; Mode 2 or “consumption abroad” (for e.g., tourism or study abroad); and Mode 3 or “commercial presence”(e.g., the supply of a service through a subsidiary or branch in another country).
the Agreement specifies that two categories of measures are covered, those affecting natural persons who are "service suppliers of a Member", i.e. self-employed suppliers who obtain their remuneration directly from customers and those affecting natural persons of a Member who are "employed by a service supplier of a Member in respect of the supply of a service". These natural persons can be employed either in their home country and be present in the host market to supply a services or employed by a service supplier in the host country. By establishing guidelines for movement of service suppliers, Mode 4 of the GATS can facilitate greater flows and reduce the delays and uncertainty involved in entering a foreign market. Mode 4 is particularly important for countries like India with large pools of semi-skilled and skilled labour. Traditionally India has been a large source country for labour flows, and in recent years, Indians have provided the lion’s share of high-tech temporary migrant workers in the major receiving countries. Particularly in the IT sector, Indians have created a “brand-name”, wherein an “Indian” software programmer sends an ex ante signal of quality much as a “made in Japan” sends an ex ante signal of quality in consumer electronics. India’s IT talent is being courted not just by the US but also by other countries where movement of Indians had slowed (UK) or had been very small to begin with (Germany, Finland, Japan and South Korea).

Despite the increase in immigration flows, international migration remains highly regulated. National security and sovereignty issues restrict immigration. Concerns about the impact of migrants on the domestic labor markets, and the wages of nationals have led to tight entry criteria. Even for temporary migration, there are several restrictive immigration and administrative procedures. Economic demands from industry as well as domestic political pressures have led to such restrictions in several OECD countries. These have taken the form of restrictions on visas and work permits. However, many of the barriers faced by foreign service suppliers are often not apparent. Nationality and residency requirements and other staffing requirements lead to limitations in market access. Specific sectors are subject to many aspects of domestic regulation that restrict temporary movement in the sector.

This paper examines the barriers to entry for Indian service providers. The study centers on the United States, and determines the volume and nature of barriers to movement of professionals in the United States. The United States tops the list of countries with the largest international

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4 INS (2000)
5 Kapur (2001)
migrant stock in 2000 and accounts for a bulk of India’s mode 4 based exports of services. More than 27.9 million nonimmigrant admissions were counted in the Immigration and Naturalization Service’s (INS) Nonimmigrant Information System during fiscal year 2002. The United States has an “open door” admission policy for most non-immigrant classes. This means that there is no set limit on the total number of temporary admissions each year. Temporary movement in most visa categories in the US has recorded a substantial increase in recent times.

However, there are several restrictions on the temporary movement of foreign persons for work. Hiring foreign workers for employment in the U.S. normally requires approval from several government agencies. Certain visa categories first require employers to seek labor certification through the U.S. Department of Labor (DOL). Once the application is approved, the employer must petition the Bureau of Citizenship and Immigration Services (BCIS) for a visa. Approval by DOL does not guarantee a visa issuance. The Department of State (DOS) will issue a visa number to the foreign worker for U.S. entry. Applicants must also establish that they are admissible to the U.S. under the provisions of the Immigration and Nationality Act (INA). Employment for certain categories of temporary workers are subject to numerical limitations. For instance, annual ceilings have been set by U.S. law on the number of H1B (specialty occupations) and H-2B (occupations in which persons providing services cannot be found in US) categories. Lastly, domestic regulations also govern other areas such as the grounds for admission, actual practice of the profession, the length and extension of stay, type of employment in the United States, and change of admission status.

The barriers to temporary movement in the US are analyzed in a sector-specific approach. While there has been considerable attention on the general barriers faced (in form of visa and other restrictions), there has been less work on domestic regulations in particular sectors and professions and on the operational/administrative modalities and mechanisms by which these regulations are enforced. Domestic regulations and recognition issues such as licensing

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6 Migration Policy Issues, March 2003
7 The United States admits persons on a temporary basis as non-immigrants. A non-immigrant is defined as “an alien admitted to the United States for a specified purpose and temporary period but not for permanent residence”.
8 The Immigration and Nationality Act, or INA, was created in 1952. Before the INA, a variety of statutes governed immigration law but were not organized in one location. The McCarran-Walter bill of 1952, Public Law No. 82-414, collected and codified many existing provisions and reorganized the structure of immigration law. The Act has been amended many times over the years, but is still the basic body of immigration law in the US.
requirements, nationality and residency conditions are often the most significant barriers in regulated professionals, such as medicine and law. Many of these barriers are not apparent from the GATS commitments. Licensing and regulation of the professions in the United States are a function of the States, and not the federal government. A detailed analysis of rules and regulations in specific sectors and professions is necessary to determine the effective market access for mode 4 in the US. The focus of the study is on the barriers in key service sectors and professions that are of export interest to India. Based on available evidence on India’s mode 4 based exports, the service sectors analyzed include accounting, bookkeeping and auditing services, legal services, health services, architectural services, engineering services, construction services and computer and related services. The study provides a comprehensive analysis of licensing and other sectoral requirements and the specific issues faced by Indian and other Foreign Service professionals in the US.

The paper is organized in five major sections. The first two sections aim to provide a background of mode 4. Section 1 discusses the measurement of mode 4 movement and classifies the various classes of admission of mode 4 workers in the US. It also examines the volume of mode 4 during the last five years and specifically looks at mode 4 movement in various categories from India. Section 2 summarizes the most common constraints and limitations on market access for mode 4 in the US. Many of these restrictions are well known and have been discussed in considerable detail in earlier studies. These constraints are summarized here to present a complete picture of restrictions on visas and other major issues at the federal levels in the US.

Section 3 presents the crux of the study. It is divided into five subsections. The first subsection deals with accounting, auditing and bookkeeping services. It is followed by sections on the legal services sector, the health services sector, the engineering and construction services sector, and the computer services sector. The health sector deals with licensing requirements of all healthcare providers i.e. physicians, nurses and doctors. Engineering and Construction are covered in a single subsection due to close linkages between these services. Each sector-specific section contains a brief background, followed by detailed examination of the licensing procedures and the specific requirements for foreign and Indian professionals within that sector. The most important operational barriers faced by temporary workers are summarized in all the sectors, with

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9 Accounting, bookkeeping and auditing services, legal services, health services, architectural services, engineering services, computer and related services are part of business services in the GATS services sectoral classification list.
a look at the role that can be played by mutual recognition agreements. The sub-section on computer services is different from the other sectors since it is a non-licensed sector and does not face many of the regulatory and licensing issues as the licensed sectors. The restrictions faced by this sector are comparatively few and mostly fall in the scope of the general restrictions faced by service providers in the US. The subsection on computer services summarizes the major barriers faced and also points out the restrictions on mode 4 that might arise with the recent trend of increased regulation of this sector.

Section 4 examines the effect of restrictions on other modes of supply on mode 4. The restrictions are examined due to the close linkages between mode 4 and other modes in the supply of most services. The section shows how recent US trends in modes such commercial presence (mode 3) and outsourcing (mode 1) can affect mode 4. Section 5 concludes the paper. It summarizes the major barriers to mode 4 that emerge across the various sectors, and in relation to other modes of supply. It also highlights the main GATS policy prescriptions that emerge from the study and suggests an integrated approach to negotiating for improved market access under movement of natural persons.

The paper includes one appendix. The appendix presents data on individual states in the US and determines the most popular destinations for mode 4 workers in the US. The appendix points out the important role states will play in shaping market access in mode 4.

Section 1: Visa Categories and Volume of Mode 4

1.1 Visa Categories in Mode 4

For an accurate study of mode 4, it is necessary to identify and isolate the classes of admission for mode 4 workers in the US immigration system. A large percentage of the nonimmigrant or temporary admissions in any fiscal year are visitors for pleasure. For instance, in 2002, 71.5% of non-immigrants entered as visitors for pleasure (tourists), and 15.68% as temporary visitors for business. Although tourists have been the most numerous nonimmigrant class of admission to the United States, there has been an expansion in the category of temporary workers. Temporary workers are admitted with “specialty occupations” (such as computer system analysts) or to perform temporary services or labor when persons performing such services or labor cannot be
found in the country (such as agricultural laborers). Exchange visitors come to study, teach, or conduct research. Intracompany transferees provide managerial or executive services to international firms or corporations. Treaty traders and treaty investors temporarily conduct trade or invest in enterprises under the provisions of treaties of commerce between the United States and foreign states. New classes of temporary admission are also established depending upon demand and need for services. For instance, since 2001, nurses have been admitted under the Nursing Relief for Disadvantaged Areas Act of 1999 which allows for a limited number of nurses to fill short-term needs in medically underserved areas in the United States.

Entrants under mode 4 can be found in a number of classes of admission and visa categories. There are fifteen major classes of admission in the US non-immigrant classification. (The visa category corresponding to the class of admission is included in the parenthesis.\textsuperscript{10})

1. *Foreign government officials and families* 
   (Includes Ambassadors (A1), Other foreign government officials or employees (A2))

2. *Temporary visitors* 
   (For business (B1), For pleasure (B2))

3. *Transit aliens* 
   (Aliens in transit (C1), Aliens in transit to the U.N. (C2))

4. *Treaty traders and investors and families* 
   (Treaty traders (E1), Treaty investors (E2))

5. *Students* 
   (Academic students (F1), Vocational students (M1))

6. *Spouses and children of students* 
   (Academic students (F2), Vocational students (M2))

7. *Representatives (and families) to international organization* 
   (Principals of recognized foreign governments (G1), other representatives of recognized foreign governments (G2))

8. *Temporary workers and trainees* 
   (Registered nurses (H1A), Specialty occupations (H1B), Internationally recognized athletes or entertainers (P1), Workers in religious occupations (R1), Professional workers NAFTA (TN), Workers in international cultural exchange programs (Q1))

9. *Spouses and children of temporary workers and trainees* 

\textsuperscript{10}The visa categories in each class of admission are representative and are not an exhaustive list.
(Spouses and children of H1, H2, and H3 workers (H4), Spouses and children of P1, P2, and P3 workers (P4))

10. Exchange visitors (J1)
(Spouses and children of exchange visitors (J2))

11. Intracompany transferees (L1)
(Spouses and children of intracompany transferees (L2)

12. NATO officials and families (N1-7)

13. Parents or children of international organization special immigrants (N8-9)

14. Legal Immigration Family Equity (LIFE) Act
(Spouse US citizen visa pending (K3), Child US citizen visa pending (K4))

15. Victims of trafficking and violence
Victims of severe trafficking (T1), Spouse of victim trafficking (T2)

This study deals with commercial transactions and service-related activities. Consequently, the categories of entrants whose activities would not seem to constitute a commercial supply of services for GATS purposes (e.g. religious workers) need to be excluded. Moreover, in accordance with Article I (3) of GATS, foreign government officials, representatives of foreign organizations, and NATO officials would not be included in a study of mode 4. Methodological problems exist in identifying mode 4 since there is often no distinction between service-related and other activities. Moreover, some classes of admission may include both non-profit and commercial activities. For instance, artists may visit US for participating in a charity event but also may sell their works of art. Similarly, exchange visitors might be visiting to study but also engage in teaching. Given these uncertainties, Nielson and Cattaneo (2002) distinguish eight major groups of visa categories of interest to mode 4. Although, the study mentions that the selection of these categories is not necessarily the official position of the US government, the classification is appropriate since it includes all categories that might have activities pertinent for mode 4. The seven visa categories include:

(i) Temporary visitors for business (B1)

B1 visa holders come to the US to engage in commercial transactions but are not employed in the US labor market and are not allowed to receive payment from an US organization.

(ii) Treaty traders and investors (E1, E2)

---

11 Article I (3) of the GATS excludes “services supplied in the exercise of governmental authority” from the coverage of services in GATS. Hence, movements of government officials are not included in mode 4.

12 Description of each visa category is based on information from US Department of State, Visa services.
E1/E2 visa holders come to the US to carry on “substantial” trade or direct the operations of an enterprise in which they have invested a substantial amount of capital. They have to belong to a nation that maintains a treaty of commerce and navigation or a bilateral agreement with the U.S.\textsuperscript{13}

(iii) \textit{Temporary workers and trainees (H1B, H1C, H2B, P1 etc)}

There are several categories of temporary workers

- H-1B visas are for people in a “specialty” occupation which requires professional/college education, skills, and/or equivalent experience.
- H1C applies to registered nurses coming to the United States to temporarily work in “healthcare shortage areas”.
- H-2B classification applies to temporary or seasonal nonagricultural workers.
- H-3 classification applies to trainees other than medical or academic.
- O-1 classification is for people who have extraordinary ability in the sciences, arts, education, business, athletics or motion pictures.
- O-2 applies to persons accompanying an O-1 alien to assist in an artistic or athletic performance for a specific event or performance.
- P-1 visas are for individual or team athletes, or members of an entertainment group that are internationally recognized.
- P-2 classification is for artists or entertainers who perform under a reciprocal exchange program with a US organization.
- P-3 classification applies to artists or entertainers who perform under a program that is culturally unique.
- Q-1 are for participants in an international cultural exchange program for providing practical training, employment, and sharing of the history, culture, and traditions of their home country.

(iv) \textit{Representatives of foreign information media (I1)}

I1 visa holders come to the United States as a representative of foreign press, radio, film, or other foreign information media.

(v) \textit{Exchange visitors (J1)}

The J1 visa enables foreign nationals to visit the United States to teach, lecture, study, observe, conduct research, consult, train, or demonstrate special skills.

(vi) \textit{Intracompany transferees (L1)}

L classification is for intra-company transferees who are employed by a branch/subsidiary of the same employer in the U.S. in a managerial, executive, or specialized knowledge capacity.

\textsuperscript{13} The countries which have treaties with the United States that allow qualifying nationals to apply for E1 status are Argentina, China (ROC), France, Italy, Netherlands, Sweden, Australia, Colombia, Germany, Japan, Norway, Switzerland, Austria, Costa Rica, Greece, Korea, Oman, Thailand, Belgium, Denmark, Honduras, Latvia, Pakistan, Togo, Bolivia, Estonia, Iran, Liberia, Philippines, Turkey, Brunei, Ethiopia, Ireland, Luxembourg, Spain, U.K., Canada, Finland, Israel, Mexico, Suriname, and Yugoslavia. India does not have a treaty with US for E1 or E2 visas.
(vii) NAFTA Professional workers (TN)\textsuperscript{14}

The visa category of NAFTA (North American Free Trade Agreement) is available only to citizens of Mexico and Canada. The TN visa category facilitates entry for Mexican and Canadian visitors seeking classification as treaty traders or investors, intracompany transferees, or other business people.

Nielsen and Cattaneo (2002) point out that many of these categories appear to be a mix of mode 4 and non-mode 4 because they may include activities beyond services. For instance, H2B workers may come to US for manufacturing jobs as well. Thus, while the classes of admission identified as relevant for mode 4 gives an idea of the volume of mode 4 related flows of workers, caution has to be exercised in using the data as it may be over or underestimated.

2.2 Volume of Mode 4 in the US

The United States visa system provides detailed information on the number, country of origin, and skill levels of persons entering the country on a temporary basis. Thus, it is possible to estimate the volume of movement of physical persons. However, like many other countries, the US does not have a separate visa category for mode 4\textsuperscript{15}. Data from the Immigration and Naturalization Service (INS) on visa categories identified as mode 4 is presented in the table below. The table lists the volume of admissions in these classes available for the last five years i.e. 1998-2002.

<table>
<thead>
<tr>
<th>Class of admission</th>
<th>1998</th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temporary visitors</td>
<td>4,558,012</td>
<td>4,743,893</td>
<td>30,511,125</td>
<td>29,419,601</td>
<td>24,344,216</td>
</tr>
<tr>
<td>For business (B1)</td>
<td>4,413,440</td>
<td>4,592,540</td>
<td>4,376,935</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Visa Waiver, business</td>
<td>1,959,552</td>
<td>2,145,967</td>
<td>2,047,227</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treaty traders and investors and families</td>
<td>144,572</td>
<td>151,353</td>
<td>168,214</td>
<td>178,534</td>
<td>171,368</td>
</tr>
<tr>
<td>Treaty traders (E1)</td>
<td>50,817</td>
<td>50,521</td>
<td>51,241</td>
<td>51,443</td>
<td>46,440</td>
</tr>
<tr>
<td>Treaty investors (E2)</td>
<td>93,755</td>
<td>100,832</td>
<td>116,973</td>
<td>127,091</td>
<td>124,928</td>
</tr>
<tr>
<td>Temporary workers and trainees\textsuperscript{2}</td>
<td>430,714</td>
<td>525,700</td>
<td>635,229</td>
<td>688,480</td>
<td>655,949</td>
</tr>
<tr>
<td>Registered nurses (H1A) \textsuperscript{3}</td>
<td>551</td>
<td>534</td>
<td>565</td>
<td>627</td>
<td>1,145</td>
</tr>
</tbody>
</table>

\textsuperscript{14} Although the TN visa category is included in the “temporary workers and trainees” class of admission in the INS classification, Nielsen and Cattaneo (2002) list TN visas separately.

\textsuperscript{15} Mode 4 is defined in Article I: 2(d) of GATS as “the supply of a service … by a service supplier of one Member, through presence of natural persons of a Member in the territory of any other Member”.
<table>
<thead>
<tr>
<th>Occupation (H1B)</th>
<th>1998</th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specialty occupations</td>
<td>240,947</td>
<td>302,326</td>
<td>355,605</td>
<td>384,191</td>
<td>370,490</td>
</tr>
<tr>
<td>Registered Nurses (H1C)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>29</td>
<td>111</td>
</tr>
<tr>
<td>Performing services unavailable in the United States (H2)</td>
<td>28,052</td>
<td>39,277</td>
<td>84,754</td>
<td>100,082</td>
<td>102,615</td>
</tr>
<tr>
<td>Nonagricultural workers (H2B)</td>
<td>24,895</td>
<td>35,815</td>
<td>51,462</td>
<td>72,387</td>
<td>86,987</td>
</tr>
<tr>
<td>Industrial trainees (H3)</td>
<td>3,157</td>
<td>3,462</td>
<td>3,208</td>
<td>3,245</td>
<td>2,695</td>
</tr>
<tr>
<td>Workers with extraordinary ability/achievement (O1)</td>
<td>12,221</td>
<td>15,946</td>
<td>21,746</td>
<td>25,685</td>
<td>25,008</td>
</tr>
<tr>
<td>Workers assisting in performance of O1 workers (O2)</td>
<td>2,802</td>
<td>3,248</td>
<td>3,627</td>
<td>3,834</td>
<td>4,156</td>
</tr>
<tr>
<td>Internationally recognized athletes or entertainers (P1)</td>
<td>34,447</td>
<td>36,228</td>
<td>40,920</td>
<td>42,430</td>
<td>41,453</td>
</tr>
<tr>
<td>Artists or entertainers in reciprocal exchange programs (P2)</td>
<td>3,089</td>
<td>3,772</td>
<td>4,227</td>
<td>3,877</td>
<td>3,754</td>
</tr>
<tr>
<td>Artists or entertainers in culturally unique programs (P3)</td>
<td>9,452</td>
<td>8,471</td>
<td>11,230</td>
<td>9,484</td>
<td>9,487</td>
</tr>
<tr>
<td>Workers in international cultural exchange programs (Q1)</td>
<td>1,921</td>
<td>2,466</td>
<td>2,447</td>
<td>2,089</td>
<td>1,755</td>
</tr>
<tr>
<td>Professional workers NAFTA (TN)</td>
<td>59,061</td>
<td>68,354</td>
<td>91,279</td>
<td>95,486</td>
<td>73,699</td>
</tr>
<tr>
<td>Representatives (and families) of foreign information media (I1)</td>
<td>28,888</td>
<td>31,917</td>
<td>33,918</td>
<td>34,488</td>
<td>33,414</td>
</tr>
<tr>
<td>Exchange visitors (J1)</td>
<td>250,959</td>
<td>275,519</td>
<td>304,225</td>
<td>339,848</td>
<td>325,580</td>
</tr>
<tr>
<td>Intracompany transferees (L1)</td>
<td>203,255</td>
<td>234,443</td>
<td>294,658</td>
<td>328,480</td>
<td>313,699</td>
</tr>
<tr>
<td><strong>All classes</strong></td>
<td><strong>30,174,627</strong></td>
<td><strong>31,446,054</strong></td>
<td><strong>33,690,082</strong></td>
<td><strong>32,824,088</strong></td>
<td><strong>27,907,139</strong></td>
</tr>
</tbody>
</table>

Notes
1. Data for business and pleasure are not available in the years 2000 and 2001 separately due to temporary expiration of the Visa Waiver Program from May to October.
2. This category includes admissions under the NAFTA and previous U.S.-Canada Free-Trade Agreement (The NAFTA category is shown by Nielson and Cattaneo (2002) separately).
3. Admissions began October 1, 1990 (fiscal year 1991). This classification ended during fiscal year 1995; entries subsequent to that represent readmissions of individuals who were previously admitted under this classification.
4. Prior to October 1, 1991 (fiscal year 1992), H1B admissions were termed “Distinguished merit or ability.”

Source: Statistical Yearbook of the Immigration and Naturalization Service, 2002

Table 1.1 reveals that the total number of non-immigrants entering the United States has fallen from 30,174,627 in 1998 to 27,907,139 in 2002. However, most classes of admission relevant for mode 4 have shown sizeable growth. In absolute terms, the “temporary visitors for business” have been the largest class of admission with over 1.3 million entrants in 2002. Nearly, one half of
these visitors took advantage of the visa waiver program. “Temporary workers and trainees” is the second largest group of entrants in absolute terms, with 655,949 admissions in 2002. “Intracompany transferees” and “exchange visitors” also account for a substantial volume of mode 4, with respectively, 313,699 and 325,580 entrants in 2002. Table 1.2 shows the percentage changes in each class of admission from 1998 to 2002. The fastest growing category has been in the “temporary workers and trainees” class. (Temporary visitors for business have reduced by around 0.8 %). The volume of registered nurses (H1A) has increased by 107.80% from 1998-2002, specialty occupations (H1B) have increased by 53.76 % in the same period. The number of people “performing services unavailable in the United States” (H2) has increased even more rapidly (265.8 %), but this includes agricultural workers. Non-agricultural workers (H2B) have increased by 249.42 %. “Intracompany transferees” and “exchange visitors” have also grown at a substantial rate, by 53.43 % and 29.73 % respectively from 1998 to 2002.

Table 1.2: Change in volumes of temporary movement in classes relevant for mode 4, 1998-2002

<table>
<thead>
<tr>
<th>Class of admission</th>
<th>% change in admission (1998-2002)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temporary visitors</td>
<td>434.10%</td>
</tr>
<tr>
<td>For business (B1)</td>
<td>-0.83%</td>
</tr>
<tr>
<td>Visa Waiver, business</td>
<td>4.47%</td>
</tr>
<tr>
<td>Treaty traders and investors and families</td>
<td>18.53%</td>
</tr>
<tr>
<td>Treaty traders (E1)</td>
<td>-8.61%</td>
</tr>
<tr>
<td>Treaty investors (E2)</td>
<td>33.25%</td>
</tr>
<tr>
<td>Temporary workers and trainees 4</td>
<td>52.29%</td>
</tr>
<tr>
<td>Registered nurses (H1A)</td>
<td>107.80%</td>
</tr>
<tr>
<td>Specialty occupations (H1B)</td>
<td>53.76%</td>
</tr>
<tr>
<td>Registered Nurses (H1C)</td>
<td>Na</td>
</tr>
<tr>
<td>Performing services unavailable in the United States (H2)</td>
<td>265.80%</td>
</tr>
<tr>
<td>Nonagricultural workers (H2B)</td>
<td>249.42%</td>
</tr>
<tr>
<td>Industrial trainees (H3)</td>
<td>-14.63%</td>
</tr>
<tr>
<td>Workers with extraordinary ability/achievement (O1)</td>
<td>104.63%</td>
</tr>
<tr>
<td>Workers assisting in performance of O1 workers(O2)</td>
<td>48.32%</td>
</tr>
<tr>
<td>Internationally recognized athletes or entertainers (P1)</td>
<td>20.34%</td>
</tr>
<tr>
<td>Artists or entertainers in reciprocal exchange programs(P2)</td>
<td>21.53%</td>
</tr>
</tbody>
</table>

16 The Visa Waiver Program permits entry to the United States on a temporary basis without visas for certain non-immigrants from qualified countries. The program is only for certain approved countries that offer a reciprocal waiver of visas to U.S. citizens and adhere to other statutory and regulatory requirements. At the beginning of fiscal year 2002, 29 countries were members of the Visa Waiver Program.
Artists or entertainers in culturally unique programs (P3) 0.37%
Workers in international cultural exchange programs (Q1) -8.64%
Professional workers NAFTA (TN) 24.78%
Representatives (and families) of foreign information media (I1) 15.67%
Exchange visitors (J1) 29.73%
Intracompany transferees (L1) 54.34%
All classes -7.51%

Source: Statistical Yearbook of the Immigration and Naturalization Service, 2002

The volume of temporary movement also varies with the region of origin. Table 1.3 shows the geographic area of origin for workers in selected categories relevant for mode 4. The vast majority of entrants come from Europe, Asia and North America. Europe is the first provider of temporary workers in 2002 for intra-company transferees (L1), exchange visitors (J1), workers in international cultural programs (Q1/Q2), entertainers in culturally unique programs (P3), workers with extraordinary ability/achievement (O1) and workers accompanying them (O2). North America is the highest provider of temporary workers in non-agricultural workers performing services unavailable in the United States (H2B), internationally recognized athletes or entertainers (P1), and artists or entertainers in exchange programs (P2). North American countries are also the only provider of temporary workers under NAFTA. Asia is the first provider of temporary workers in specialty occupations (H1B), registered nurses (H1A), nurses under the nursing relief act (H1C) and industrial trainees (H3).

<table>
<thead>
<tr>
<th>Region/Class of Admission</th>
<th>Europe</th>
<th>Asia</th>
<th>Africa</th>
<th>Oceania</th>
<th>North America</th>
<th>Caribbean</th>
<th>Central America</th>
<th>South America</th>
</tr>
</thead>
<tbody>
<tr>
<td>Registered nurses (H1A)</td>
<td>210</td>
<td>427</td>
<td>24</td>
<td>24</td>
<td>342</td>
<td>41</td>
<td>13</td>
<td>110</td>
</tr>
<tr>
<td>Specialty occupations (H1B)</td>
<td>111,342</td>
<td>150,566</td>
<td>7,847</td>
<td>9,778</td>
<td>43,444</td>
<td>4,159</td>
<td>3,552</td>
<td>46,273</td>
</tr>
<tr>
<td>Nursing Relief Act, 1999(H1C)</td>
<td>12</td>
<td>87</td>
<td>-</td>
<td>2</td>
<td>7</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Non-agricultural temporary workers (H2B)</td>
<td>4,461</td>
<td>1,614</td>
<td>1,607</td>
<td>1,806</td>
<td>74,579</td>
<td>11,700</td>
<td>4,666</td>
<td>2,379</td>
</tr>
<tr>
<td>Industrial trainees (H3)</td>
<td>951</td>
<td>1070</td>
<td>116</td>
<td>57</td>
<td>171</td>
<td>42</td>
<td>30</td>
<td>316</td>
</tr>
<tr>
<td>Exchange visitors (J1)</td>
<td>202,260</td>
<td>57,207</td>
<td>11,141</td>
<td>10,996</td>
<td>19,411</td>
<td>3,394</td>
<td>2,364</td>
<td>22,086</td>
</tr>
<tr>
<td>Intracompany transferees (L1)</td>
<td>146,546</td>
<td>73,670</td>
<td>3,909</td>
<td>11,388</td>
<td>40,075</td>
<td>1,850</td>
<td>2,622</td>
<td>37,082</td>
</tr>
</tbody>
</table>
Workers with extraordinary ability (O1) | 14,505 | 3,121 | 381 | 1,487 | 2,577 | 371 | 159 | 2,839  
Workers assisting in performance of O1 workers (O2) | 1,690 | 677 | 47 | 131 | 1,159 | 574 | 13 | 426  
Internationally recognized athletes/entertainers (P1) | 15,122 | 2,011 | 724 | 1,017 | 17,981 | 4,598 | 909 | 4,285  
Artists/entertainers in exchange programs (P2) | 238 | 279 | 47 | 14 | 3,044 | 112 | 33 | 117  
Artists/entertainers in culturally unique programs (P3) | 3,281 | 2,539 | 477 | 70 | 2,132 | 1,658 | 12 | 842  
International cultural exchange programs (Q1,Q2) | 1,432 | 422 | 99 | 7 | 209 | 7 | 4 | 28  
NAFTA(TC/TN) | - | - | - | - | 73,699 | - | - | -  

Source: Statistical Yearbook of the Immigration and Naturalization Service, 2002

Notes:
1. The largest volume in each visa category is highlighted.

Mode 4 entrants in Asia are further analyzed in Table 1.4. Table 1.4 lists the countries in Asia with the highest number of entries under mode 4. India accounts for the largest volume of temporary movement in Asia in 2002, with 110,103 visas in mode 4 and 36.73% of Asian mode 4 movement. India is the highest provider of services in three major categories, specialty occupations (H1B), registered nurses (H1A), and entertainers in culturally unique programs (P3). Apart from India, Japan and China provide the bulk of mode 4 related services. In particular, Japan has the highest number of intra-company transferees (L1), exchange visitors (J1), and workers with extraordinary ability/achievement (O1) in Asia. China has the highest number of internationally recognized athletes or entertainers (O1), and artists or entertainers in exchange programs (P2) as well as the second highest number of specialty occupations entrants in Asia. Philippines is the largest supplier of nurses under the Nursing Relief Act (1999), providing 96% of Asian nurses under the H1C category.

Table 1.4: Movement of temporary workers from Asian Countries in selected categories for mode 4, 2002

<table>
<thead>
<tr>
<th>Country/Class of Admission</th>
<th>China</th>
<th>India</th>
<th>Japan</th>
<th>Korea</th>
<th>Philippines</th>
<th>Israel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Registered nurses (H1A)</td>
<td>57</td>
<td>228</td>
<td>32</td>
<td>25</td>
<td>21</td>
<td>13</td>
</tr>
<tr>
<td>Specialty occupations (H1B)</td>
<td>15,838</td>
<td>81,091</td>
<td>13,287</td>
<td>8,000</td>
<td>5,509</td>
<td>5,357</td>
</tr>
<tr>
<td>Category</td>
<td>2001</td>
<td>2002</td>
<td>2003</td>
<td>2004</td>
<td>2005</td>
<td>2006</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
</tr>
<tr>
<td>Nurses, Nursing Relief Act, 1999 (H1C)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>84</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Services Unavailable in US (Non-agricultural workers) (H2B)</td>
<td>108</td>
<td>310</td>
<td>461</td>
<td>128</td>
<td>221</td>
<td>31</td>
</tr>
<tr>
<td>Industrial trainees (H3)</td>
<td>94</td>
<td>96</td>
<td>529</td>
<td>25</td>
<td>17</td>
<td>24</td>
</tr>
<tr>
<td>Exchange visitors (J1)</td>
<td>9,795</td>
<td>4,866</td>
<td>12,684</td>
<td>9,951</td>
<td>1,333</td>
<td>4,039</td>
</tr>
<tr>
<td>Intracompany transferees (L1)</td>
<td>4,572</td>
<td>20,413</td>
<td>31,044</td>
<td>4,769</td>
<td>2,077</td>
<td>4,440</td>
</tr>
<tr>
<td>Workers of extraordinary ability/achievement (O1)</td>
<td>282</td>
<td>523</td>
<td>741</td>
<td>227</td>
<td>191</td>
<td>510</td>
</tr>
<tr>
<td>Workers accompanying performance of O1 workers (O2)</td>
<td>117</td>
<td>138</td>
<td>40</td>
<td>72</td>
<td>73</td>
<td>34</td>
</tr>
<tr>
<td>Internationally recognized athletes or entertainers (P1)</td>
<td>795</td>
<td>95</td>
<td>395</td>
<td>166</td>
<td>117</td>
<td>246</td>
</tr>
<tr>
<td>Artists/entertainers in reciprocal exchange programs (P2)</td>
<td>50</td>
<td>41</td>
<td>16</td>
<td>140</td>
<td>25</td>
<td>32</td>
</tr>
<tr>
<td>Artists/entertainers in culturally unique programs (P3)</td>
<td>509</td>
<td>946</td>
<td>367</td>
<td>234</td>
<td>61</td>
<td>77</td>
</tr>
<tr>
<td>International cultural exchange programs (Q1)</td>
<td>77</td>
<td>6</td>
<td>303</td>
<td>10</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>32,911</td>
<td>110,103</td>
<td>60,631</td>
<td>24,487</td>
<td>10,417</td>
<td>15,335</td>
</tr>
</tbody>
</table>

Source: Statistical Yearbook of the Immigration and Naturalization Service, 2002

Notes:
1. The figures for China include People’s Republic of China and Taiwan.

Data on the volume of mode 4 reveals that “specialty occupations” or H1Bs represent the largest nonimmigrant class of admission from Asia and the second largest nonimmigrant class of admission overall in 2002. H1B’s are also part of the fastest growing class of admission (“temporary workers and trainees”) in the last five years and the largest visa category for India in 2002. Thus, further analysis of movement in the H1B category could yield valuable insights into size and nature of mode 4 trade.

INS defines an H-1B temporary worker as “an alien admitted to the United States to perform services in “specialty occupations,” based on professional education, skills, and/or equivalent experience.” Specialty occupations include computer systems analysts and programmers, physicians, professors, engineers, and accountants. Thus, a vast majority of H1B occupations are related to services. Table 1.5 summarizes volume and characteristics of H1B beneficiaries in 2002. The table reveals the top 10 industries employing H1B’s along with the median age,
income, education and leading country of birth of the H1B beneficiaries. In the fiscal year 2002, 197,537 H1B petitions were approved for initial and continuing employment. H1B beneficiaries were, on average, 30 years old, with a median annual income of $55,000 in 2002. Almost half of all H1B’s have a masters or postgraduate degree.

Table 1.5: H1B Beneficiaries in the Top 10 Industries, United States, Fiscal 2002

<table>
<thead>
<tr>
<th>Industry (NAICS Code)</th>
<th>Total Number of Beneficiaries</th>
<th>Median Age (years)</th>
<th>Master's Degree or higher (%)</th>
<th>Median Income</th>
<th>Leading Country of Birth (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>All industries</td>
<td>197,537</td>
<td>30</td>
<td>48</td>
<td>55,000</td>
<td>India (34)</td>
</tr>
<tr>
<td>Computer systems design and related services (5415)</td>
<td>50,776</td>
<td>29</td>
<td>36</td>
<td>60,000</td>
<td>India (68)</td>
</tr>
<tr>
<td>Colleges, universities, and professional schools (6113)</td>
<td>18,401</td>
<td>34</td>
<td>93</td>
<td>37,000</td>
<td>PRC (26)</td>
</tr>
<tr>
<td>Architectural, engineering, and related services (5413)</td>
<td>8,963</td>
<td>31</td>
<td>44</td>
<td>48,000</td>
<td>India (21)</td>
</tr>
<tr>
<td>Management, Scientific, and Technical Consulting Services (5416)</td>
<td>7,458</td>
<td>29</td>
<td>43</td>
<td>55,000</td>
<td>India (39)</td>
</tr>
<tr>
<td>Scientific research and development services (5417)</td>
<td>6,695</td>
<td>33</td>
<td>82</td>
<td>54,000</td>
<td>PRC (24)</td>
</tr>
<tr>
<td>Telecommunications (5133)</td>
<td>4,357</td>
<td>30</td>
<td>48</td>
<td>70,000</td>
<td>India (38)</td>
</tr>
<tr>
<td>Elementary and secondary schools (6111)</td>
<td>3,983</td>
<td>33</td>
<td>31</td>
<td>33,000</td>
<td>India (18)</td>
</tr>
<tr>
<td>Accounting, tax preparation, bookkeeping, and payroll services (5412)</td>
<td>3,507</td>
<td>30</td>
<td>36</td>
<td>42,000</td>
<td>India (16)</td>
</tr>
<tr>
<td>General medical and surgical hospitals (6221)</td>
<td>3,442</td>
<td>32</td>
<td>81</td>
<td>42,000</td>
<td>India (24)</td>
</tr>
<tr>
<td>Securities and commodity contracts intermediation and brokerage (5231)</td>
<td>2,917</td>
<td>28</td>
<td>45</td>
<td>75,000</td>
<td>India (21)</td>
</tr>
</tbody>
</table>

Source: Statistical Yearbook of the Immigration and Naturalization Service, 2002

Notes:
1. Industry data is collected using the North American Industry Classification System (NAICS).
2. Total number of beneficiaries is the sum of initial and continuing beneficiaries.

Computer related occupations were the most numerous occupation group of H1B’s in 2002. 68% of H-1B beneficiaries in computer-related occupations were born in India. Besides computer-related occupations, India-born beneficiaries were the highest in other top 10 occupations: architecture, engineering, and surveying (21%), accounting and administrative specializations.

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17 Petitions for initial employment are filed for first-time H-1B employment with employers. Continuing employment petitions refer to extensions, sequential employment, and concurrent employment, for aliens already in the United States.

18 Source: Statistical Yearbook of the Immigration and Naturalization Service, 2002
(16 percent) and medicine and health (24 %). Table 1.6 provides details on the volume of temporary movement in H1B occupations of the top five H1B receiving countries in 2002. India is the visible leader, having 64,980 H1B visas in 2002, with majority (47,477 visas or 73 % of visas) being granted in computer related fields. China is the second largest H1B beneficiary, with 18,841 visas overall and 5,357 visas in computer-related fields. UK, Philippines and Canada have 7,171, 9,295 and 11,760 H1B visas respectively, with most visas again being in computer-related fields, with the exception of Philippines, who have more H1B visas in the medical and health fields.

Table 1.6: H1B Beneficiaries in the Top 5 H1B receiving countries, 2002

<table>
<thead>
<tr>
<th>Category</th>
<th>India</th>
<th>China</th>
<th>Canada</th>
<th>Philippines</th>
<th>United Kingdom</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer-related</td>
<td>47,477</td>
<td>5,357</td>
<td>2,770</td>
<td>1,561</td>
<td>1,250</td>
</tr>
<tr>
<td>Fashion Models</td>
<td>5</td>
<td>4</td>
<td>92</td>
<td>1</td>
<td>50</td>
</tr>
<tr>
<td>Managers and Officials</td>
<td>1,212</td>
<td>388</td>
<td>1,204</td>
<td>315</td>
<td>908</td>
</tr>
<tr>
<td>Miscellaneous, professional, technical and managerial</td>
<td>690</td>
<td>349</td>
<td>379</td>
<td>115</td>
<td>283</td>
</tr>
<tr>
<td>Administrative Specialization</td>
<td>2,689</td>
<td>1,660</td>
<td>1,342</td>
<td>2,186</td>
<td>795</td>
</tr>
<tr>
<td>Architecture, engineering and surveying</td>
<td>5,780</td>
<td>2,633</td>
<td>1,629</td>
<td>993</td>
<td>1,235</td>
</tr>
<tr>
<td>Art</td>
<td>113</td>
<td>76</td>
<td>133</td>
<td>65</td>
<td>245</td>
</tr>
<tr>
<td>Education</td>
<td>1,908</td>
<td>3,593</td>
<td>1,507</td>
<td>957</td>
<td>893</td>
</tr>
<tr>
<td>Entertainment and Recreation</td>
<td>69</td>
<td>28</td>
<td>77</td>
<td>9</td>
<td>89</td>
</tr>
<tr>
<td>Law and jurisprudence</td>
<td>72</td>
<td>93</td>
<td>165</td>
<td>34</td>
<td>99</td>
</tr>
<tr>
<td>Life Sciences</td>
<td>727</td>
<td>1,965</td>
<td>415</td>
<td>63</td>
<td>360</td>
</tr>
<tr>
<td>Mathematics and Physical Sciences</td>
<td>693</td>
<td>1,401</td>
<td>446</td>
<td>76</td>
<td>272</td>
</tr>
<tr>
<td>Medical and Health</td>
<td>2,530</td>
<td>674</td>
<td>949</td>
<td>2,524</td>
<td>297</td>
</tr>
<tr>
<td>Museum, library and archival sciences</td>
<td>11</td>
<td>30</td>
<td>56</td>
<td>5</td>
<td>31</td>
</tr>
<tr>
<td>Religion and Theology</td>
<td>7</td>
<td>2</td>
<td>14</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Social Sciences</td>
<td>738</td>
<td>413</td>
<td>365</td>
<td>257</td>
<td>206</td>
</tr>
<tr>
<td>Writing</td>
<td>77</td>
<td>91</td>
<td>133</td>
<td>44</td>
<td>83</td>
</tr>
<tr>
<td>Unknown</td>
<td>182</td>
<td>84</td>
<td>84</td>
<td>84</td>
<td>68</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>64,980</strong></td>
<td><strong>18,841</strong></td>
<td><strong>11,760</strong></td>
<td><strong>9,295</strong></td>
<td><strong>7,171</strong></td>
</tr>
</tbody>
</table>

Source: Statistical Yearbook of the Immigration and Naturalization Service, 2002

Table 1.6 clearly shows that Indians have been the leading country of birth of H1B beneficiaries in most industries. However, past INS data reveals that the relative share of beneficiaries from India declined sharply in fiscal year 2002 in relation to 2001, from one half to one third of the total H1B’s granted. China, the second leading source of H-1B beneficiaries, increased its share from 8 to nearly 10 percent in 2002.19

19 According to INS’s annual report titled “Characteristics of Specialty Occupation Workers (H-1B): 2002”, the share of H-1B workers born in India is higher for continuing beneficiaries (47 percent) than for
The relative occupational distributions in 2001 and 2002 are also different. Computer-related occupations group saw its share of total petitions approved drop sharply from 58 percent to 38 percent in 2002. Total employment of systems analysts and programmers fell by 79 percent. Nearly every occupation group declined worldwide between 2001 and 2002. The only notable exceptions were education, medicine and health and life sciences. The fall in computer-related occupations is related to the tech-bubble burst and indicates that mode 4 is closely related to business cycle conditions. These trends are also apparent in India. Table 1.7 looks at share of India in H1B visas in Asia and the world in the years 2000-2002 for various occupations.

Table 1.7: India’s Share in H1B visas, Asia and World, 2000-2002

<table>
<thead>
<tr>
<th>Category</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>India % Share in Asia</td>
<td>Indian % Share in World</td>
<td>India %Share in Asia</td>
</tr>
<tr>
<td>Computer-related</td>
<td>79.62%</td>
<td>68.18%</td>
<td>81.53%</td>
</tr>
<tr>
<td>Fashion Models</td>
<td>10.53%</td>
<td>0.33%</td>
<td>2.00%</td>
</tr>
<tr>
<td>Managers and Officials</td>
<td>32.45%</td>
<td>12.28%</td>
<td>37.16%</td>
</tr>
<tr>
<td>Miscellaneous, professional, technical and managerial</td>
<td>27.62%</td>
<td>11.49%</td>
<td>33.63%</td>
</tr>
<tr>
<td>Administrative Specialization</td>
<td>23.69%</td>
<td>13.88%</td>
<td>28.98%</td>
</tr>
<tr>
<td>Architecture, engineering and surveying</td>
<td>39.47%</td>
<td>26.01%</td>
<td>42.36%</td>
</tr>
<tr>
<td>Art</td>
<td>6.09%</td>
<td>3.36%</td>
<td>8.81%</td>
</tr>
<tr>
<td>Education</td>
<td>17.26%</td>
<td>8.36%</td>
<td>19.99%</td>
</tr>
<tr>
<td>Entertainment and Recreation</td>
<td>38.42%</td>
<td>17.37%</td>
<td>19.26%</td>
</tr>
<tr>
<td>Law and jurisprudence</td>
<td>12.90%</td>
<td>4.77%</td>
<td>15.31%</td>
</tr>
<tr>
<td>Life Sciences</td>
<td>19.76%</td>
<td>11.06%</td>
<td>19.03%</td>
</tr>
<tr>
<td>Mathematics and Physical Sciences</td>
<td>18.40%</td>
<td>10.03%</td>
<td>21.95%</td>
</tr>
<tr>
<td>Medical and Health</td>
<td>27.86%</td>
<td>18.00%</td>
<td>31.86%</td>
</tr>
</tbody>
</table>

initial beneficiaries (20 percent) while China-born workers have higher initial beneficiaries (11 percent) than continuing beneficiaries( 7 percent)

20 For further details on occupation groups in H1B visas see INS Annual Report “Characteristics of Specialty Occupation Workers (H-1B): 2002”
Data in Table 1.7 reveals that Indians received approximately 80% of Asian and 70% of overall H1B visas in “computer-related” occupations in 2000 and 2001. However, in 2002, the share of Indians reduced to 76% of Asians and 63% of overall H1B visas in computer-related occupations. There has also been a reduction in total H1B visas to India from 2001 to 2002, with India’s share falling from 65.82% to 50.91% in Asia and 48.78% to 32.89% in the world. The recent decline in visas can be attributed to various reasons, such as slowing down of the US economy, and drop in quota of H-1B visas from 195,000 to 65,000 in the last year. With these new trends, it is even more important to examine the type and nature of barriers facing movement of Indian professionals. The next section examines the common restrictions encountered by Indians in US markets. Details pertaining to specific service sectors are discussed in Section 3.

Section 2: General Restrictions on mode 4

The immigration laws that admit foreign workers to the United States are administered by various U.S. government departments and agencies. These include Immigration and Naturalization Service (INS) the U.S. Department of State; and the U.S. Department of Labor.21 In some cases, these U.S. government agencies are assisted by state government departments, such as the state departments of labor. Both permanent and temporary foreign workers fall under the purview of same immigration market rules and procedures. According to the US Immigration and Nationality Act (INA), “Every alien is presumed to be an immigrant until he establishes to the satisfaction of the consular officer, at the time of application for admission, that he is entitled to a nonimmigrant...

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21 On March 1, 2003, the INS became part of the Department of Homeland Security, and changed its name to the Bureau of Citizenship and Immigration Services (BCIS.)
status”\(^\text{22}\). Hence, temporary workers often face numerous restrictions by immigration authorities as they are viewed to be potential immigrants.

The GATS agreement indicates the commitments of member countries such as the United States in trade related to mode 4. Like all other countries, the commitments made by the United States in mode 4 are very limited. Market access and national treatment obligations in mode 4 are mostly unbound in the sectoral schedules of US. \(^\text{23}\) The horizontal commitments are bound for only a small subset of service personnel, namely service sales person, intra-company transferees (managers, executives, specialists), personnel engaged in establishment, fashion models and specialty occupations. The limitations on market access and national treatment are in the form of restrictions on eligibility conditions, duration of stay, and additional requirements that a service provider must satisfy. For instance, intra-corporate transferees or L1 visa applicants need to be employed by their firm outside the United States for at least one year immediately before the date of their application. L1 visa applicants must also be in positions of an executive, manager or a specialist in their firm. \(^\text{24}\) The limitations that are common in the commitment schedules can broadly be summarized in four areas. These are immigration laws and visa regulations, numerical quotas, policies favouring domestic service providers and recognition related regulations. Each of these barriers is discussed in brief below.

2.1 Visa Regulations

Visas for a foreign worker to enter the United States are obtained from the U.S. embassy or consulate in the foreign country. However, depending on the type of visa, approvals must be obtained from U.S. government departments and the INS. All visas have specific durations, with different conditions attached to their grant and renewal. The procedure for the grant or extension of a visa is often time-consuming, cumbersome, and expensive. Certain categories of visa require employers to seek labor certification through the U.S. Department of Labor (DOL). Depending upon the program, the process for filing varies between months and years. The DOL provides the

\(^{22}\) Quoted from Section 214(b), Immigration and Nationality Act (INA).

\(^{23}\) In the GATS agreement, a Member has to specify the commitments that it is prepared to undertake on market access and national treatment for any sector included in its services schedule. Limitations applying to all scheduled sectors are listed in the horizontal section. If there is no guarantee to market access and/or national treatment, the commitment is indicated as “unbound”.

\(^{24}\) For instance, the US commitments specify that a manager must be in a position to direct the organization, or a department or sub-division of the organization, supervise and control the work of other supervisory, professional or managerial employees, have the authority to hire and fire or recommend hiring, firing, or other personnel actions (such as promotion or leave authorization), and exercise discretionary authority over day-to-day operations.
current processing times for labor certifications in various states of US on the DOL website.\textsuperscript{25} Labor certification is required for H1B, H1C, H2A and H2B visas. Any employer of foreign workers has to complete five basic steps to obtain a labor certification.

a. The employer must ensure that the position meets the qualifying criteria for the requested program. (For instance, H1B’s need to have a bachelor’s degree in a specific specialty)
b. The employer should complete the ETA (Employment and Training Administration) form designated for the requested program. This includes obtaining supporting documentation.
c. The employer must ensure that the wage offered equals or exceeds the prevailing wage for the occupation in the area of employment.
d. The employer must ensure that the compliance issues upon receipt of a foreign labor certification are completely understood.
e. The completed ETA form is submitted to the designated Department of Labor office for the requested program.

Labor certification often takes a long time due to the large number of administrative requirements. Currently, the process to obtain an employment based temporary labor certification (H-2A, H-2B) usually takes months through the state agency and the DOL regional office. The Immigration and Nationality Act (INA) requires that the hiring of a foreign worker should not affect the wages and working conditions of U.S. workers adversely. One of the major ways this is ensured is by the regulatory requirement that the wages offered on labor certification applications should be the prevailing wage rate for the occupation and area of employment. The time needed to determine the prevailing wage varies from state to state, based on their workload, and most states require between one to four weeks for a response.

Employers also have to prove that they do not lay off US workers for foreign workers and must post a notice to hire H1B’s for at least 10 days in the workplace. They have to place a job order with the local employment office, and an advertisement in a publication for at least three days. The Visa Reform Act of 2004 increased the fee to be paid by employers for H1B’s by $500 to step up efforts by the US department of labor to detect fraud and underpayment of wages. The time, burden of procedures and paperwork involved does negate to a certain extent, the benefit of

\textsuperscript{25} Current Processing time for labor certification by DOL can be found at http://workforcesecurity.doleta.gov/foreign/times.asp
hiring foreign workers from developing countries like India. The wage-parity conditions, although aimed at providing non-discrimination, takes away the cost and competitive advantage of developing countries.

### 2.2 Numerical and Time Limits

There are numerical limits on the number of foreign workers in the US. For instance, current law limits the number of foreign workers on H-1B status to 65,000 and registered nurses under the H1C program to 500 annually.\(^{26}\) H2B workers have a quota of 66,000 per year. In 2004, the annual cap of 65,000 new H1B workers was reached in mid-February of 2004, within less than five months into the fiscal year.\(^{27}\) Moreover, 22,000 H-1B applications were pending from the last year and close to 7,000 H1B visas were set aside for Chile and Singapore in recent U.S. free-trade agreements. Thus, effectively only 36,000 new H-1B visas were available in 2004.\(^{28}\) Such restrictions prevent employers from hiring qualified foreign nationals in a competitive global market. In 2005, the annual limit on H-1B visas of 65,000 was reached on October 1, 2004, the first day of opening for H1B visas for the year 2005. The Visa Reform Act of 2004 now allows an additional 20,000 H-1B visas a year. However, these are issued only to foreign graduates of US universities who hold Masters or PhD degrees. These visas would not be available to temporary workers in mode 4. The annual cap of 66,000 H-2B visas was reached on January 3, 2005, just three months into visas for fiscal year 2005.

Restrictions also apply to Indian service providers after they enter the foreign market. The duration of stay depends on the type of visa and hence the skill level and position of the worker. While a B1 visitor for business can stay initially for 6 months, with an extension of up to a year, a H1B can stay for 3 years with extension for 3 years. For L1 visas, executive and managerial L1 visas can be issued for a maximum of 7 years, whereas a specialized knowledge L1 visa is issued only for 5 years. The limitations on duration and fees for extensions reduce the probability of an employer hiring a foreign worker.\(^{29}\)

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\(^{26}\) The yearly number of H1B visas for foreign workers and professionals dropped by two-thirds for fiscal 2004 from 195,000 in the years 2001-2003.  
\(^{27}\) The notice from the BCIS (INS) is at http://uscis.gov/graphics/publicaffairs/newsrels/h1bcap_NR.pdf.  
\(^{29}\) Chanda (2003) reports that although permits are extendable, renewals and extensions are subject to stringent conditions and high fees.
2.3 Policies favoring domestic workers

Mode 4 is often restricted due to many policies which differentiate against Foreign Service providers. Foreign workers face discrimination in a variety of ways. Some of these relate to eligibility conditions such as residency and citizenship requirements for providing services and are specific to particular professions and sectors. For instance, US citizenship is required for licensure in accounting, auditing and bookkeeping Services in North Carolina. These are discussed in Section 3. Other major policies that discriminate against foreign workers include taxation policies on foreign workers, government sourcing and preference policies, and security policies. The implications of these policies for mode 4 are briefly discussed below.

2.3.1 Taxation Policies

Taxes levied on foreign workers and the tax percentage and tax components vary from state to state. There are four major components of tax for any worker; federal income tax, state tax, social security tax, and Medicare tax. Income from any U.S. sources is taxable whether it is received while the foreign worker is a nonresident alien or a resident alien. The amount of tax depends on a foreign workers filing status and is important in determining whether he/she can take certain deductions and credits. For instance, resident aliens can claim personal exemptions and exemptions for dependents in the same way as U.S. citizens, however, nonresident aliens generally can claim only one personal exemption. If any foreign worker is in the US for a short period of time and cannot claim a resident alien status while filing taxes, he may have to pay a very high tax amount. Moreover, all foreign workers need to pay social security taxes although temporary workers cannot often avail of the social security benefits. Social security and Medicare taxes apply to wages for services performed as an employee in the United States, regardless of the citizenship or residence of either the employee or the employer. The 2004 contribution rate, also

30 A foreign worker is a resident alien of the United States for tax purposes if they meet either the green card test or the substantial presence test for the calendar year. According to the Green Card test, a worker is a resident for tax purposes if they were a lawful permanent resident or a green card holder of the United States at any time during the calendar year. In the substantial presence test, a foreign worker is considered a U.S. resident for tax purposes if they have substantial presence for the year. To meet this test, a worker must be physically present in the United States on at least 31 days during the current year, or 183 days during the 3-year period that includes the current year and the 2 years immediately before that.

31 To see how a foreign worker is determined to be a resident alien or a non-resident alien, see IRS publication 519 (2003), U.S. Tax Guide for Aliens, online at http://www.irs.gov/publications/p519/index.html
known as the FICA tax rate, is 7.65% for employees and 15.30% for self-employed workers. The social security tax rate is 6.2% on earnings up to $87,900 and the Medicare rate is 1.45% on all earnings. The payment of these taxes contribute to coverage under the U.S. social security system for retirement benefits and medical insurance, however they do not benefit temporary workers since they return to their home country. Indians can receive social security retirement benefits only if they have worked in the US for at least ten years. Countries that have treaties of reciprocity or totalization agreements with US can receive benefits based on their combined work history at their home country and the US. However, developing countries such as India do not get any tax credits due to the absence of tax treaties with the US. This often leads to double taxation as workers have to pay taxes and make retirement contributions in their home country.\textsuperscript{32}

2.3.2 Government preferences and sourcing policies

Another important source of discrimination between foreign and domestic service providers is in government preferences and sourcing policies. Government preferences in the form of procurement contracts and subsidies to domestic suppliers prevent foreign suppliers from competing in the market. The US government-wide goal for small business participation in terms of the percentage of total federal government procurement dollars awarded is 23 percent. The goal for small disadvantaged businesses is 5 percent and the goal for women-owned small businesses is 5 percent. There are also preferences for both Historically Underutilized Business Zone (HUBZone) contractor participation and the service-disabled veterans owned small businesses program (SDVOSB).\textsuperscript{33} Foreigners are also not eligible for many subsidy schemes, and to buy real estate in many states of the United States. For instance, loans by the Federal Small Business Administration are restricted to US citizens or companies that are 100 percent owned by US citizens and whose directors are all US citizens. It must be pointed out government subsidies and sourcing policies such as those for increasing small business participation are often introduced in national interest and do not specifically target restricting foreign professionals. However, reservations for various constituencies and special interest groups restrict competition and often indirectly do have an effect in terms of limiting the role of foreign service providers.

2.3.3 Security Restrictions

\textsuperscript{32} There has been some discussion of avoiding double taxation under which collection or recovery of tax would generally be suspended on a reciprocal basis between the United States and India. However things have not progressed on this front.

\textsuperscript{33} The goal for these groups is 3 percent or 12 percent of the small business goal.
The regulations on foreign workers also changed with the prevailing economic and political situation. The terrorist attacks of September 11 have had a significant impact on the operations of US admissions system, and brought about a renewed focus on security issues. In November 2001, the State Department announced that there would be increased security checks on all male non-immigrant visa applicants between ages 16-45 from Arab or Muslim countries. This has resulted in an additional 20-day waiting period, which enables name checks against FBI databases. From January 5, 2004, every person entering the United States with a visa at U.S. commercial international airports, and in 14 major seaports are being electronically fingerprinted and photographed at immigration inspection stations. Non-immigrant workers have to notify the INS of any change of address or employment. While some anti-terrorism immigration measures may be necessary for US security, practical application of such regulations may be arbitrary and make the process of admission to US more expensive, and inhospitable to temporary workers.

2.4 Non-recognition of Professional Qualifications

Foreign service providers face many recognition barriers such as licensing requirements, nationality and residency conditions. This is particularly a serious barrier to market entry for developing countries with different methods of accreditation. While the existence of these barriers is well-known, there has been no detailed study on the process of recognition that foreign workers need to go through in-order to practice their respective professions. These barriers are very significant barriers particularly in accredited professions, such as accountancy, medicine and law. In the legal and medical professions, foreign medical and legal professionals must take re-certification examinations. A foreign lawyer has to obtain additional degree from an approved law school in the US, pass a bar examination, and satisfy the bar’s other eligibility requirements. In the accountancy profession, foreign accountants must obtain appropriate local recognition by applying individually to a state board and pass the AICPA Uniform Final Examination.34

Licensing requirements are analyzed in detail in the next section of this study. As mentioned earlier, licensure is often the responsibility of each individual state and territory in the United States, rather than the federal government. Hence to determine the actual process of recognition, it is necessary to study licensing and accreditation mechanisms of each profession on the federal and state level. The role of individual professional associations is often equally important and
Section 3: Sectoral Restrictions on mode 4

The service sector comprises a broad range, including varied activities such as business and professional services, communication services, tourism, and transportation services. In line with the global trend, services sector in India has grown rapidly and during the 1990s exports of the Indian service sector grew at more than 17 percent per annum. While India’s share in global merchandise trade is around 0.7 per cent, the share of Indian services exports is higher at 1.4 per cent of the total world trade in services. India exhibits a strong revealed comparative advantage (RCA) in services relative to goods. Between 1996 and 2000 the RCA index for services increased by 74 percent and a close analysis revealed that the increase was on account of the ‘other business services’ which includes software exports (IT and BPO sector), financial, management, consultancy and telecommunication sectors among others. This study examines the barriers in the major service sectors where India is engaged in mode 4 exports or has the potential to export services. Based on available evidence on the profile of India’s mode 4 based exports as well as an examination of the offer and original commitment schedules for the US, the service sectors proposed for this study are accountancy, health, legal and construction, engineering, architecture and computer services. The importance of these sectors is also stated in the Ministry of Commerce and Industry, Government of India background paper on mandated negotiations under the GATS which identifies these sectors as areas where market access for Indian professionals is specifically required.

Information on specific sectors can be found in the current U.S. commitments under the GATS. The US schedule of commitments lists the extent of market access and limitations on national treatment in all sectors. The market access and national treatment obligations in most sectors are not guaranteed for mode 4 (except for categories indicated in the horizontal section). The

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34 AICPA stands for American Institute of Certified Public Accountants
35 The WTO Secretariat has divided all services into 12 sectors which are further divided into 161 sub-sectors.
36 World Bank (2004), “Sustaining India’s Services Revolution”.
37 See http://commerce.nic.in/dbkserv.htm for more details.
38 In the Uruguay Round, mode 4 commitments were very limited and often confined to senior managers and executives in overseas affiliates. Although most countries have made mode 4 commitments, they are inscribed horizontally. Developed countries have covered 50% of the services sector while developing countries have covered 11% of the services sector.
barrier to mode 4 from the US schedules mainly concern licensing and residency requirements for providing services in different sectors. As licensing and regulation of the professions are a function of the states, it is necessary to look beyond the limitations to market access listed in the US commitments schedule. The nature of the sector, the steps to licensure as well as the regulatory difficulties faced by service providers in various sectors is not apparent from commitments schedule and can only be ascertained by studying the different sectors and professions in further detail.

These service sectors analyzed in the next subsections mainly include licensed professional services. Licensed professional services such as, law, accounting, medicine, and architecture have been subject to extensive governmental regulation and licensing requirements. The direct form of regulation occurs through the actions of formal government agencies. The indirect form of regulation is seen when governments delegate to professional or licensing organizations many of the regulatory roles of the government, even though the ultimate regulatory powers are often held by the governments. As regulation in the U.S has been delegated to the state level it varies among state jurisdictions. The responsibility of states in the US has given rise to extra procedures, laws, and extra agencies to deal with any licensed services. Although the goal of such regulations is mostly consumer protection and to ensure that the integrity and quality of the service and the service provider are maintained, often these types of regulations give rise to greater barriers to entry for Foreign Service providers.

The nature of computer and related services is different from licensed sectors. Computer and related services is a non-licensed sector and there are generally no formal barriers and processes to verify the competence of foreign professionals. Computer services, however, face restrictions on visa regulations and taxation issues summarized earlier in the section on general restrictions. Such non-licensed sectors often face many informal and intangible barriers, which are harder to address since they are not often captured in existing agreements.

Section 3 is divided into 5 subsections. The first four subsections outlines the character of licensed service sectors, including accountancy services, health services, legal services and construction and engineering services. The last subsection discusses the informal barriers and recent trends in computer services.
3.1 Accounting, Auditing and Bookkeeping Services

Accounting has been a leading sector in the GATS negotiations to reduce barriers to trade in professional services. With businesses enterprises becoming more international, the need for more international accounting services has grown. But, despite the considerable international presence of the major accounting firms, such as PricewaterhouseCoopers, Arthur Andersen and Ernst & Young, almost all countries maintain various types of restrictions that impede the flow of accounting services across borders. The scope of "accounting services" is usually understood to include accounting/bookkeeping (measuring and recording the financial flows and positions of an enterprise), auditing (verifying and attesting/certifying the accuracy of the financial position and results of the enterprise, for internal or external purposes), and tax preparation. The delivery of accounting services is mostly dependent on the physical presence of local establishments (commercial presence). In addition, the larger accountancy firms also engage in widespread short-term consultancies (the movement of natural persons) to mobilize specific sources of expertise within their firms.

The US is the center of operations of some of the largest accounting firms in the world. Four of the “Big Five” accounting firms, have their headquarters in the U.S. The dominance of the Big Five is evident from the fact that the Big Five constituted 89.9% of the aggregate revenues in 100 largest accounting firms in the U.S. and virtually all of the "Fortune 500" U.S.-based companies are audited by the Big Five. The international presence of the large U.S.-headquartered accounting firms is reflected in the US balance of payments. In 2002, U.S. direct exports of "accounting, auditing, and bookkeeping services" totaled $ 360 million, while imports totaled $716 million. The large volume of imports and exports reflects the extent of the US' international trade in accounting services. Accounting firms and services are, however, subject to many local regulatory restrictions that restrict the free flow of personnel and information. The organizations that regulate the accountancy profession in the US are the 54 State Boards of Accountancy, the American Institute of Certified Public Accountants (AICPA) and the 54 state societies of CPAs. The State Boards of Accountancy are agencies of state governments and each board operates under legislation enacted by each individual state. Thus, the regulations governing

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39 This is particularly true for trade through mode 3.
40 These firms are PricewaterhouseCoopers, Arthur Andersen, Ernst & Young, KPMG, and Deloitte & Touche.
41 Source: U.S. Department of Commerce, Bureau of Economic Analysis, Balance of Payments Division. Data on exports and imports of accounting, auditing, and bookkeeping services from India is not available.
the training and licensing of accountants/auditors vary considerably. Foreign service providers wishing to act as auditors in the USA must obtain appropriate local recognition by applying individually to a state board. In most states there is a three-step process.

1. Service providers must apply to the state board of accountancy for the state in which they wish to be registered. They must provide details of their qualifications to be assessed by a foreign credentials evaluator as at least equivalent to a US bachelor's degree. There is a fee for the evaluation of credentials and it ranges from $90 to $160 for academic credentials, with shipping fee being extra.\(^{42}\)

2. If the application to the state board is accepted, the applicant must pass the AICPA Uniform Final Examination. The Uniform CPA Examination is a professional licensing examination used by all state accountancy boards to ensure CPA applicants possess a mastery of technical knowledge needed to enter the CPA profession. They are tested in four subjects, auditing and attestation, business environments & concepts, financial accounting & reporting and regulation. The costs of taking the exam vary for each state jurisdiction. Estimated costs for first-time candidates applying to take all four sections is approximately $575-$800.\(^{43}\)

3. After passing the CPA exam, applicants in most states need to satisfy additional requirements for receiving a license, such as passing an ethic exam of the respective state, meet experience requirements and pay the appropriate license fee for the state. The application fees for licensing ranges from state to state (For instance, it is $100-200 in California and $330 in Washington State). Most states require applicants to have a 12 to 24-month experience requirement. While most US state board’s experience requirements allow foreign experience, some states require an instate office or in-state residency for licensure. The US sector-specific schedules for mode 4 states that an in-state office is required for licensure in accounting services in 14 states and in-state residency is required for 25 states and the District of Columbia.\(^{44}\) US citizenship is required for licensure in North Carolina.

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\(^{42}\) This is based on the fees charged by a popular evaluation agency, Academic Credentials Evaluation Institute, Inc.

\(^{43}\) Applicants pay fees based on their application status (first-time applicants/reexamination applicants) and the number of examination sections to be tested. For instance, in Washington State, the administrative fee for a first time applicant ranges from $83 to $124.50, depending upon the number of sections the applicant is taking and a section fee that varies from $100.50 to $134.50. For further details on fees and application process for CPA, see [http://www.cpa-exam.org/](http://www.cpa-exam.org/)

\(^{44}\) An in-state office must be maintained for licensure in Arkansas, Connecticut, Iowa, Kansas, Kentucky, Michigan, Minnesota, Nebraska, New Hampshire, New Mexico, Ohio, Vermont, and Wyoming. An
The process of licensing of foreign accountants gives rise to many barriers to mode 4. The application process, testing fees and assessments of educational qualifications and relevant experience in the US clearly discriminates against foreign providers. There are also nationality requirements with respect to who can offer local accounting services with many residence and establishment requirements. There are restrictions on other modes, such as commercial presence in some states which require that a specified number or fraction of the owners of an accounting firm be local citizens/residents and members of an approved professional organization. The restrictions on commercial presence affect the scope for movement of natural persons. White (2001) points out that even in instances where the restrictions appear to affect domestic incumbents and foreign entrants similarly (e.g., restrictions on advertising), the effect is likely to be more adverse to the foreign entrant, since the entrant may need advertising or other promotion to enter and expand in a market dominated by domestic incumbents.

These barriers in the accountancy sector contradict the guidelines of mutual recognition for the accountancy sector in the GATS agreement. The GATS agreement outlines several general obligations of member countries in provision of professional services which includes Most Favored Nation (MFN) treatment (Article II), domestic regulation where members are to ensure that qualification requirements, technical standards and licensing requirements do not constitute unnecessary barriers to trade (Article VI) and encourages mutual recognition of the qualifications of service providers (Article VII). For the accountancy sector, the WTO’s Council for Trade in Services adopted two additional measures developed by the Working Party on Professional Services (WPPS). First, in May 1997 the Council adopted non-binding guidelines for mutual recognition agreements (MRAs) for the accountancy sector. The guidelines provide an extensive framework that is intended to help members structure their MRAs in ways that make them transparent and accessible. The Guidelines sets out in detail the process of negotiating MRAs and clearly states the substance of MRAs with respect to, e.g., qualifications (minimum levels of education, experience, examinations); registration mechanism; and implementation (rules and procedures for enforcement and dialogue and administrative cooperation and arbitration of disputes). Second, in December 1998 the Council adopted "disciplines" (rules) on domestic regulation of the accountancy sector that amplify the provisions of Article VI. The disciplines

In-state residency is required for licensure in Arizona, Arkansas, Connecticut, District of Columbia, Idaho, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Michigan, Minnesota, Mississippi, Missouri, Nebraska, New Hampshire, New Mexico, North Carolina, North Dakota, Ohio, Oklahoma, Rhode Island, South Carolina, Tennessee, and West Virginia.
provide greater detail as to transparency, licensing requirements and procedures, qualification requirements and technical standards. With respect to licensing, the disciplines urge alternatives to residency requirements (e.g., allowing the posting of security bonds to serve as an alternative method of ensuring accountability) and require that licensing procedures be transparent and not unnecessarily burdensome. With respect to qualifications, the disciplines require transparency and reasonable procedures as to examinations and other qualifications. Members are required to take account of qualifications (such as education, experience, and/or examinations) that have been acquired in other countries. However, the licensing process of foreign accountants in the US does not follow the objective and disciplines of the GATS agreement for transparency and unnecessary burden. Foreign accountants in the US need to pay substantial fees and give several examinations for assessing qualifications and registration. There are no alternatives to residency requirements with in-state residency being a requirement in most states.

Moreover, in spite of WTO guidelines on the accountancy sector, the overall disciplines on recognition give considerable flexibility to members and the accountancy disciplines does not tackle Article XVI (market access) and XVII (national treatment) issues, such as citizenship requirements and more rigorous requirements for foreign applicants than for domestic applicants. The guidelines for MRA’s in the accountancy sector remain relatively broad and are voluntary and non-binding. The existing arrangements for mutual recognition tend to be between developed countries, largely based on a shared region or common cultural/historical ties. In the accounting profession, 19 states of the US have an agreement for reciprocal licensing with Australia (all states and territories) and 36 states of the US have an agreement for reciprocal recognition with 9 Canadian provinces. The agreements set out the reduced examination and experience requirements for licensed accountants of respective jurisdictions.\textsuperscript{45} Other Bilateral agreements on recognition of qualifications have been developed between the American Institute of Certified Public Accountants and the Institute of Chartered Accountants(CA) in Australia and the Institutions of Chartered Accountants in England & Wales, Scotland, Ireland; the Canadian and South African Institutes of Chartered Accountants. Members of each organization can apply for membership of others without having to undergo a separate process for the assessment of their qualifications.

\textsuperscript{45} Candidates who have successfully finished relevant exams and licensing requirements by state authorities in each jurisdiction need not duplicate all steps in licensing process and may need to complete a minimum period of accounting experience within the US.
Recognition of qualifications has been raised as one of the issues that need to be addressed if real progress on mode 4 is to be made. As noted before, MRA’s mainly exist where differences between countries are less, with developed countries granting access bilaterally depending on their needs. At present, India has no MRA in accounting services with a foreign accounting body. The process of reciprocal licensing between US and India was initiated by Chartered Accountants of India in March, 2001 and currently rests with the International Qualification Appraisal Board, USA. However, even in the absence of MRA, data on H1B beneficiaries show that more than three thousand five hundred Indians received an H1B visa for accounting, tax preparation, bookkeeping, and payroll services, with Indians representing 16% of H1B visas granted for accounting services.\(^{46}\) Another recent trend has been the use of Indian offshore accountants for preparation of U.S. returns. Tax experts predicted that Indian chartered accountants have prepared 150,000 to 200,000 US returns in 2004, up from about 20,000 in 2003 and 1,000 in 2002. Ernst & Young is reported to have prepared 15,000 tax returns abroad, most of which are corporate returns.\(^{47}\) Even though these developments are in the positive direction, the need for formal accreditation of CA qualification from India cannot be doubted. Recognition would increase the value of the qualification in the employment market and avoid uncertainty in providing services in foreign markets. It must be noted that recognition barriers in accountancy sector also exist in India. Only graduates of an Indian university can qualify as professional accountants in India and foreign accountants cannot be equity partners in an Indian accounting firm. Liberalization in accountancy services need to be reciprocally pursued by both the US and India, with development of global enforceable standards and an institutional infrastructure for accreditation. Organizations such as the Intergovernmental Working Group of Experts on International Standards of Accounting and Reporting (ISAR), established by UNCTAD, have made an attempt in this direction by suggesting guidelines for the qualifications of professional accountants, including a model curriculum for their technical education. The guideline covers general and technical education, the examination system, practice requirements, continuing professional education and a code of professional ethics.\(^{48}\)

\(^{46}\) See Table 1.5 in Section 1  
\(^{47}\) For further details see Associated Press, Feb 22 2004  
Accounting is a vital infrastructural element of the business sector, with large accounting firms already being international in scope and operation. However, there is need to address national regulatory and licensing restrictions to further expand the export of accountancy services from qualified professionals in India.

### 3.2 Legal Services

Legal services play a vital role in supporting and facilitating business. Like accounting firms, law firms around the world are increasingly becoming international since many of their clients pursue opportunities in a global marketplace and need advice on transactions involving multiple jurisdictions. Legal firms often need to establish a commercial presence in overseas markets for their corporate clients. Many lawyers also need to engage in short-term assignments in foreign markets with e-commerce increasing the potential for greater cross-border supply. The number of lawyers and law firms varies among countries according to the size of the economy, and the structure of the legal profession. In the mid 1990s the number of lawyers reached 800,000 in the United States (925,000, including non-professional staff), 500,000 in the European Community and 19,000 in Japan. In the vast majority of countries the legal profession is practiced by individual professionals or by small firms, while the large law firms are limited to a small number countries such as the US, Australia and Canada.\(^{49}\)

In the past decade trade in legal services appears to have grown at a fast rate. In US the exports of legal services have grown from US$ 1358 million in 1992 to US$ 3270 million in 2002, while the US import of legal services have grown from US$ 311 million in 1992 to US$ 768 million in 2002. The United States and the United Kingdom are reported to be the two major exporters of legal services. US balance-of-payments data for private legal services, which capture cross-border trade and temporary establishment of natural persons, shows that in 2002, India received 9 million dollars of legal services from US and supplied 4 million dollars of legal services to the US. Indian exports and imports of US legal services have increased several times, from around 1 million dollars in 1992 to the figures quoted above in 2002.\(^{50}\)

The main obstacle to trade in legal services is represented by the predominantly national character of the law and legal education. The qualification requirements in various countries often differ in

\(^{49}\) See background note by the WTO secretariat, 1998

\(^{50}\) Data on exports and imports are from the US Department of Commerce, Bureau of Economic Analysis
legal services, as one of the main aspects of a lawyer’s education is his knowledge of national law, which differs for each country and in some cases even within the same country. Foreign lawyers supplying legal services act in the majority of cases as foreign legal consultants, that is, they provide advisory legal services in international law, in the law of their home country or in the law of any third country for which they possess a qualification. Domestic law (host country law) still plays a marginal role in international trade of legal services, due to the high barriers represented by qualification requirements, which, like domestic law, are shaped along national lines. Some jurisdictions in the US permit the certification of a foreign lawyer as a foreign legal consultant. A supplier regularly providing legal services is required to be licensed as a foreign legal consultant in the state. The conditions of licensure mentioned in the GATS sector specific commitments are similar in 16 states. Licensure is subject to meeting multiple requirements such as an experience requirement (5 of the 7 years preceding registration must have been spent practicing law), meeting the professional liability insurance requirement, certification of registration and good standing with home-country bar, and a commitment to observe the rules of Professional Responsibility and Disciplinary Rules applicable to members of the respective State Bar. Some states have more strict requirements than others, for instance, California, Florida and Georgia allows foreign lawyers to only practice international law, not 3rd country and host-country law while Alaska, Connecticut and District of Columbia allows practice of international, 3rd country and host-country law, when certain conditions are met.

According to the American Bar Association (ABA), till date, 24 states have enacted a rule licensing foreign legal consultants without an examination in the United States. In 1993 the ABA issued guidelines on foreign legal consultants (“model rule”) which have been adopted in their most liberal form by the state of New York. The ABA “model rule” includes provisions on partnership and employment of local lawyers, scope of practice and previous practical experience. Foreign lawyers in other states cannot practice law in the United States, even if limited to advising on the law of their own countries, without attending an accredited American law school; sitting for the state bar examination and becoming a full member of the bar, by satisfying the bar’s other eligibility requirements. Like accounting services, there is no "United States" bar exam and foreign service providers wishing to act as lawyers in the USA must determine the rules

52 The American Bar Association encourages other jurisdictions to adopt the ABA Model Rule for the Licensing of Legal Consultants. For further details see ABA Section of International Law and Practice, Report 113E to the House of Delegates, at 2 (February 3, 2002).
for the particular state in which they wish to practice. U.S. jurisdictions vary a great deal in bar eligibility requirements for lawyers who received their legal education outside the United States. Some jurisdictions do not allow foreign law school graduates to take the bar examination. Some jurisdictions provide alternatives for foreign-trained lawyers to become eligible to sit for the exam under certain conditions. These conditions usually require the previous legal education to include principles of English common law. Some jurisdictions require successful completion of an additional course of study at an ABA approved law school, others require applicants to have practiced before and many require applicants to pay for an evaluation of their previous education to assure that it is equivalent to the education provided by an ABA approved law school. The steps that need to be followed by a foreign applicant can be summarized as follows.

1. Register in a law school and complete the necessary legal education. A foreign lawyer might need to obtain a Juris Doctor (J.D) or a master of law (LL.M.) degree. Graduates of international law schools often may need to have their academic credentials evaluated by a foreign credential evaluation service in the US. Students whose law degrees are earned from a non-U.S. law school where English is not the primary language of instruction are also required to take the TOEFL. The fee for the LLM degree varies and ranges from $26,000 to $30,000 for tuition for a nine to twelve month academic year, with living expenses, books and supplies being extra.

2. Register with the Committee of Bar Examiners and take the respective state bar examination. The fees for the bar exam range from $300 in Arizona and $375 in Washington State to $446 in California for a general applicant. The exam generally lasts 2 to 3 days, testing both knowledge and understanding of the principles and theories of law as well as knowledge of the Rules of Professional Conduct of the state in which the applicant takes the exam.

3. File an application for a moral character determination or background investigation. Fees for the background investigation are separate and additional to the fees for taking the bar examination.

4. File an application, take and pass the Multistate Professional Responsibility Examination (MPRE), which is administered and graded by the National Conference of Bar

53 Only 12 states allow foreign graduates to sit for the state bar exam with a LL.M. degree. Other states require foreign trained applicants to obtain a J.D. or LL.B. from an approved law school
Examiners. The MPRE is used in all states and jurisdictions, with the exception of Washington, Puerto Rico, Maryland, and Wisconsin. The MPRE is based on the law governing the conduct of lawyers, including the disciplinary rules of professional conduct articulated in the ABA Model Rules of Professional Conduct, the ABA Code of Judicial Conduct, as well as controlling constitutional decisions. The regular fee for the MPRE is $52.00.

The process of certification for lawyers indicates that there are several barriers for foreign lawyers in the US.

Firstly, even for the foreign legal consultant (FLC) allowed in U.S. jurisdictions, there is limited scope of practice afforded by the rules. Of the 24 U.S. jurisdictions with legal consultant rules, 15 restrict legal consultants to advising on the law of their home countries. Foreign lawyers come to the U.S. to learn about U.S. law and practice, which generates value for them in their home countries and elsewhere. However, the legal consultant licensing system in a majority of states does not permit foreign lawyers to experience and learn about U.S. law directly. States also require that the foreign legal consultant have extensive experience of practice in the law of their respective home countries. This prevents newly licensed foreign lawyers from being foreign consultants, in spite of the fact that they are the most likely to travel to the U.S. for education in U.S. law schools and training in U.S. law firms. The consequence of the limited value of the legal consultant license is that few foreign lawyers have registered under the existing legal consultant regimes. According to Hollenhorst (1999), the maximum number of licensed legal consultants was in the state of New York where there were 277 legal consultants. No jurisdiction other than New York had more than 27 FLCs. The states of Alaska, Indiana and Oregon had 1 registered FLC. Most states reported very little enquiries for FLC certification as it is not considered a significant credential.

Secondly, the process for securing admission to a state bar is typically quite long and requires multiple applications and fees. Separate and distinct applications are required for registration for the bar, the moral character determination, the bar examination, and the Multistate Professional Responsibility Examination. The rules for admission are also not very clear. Traditional legal education, as outlined above, is one way of preparing for the bar exam, but other methods also are

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54 Fees are based on figures quoted by the George Washington University Law School and Washington College of Law at American University as they have significant LL.M. programs
recognized either formally by the rules or informally by practice. Vermont rules, for example, permit preparation for the bar by practicing under the direction of a Vermont lawyer. Utah identifies particular courses required for qualification for its bar exam, including constitutional law and civil procedure, among others.

Thirdly, the procedures vary from one state to the other, with some states requiring instate residency or an instate office for licensure. 17 states require instate residency and 9 states require an instate office for practicing legal services through a US qualified lawyer. Some states do not allow a foreign applicant even with masters from an ABA-approved school to sit for the respective bar exam, unless their first degree in law (LL.B.) is from an US approved law school. The diversity in states’ approaches and rules governing the rights of foreign lawyers to practice in the U.S. create a complex and opaque web of barriers for foreign lawyers.

Lastly, there is also some amount of discrimination in recognizing qualifications as a few jurisdictions recognize the sufficiency of a foreign legal education in specific countries. For example, California, Colorado, and Massachusetts routinely acknowledge the equivalency of a law degree earned in certain Canadian law schools and New York grants exam eligibility to some graduates of three-year programs at Oxford, Cambridge, and University of London. However there are no clear guidelines on the procedures used for granting recognition.

Like in the accountancy sector, recognition of foreign qualifications is necessary for any substantial mode 4 related movements in the legal services sector. The overwhelming number and variety of state regulations for foreign lawyers in US make mode 4 complicated and confusing. There are few international associations that have attempted to promote trade in legal services. The two major international associations of lawyers are the International Bar Association (IBA) and the International Union of Lawyers (UIA). The International Bar Association (IBA) is a

55 An in-state office must be maintained for licensure in: District of Columbia, Indiana, Michigan, Minnesota (or maintain individual residency in Minnesota), Mississippi, New Jersey, Ohio, South Dakota and Tennessee. In-state or US residency is required for licensure in: Hawaii, Iowa, Kansas, Massachusetts, Michigan, Minnesota (or maintain an office in Minnesota), Mississippi, Nebraska, New Jersey, New Hampshire, Oklahoma, Rhode Island, South Dakota, Vermont, Virginia, Wyoming.

56 For instance in Connecticut, if the applicant did not receive first degree in law from an approved law school, they have to may submit credentials to the bar committee. If accepted, committee will permit the applicant to sit for exam upon receipt of LL.M. from approved school. Legal education obtained in countries whose system is based on English common law is required. All other foreign trained applicants must obtain a J.D. or LL.B. from an approved law school.
federation of national bar associations and law societies, based in New York. Its membership includes national professional organizations (190) and individual lawyers (16,000). The IBA constitution states that it aims to establish and maintain relations and exchanges between Bar Association and Law Societies and their members throughout the world as well assist members of the legal profession to develop and improve their legal services to the public and promote uniformity and definition in appropriate fields of law. The International Union of Lawyers (UIA) was founded in Charleroi (Belgium) in 1927 by the bars of Charleroi, Luxembourg and Paris. The UIA’s main object is “Contribute to a universal order based on principles of human dignity, solidarity of peoples and freedom of communication”. Although both IBA and UIA has expressed interest in the work of the WTO in the field of international trade in legal services, their members are divided over the issue of liberalization and have not been involved in GATS negotiations or mutual recognition agreements(MRA). However, in 1998, the IBA Council adopted General Principles for the Establishment and Regulation of Foreign Lawyers and identified two main approaches for the establishment of foreign lawyers, full licensing approach and a limited licensing approach. Under the full licensing approach foreign lawyers are integrated as full members of the local profession with no restrictions on their scope of practice, provided that they satisfy some basic conditions. The conditions include licensing in the home country, minimum periods of practice, good character and repute, submission to the local code of ethics and reasonable qualification requirements in the host country. The limited licensing approach sets out principles applicable to foreign legal consultants. The principles limit the scope of practice to advice on home country law, and exclude all court work, host country law and the law of any other jurisdiction where the foreign lawyer is not qualified and licensed. For limited licensing, a foreign lawyer must satisfy additional conditions similar to the full licensing approach with the exception of reasonable qualification requirements in the host country and the limitation on ethical rules.

The Bar Council of India, Bar Association of India and the Society of Indian Law Firms are member organizations of the IBA. India is also a member of the Commonwealth Lawyers’ Association, whose aim is to strengthen professional links between members of the legal profession throughout the Commonwealth. The law governing and regulating the legal profession

57 Quoted from the Union of International Associations (UIA) website at http://www.uia.org/uia/profilen.php
58 In addition to these conditions, a foreign legal consultant must also: (a) carry liability insurance or bond indemnity consistent with local law, and (b) consent to local service of legal process.
in India is the Advocates Act, 1961. The act states that the Bar Council of India authorizes participation of Indian Bar’s representatives in international legal conferences. The Advocates Act also imposes restrictions on foreign lawyers in India. Section 24 of the Act states that only an Indian Citizen has the right to practice and be enrolled as an Advocate in India, with the proviso that a national of any other country may be admitted as an Advocate, if citizens of India are permitted to practice law in that other country, under the principle of reciprocity. The Law Commission has taken up a study in 2002 on the entry of foreign legal consultants and the liberalization of the legal profession in India. The Commission will be suggesting suitable measures to amend the Advocates Act 1961. A recent report suggests that the limited licensing approach recommended by the IBA might be adopted.\(^{59}\) However, the Indian Bar Association and Society of Indian Law Firms are opposed to allow foreign lawyers and law firms to enter India in the absence of same privileges and recognition of Indian law degrees in the US and other overseas markets.\(^{60}\)

While establishment of international legal bodies and principles of licensing as outlined by the IBA are in the right direction, the rules need to be applied and adopted by the competent authorities in the respective jurisdictions. International bodies cannot bind individual states unless they have a clear delegation of authority from the competent authority. In the US, significant mode 4 movement in legal services can only be achieved if states simplify their admission and legal consultant rules and enact a national regulatory and registration system to grant temporary bar admission to foreign lawyers.\(^{61}\)

### 3.3 Health Services

Health Services is among the service sectors that have the fewest number of binding agreements encompassed in GATS. Health services are divided into four sub-sectors in GATS and include

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\(^{59}\) For more details see http://law.indiainfo.com/legal/permit.html  
\(^{60}\) See Times News Network, March 18, 2004  
\(^{61}\) One way in which states could simplify their rules for foreign lawyers is if all states adhere to the model standards proposed by the American Bar Association. In August 2000, the American Bar Association (ABA) created a Commission on Multijurisdictional Practice. The commission which issued its Final Report in June 2002 included two recommendations that directly addressed U.S. regulation of foreign lawyers. Firstly, the ABA encouraged jurisdictions to adopt the ABA Model Rule for the Licensing of Legal Consultants, dated August 1993. Secondly, the ABA adopted the proposed Model Rule for Temporary Practice by Foreign Lawyers, dated August 2002.
medical services, dental services, hospital services, and services provided by nurses and midwives. Of the four sub-sectors, “medical and dental services are the most committed (54 Members), followed by hospital services (44 Members) and services provided by nurses, midwives, etc. (29 Members).” No WTO Member has undertaken full commitments in any of the four health sub-sectors for Mode 4. The country pattern of commitments reveals that while Canada has not undertaken commitments in any of the four relevant sub-sectors, Japan and the USA have scheduled only one commitment. The small number of commitments in this sector is not surprising given that most countries of the world have strong government involvement in healthcare and protect provision of national health services.

3.3.1 Physicians and Dentists

For many years, the United States did not allow foreign-born physicians and many states required physicians to be U.S. citizens in order to obtain licenses. From 1976 to 1991, federal immigration laws banned foreign-born physicians from obtaining temporary working (“H-1B”) status in order to perform direct patient care. A physician in H-1B status was permitted only to teach or conduct research in the U.S. for a public or nonprofit private educational or research institution or agency. In 1991, legislation was passed to allow foreign-born physicians to be eligible for temporary visas in order to qualify for medical residencies and fellowships and perform patient care in the US. However, U.S. employers cannot readily recruit and obtain H-1B visas for most international medical graduates (IMGs) who are residing abroad. All IMGs must obtain certification from the Educational Commission for Foreign Medical Graduates (ECFMG) and undertake medical residency training in the United States before they can obtain a license to practice medicine in the United States. An IMG must fulfill several requirements to receive a Standard ECFMG Certification. India has been a leader among recipients of Standard ECFMG Certificates for practice of medicine in the US. From 1969 through 1981, nationals from India had formed the largest group of certificate recipients when citizenship was considered. In 1982, citizens of the United States graduating from medical schools abroad received more certificates than citizens of


63 This legislation was contained within the Miscellaneous Technical Immigration and Naturalization Amendments of 1991 (MTINA) and allows physicians to obtain H-1B status by two methods, firstly by an invitation from a public or nonprofit private educational or research institution to teach or conduct research and secondly by an offer of employment as a physician if the foreign doctor has passed the Federation Licensing Examination (FLEX) or its equivalent as determined by the U.S. Department of Health and Human Services (HHS) and he or she is competent in oral and written English, or is a graduate of a medical school accredited by the U.S. Department of Education.
India. However, from 1989 through 1998, citizens of India were again the largest group of certificate recipients. The distribution of recipients of the ECFMG certificates in 2002 per country of medical school and country of citizenship is summarized in Table 3.1. India has increased both its number of certifications and share of the total since 1969. Of the 5,429 Standard ECFMG Certificates issued, India has the largest number of recipients based upon country of medical school. 21.7% of recipients of the Standard ECFMG Certificates were graduates of Indian medical schools. This is 3 times the number of certificates over the next largest country, Dominica (393 students or 7.2% of recipients were from Dominica).

Table 3.1: Standard ECFMG Certificates Issued in 2002: Distribution of Recipients by Country of Medical School and Citizenship

<table>
<thead>
<tr>
<th>Country</th>
<th>Country of Medical School</th>
<th>Country of Citizenship</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>%</td>
</tr>
<tr>
<td>Canada</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>China</td>
<td>124</td>
<td>2.3</td>
</tr>
<tr>
<td>Colombia</td>
<td>101</td>
<td>1.9</td>
</tr>
<tr>
<td>Cuba</td>
<td>50</td>
<td>0.9</td>
</tr>
<tr>
<td>Dominica</td>
<td>393</td>
<td>7.2</td>
</tr>
<tr>
<td>Dominican Republic</td>
<td>90</td>
<td>1.7</td>
</tr>
<tr>
<td>Egypt</td>
<td>67</td>
<td>1.2</td>
</tr>
<tr>
<td>Germany</td>
<td>79</td>
<td>1.5</td>
</tr>
<tr>
<td>Grenada</td>
<td>384</td>
<td>7.1</td>
</tr>
<tr>
<td>Hungary</td>
<td>50</td>
<td>0.9</td>
</tr>
<tr>
<td>India</td>
<td>1,180</td>
<td>21.7</td>
</tr>
<tr>
<td>Iran</td>
<td>93</td>
<td>1.7</td>
</tr>
<tr>
<td>Ireland</td>
<td>64</td>
<td>1.2</td>
</tr>
<tr>
<td>Israel</td>
<td>141</td>
<td>2.6</td>
</tr>
<tr>
<td>Lebanon</td>
<td>90</td>
<td>1.7</td>
</tr>
<tr>
<td>Mexico</td>
<td>84</td>
<td>1.5</td>
</tr>
<tr>
<td>Netherlands Antilles</td>
<td>259</td>
<td>4.8</td>
</tr>
<tr>
<td>Nigeria</td>
<td>96</td>
<td>1.8</td>
</tr>
<tr>
<td>Pakistan</td>
<td>356</td>
<td>6.6</td>
</tr>
<tr>
<td>Philippines</td>
<td>200</td>
<td>3.7</td>
</tr>
<tr>
<td>Poland</td>
<td>66</td>
<td>1.2</td>
</tr>
<tr>
<td>Romania</td>
<td>81</td>
<td>1.5</td>
</tr>
<tr>
<td>Russia</td>
<td>89</td>
<td>1.6</td>
</tr>
<tr>
<td>South Korea</td>
<td>54</td>
<td>1</td>
</tr>
<tr>
<td>Syria</td>
<td>104</td>
<td>1.9</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>44</td>
<td>0.8</td>
</tr>
<tr>
<td>United States</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Countries with fewer than 50 recipients</td>
<td>1,090</td>
<td>20</td>
</tr>
<tr>
<td>Total</td>
<td>5,429</td>
<td>100</td>
</tr>
</tbody>
</table>


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64 Citizens of the United States graduating from medical schools outside the United States also need ECFMG certification to pursue medical practice in the US.
The profile of the J-1 exchange visitor physicians sponsored by ECFMG for the 2001-2002 academic year also indicate that India is the leading nation of origin for foreign physicians in the US. India had 1,574 visas in 2002, with more than 600 visas over the next leading country.

Table 3.2: J-1 exchange visitor physicians sponsored by ECFMG for the 2001-2002

<table>
<thead>
<tr>
<th>Country</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>India</td>
<td>1,574</td>
</tr>
<tr>
<td>Pakistan</td>
<td>926</td>
</tr>
<tr>
<td>Canada</td>
<td>545</td>
</tr>
<tr>
<td>Philippines</td>
<td>453</td>
</tr>
<tr>
<td>Lebanon</td>
<td>443</td>
</tr>
<tr>
<td>Syria</td>
<td>356</td>
</tr>
<tr>
<td>Germany</td>
<td>278</td>
</tr>
<tr>
<td>Egypt</td>
<td>251</td>
</tr>
<tr>
<td>Romania</td>
<td>223</td>
</tr>
<tr>
<td>Jordan</td>
<td>217</td>
</tr>
</tbody>
</table>


Although India has a larger share of medical graduates in the US, the medical profession has more complex issues than other professionals and the various steps to medical practice involves many years of education and training. The major steps and procedures for an international graduate are summarized below.

1) **Obtain the Standard Educational Commission for Foreign Medical Graduates (ECFMG) Certificate.**

A graduate of a foreign medical school must have a valid Standard ECFMG Certificate to enter Graduate Medical Education programs and practice in the United States. To become ECFMG certified, the applicant must fulfill several requirements

a) **Pass the basic medical and clinical science components of the medical science examination,** which are Step 1 and Step 2 of the U.S. Medical Licensing Examination (USMLE). Step 1 is the basic medical science component. It evaluates understanding of scientific principles and their application to the study of medicine. Topics include anatomy, biochemistry, cell biology, microbiology, genetics, immunology, nutrition, molecular biology, pathology, pharmacology, physiology, and psychology. Step 2 is the clinical science component. This
component is disease-specific and tests knowledge in four areas: preventative health, mechanisms of disease, diagnosis, and treatment. The total fee for Step 1 or Step 2 consists of the examination fee plus the appropriate international test delivery surcharge. The examination fee for 2004 eligibility periods is $675 for each exam. For testing region other than the United States or Canada, candidates must also pay the international test delivery surcharge for the testing region. The international delivery surcharge fee for Asian regions including India in 2004 is $120 for Step 1 and $130 for Step 2.

b) *Pass the English language proficiency test.* The ECFMG uses the Test of English as an International Language (TOEFL) to test proficiency in English. The TOEFL evaluates listening, reading, writing, and grammar. The fee for the TOEFL examination is $130 in India.

c) *Document medical education credentials.* International Graduates must show proof of having graduated from a four-year medical college listed in the International Medical Education Directory (IMED). The candidate must hold the final medical diploma from the country of their medical school. There are 163 medical schools in India that are listed in IMED.65

d) *Pass the Clinical Skills Assessment (CSA).* The Clinical Skills Assessment (CSA) tests a candidate’s ability to gather and analyze clinical patient data as well as their spoken English capability and interpersonal skills. Actors present a variety of illnesses and injuries and the IMG must gather data, diagnose the condition, and lay out a treatment plan. These encounters test knowledge in the areas of internal medicine, surgery, obstetrics and gynecology, pediatrics, psychiatry, and family medicine. The CSA is offered throughout the year but only at ECFMG facilities in Philadelphia and Atlanta. The candidates are responsible for making the necessary travel and accommodation arrangements which includes obtaining appropriate travel documents and visas. The examination costs $1,200 and lasts eight hours. IMGs must pass Step 1 before taking the CSA.66

2) **Apply to the residency programs**

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65 A medical school is listed in IMED after FAIMER receives confirmation from the Ministry of Health or other appropriate agency that the medical school is recognized by the Ministry or other agency. (The Foundation for Advancement of International Medical Education and Research (FAIMER) is a non-profit foundation of the Educational Commission for Foreign Medical Graduates.)

66 The second part of USMLE was recently divided into two parts, USMLE step 2ck (clinical knowledge) and USMLE step 2cs (clinical skills). Step 2 CS will replace the ECFMG Clinical Skills Assessment (CSA) as the exam that satisfies the clinical skills requirement for ECFMG Certification. The ECFMG CSA will be administered until spring 2004. Further information regarding examination and certification can be obtained in ECFMG website at [http://www.ecfmg.org/](http://www.ecfmg.org/)
Foreign medical graduates (FMG) have to apply for their desired residency program and research hospitals offering programs in their area. The *Graduate Medical Education Directory (GMED)*, published by the American Medical Association (AMA), is recognized as the official list of accredited graduate medical education programs. The *GMED* lists all residency programs by specialty and describes the general and special requirements for each medical specialty. The top specialty of foreign physicians on J1 visas has been Internal Medicine with pediatrics being a distant second. Table 3.3 summarizes the top specialties pursued by J-1 physicians the 2001-2002 academic years.

**Table 3.3: Top specialties pursued by J-1 physicians, 2002**

<table>
<thead>
<tr>
<th>Specialty</th>
<th>Number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal Medicine</td>
<td>3,835</td>
<td>43.6</td>
</tr>
<tr>
<td>Pediatrics</td>
<td>846</td>
<td>9.6</td>
</tr>
<tr>
<td>Anesthesiology</td>
<td>543</td>
<td>6.2</td>
</tr>
<tr>
<td>Psychiatry</td>
<td>543</td>
<td>6.2</td>
</tr>
<tr>
<td>General Surgery</td>
<td>477</td>
<td>5.4</td>
</tr>
<tr>
<td>Pathology</td>
<td>326</td>
<td>3.7</td>
</tr>
<tr>
<td>Neurology</td>
<td>322</td>
<td>3.7</td>
</tr>
<tr>
<td>Family Practice</td>
<td>279</td>
<td>3.2</td>
</tr>
<tr>
<td>Diagnostic Radiology</td>
<td>259</td>
<td>2.9</td>
</tr>
<tr>
<td>Obstetrics &amp; Gynecology</td>
<td>126</td>
<td>1.4</td>
</tr>
</tbody>
</table>


There are two methods of applying to U.S. residency programs: submitting an electronic application using the Electronic Residency Application Service (ERAS) and submitting a paper application. The electronic residency application system (ERAS) is a centralized and computerized application for residency. The ERAS transmits residency applications and supporting documents, such as transcripts and letters of recommendation, to residency program directors over the Internet. The ERAS processing fees are based on the number of programs selected per specialty. For up to 10 programs per specialty, the fees are $60. Applications for additional programs or specialties have extra fees. International Medical Graduates (IMGs) are charged a fee of $75 for preparation and transmission of the ECFMG Status Report to all programs.67 All applicants for residency positions, regardless of the method of application, also

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67 For further details on ERAS fees structure see [http://www.aamc.org/students/eras/feesbilling/start.htm](http://www.aamc.org/students/eras/feesbilling/start.htm)
have to contact residency program directors for specific requirements and deadlines and register with the National Resident Matching Program (NRMP).

3. Register with the National Resident Matching Program (NRMP)

The National Resident Matching Program (NRMP), also known as "the Match," matches a physician's highest ranked residency program with a hospital that ranks them highly. Registering for the NRMP is a separate process from applying to residency programs through ERAS. An international applicant has to register as an 'independent applicant' in the NRMP and has to pass all examinations required for ECFMG certification by the NRMP's rank order list deadline. Applicants submit to the NRMP a list of residency programs in order of preference to which they have applied (via ERAS or traditional paper applications). The Hospitals also ranks applicants among the various candidates they have interviewed and received applications. Many hospitals only select applicants who participate in the Match. It is possible that an applicant may not match with any of his or her selected programs as the number of applicants may be larger than the number of available positions. Those that do not 'Match' are notified two days before the official results and can participate in the 'Scramble' where unmatched physicians contact unmatched residency programs.

4. Apply for the appropriate visa to enter the United States

After selection to a residency program, foreign medical doctors need to apply for a temporary work or training visa. There are two main visa options for doctors.

a) J-1 Visa - The J-1 non-immigrant visa permits completion of an accredited residency or fellowship program of up to seven years duration. Foreign national physicians seeking ECFMG sponsorship as J-1 Exchange Visitors must meet the following general requirements:

- Pass USMLE Step 1 and Step 2 or the former VQE, NBME Part I and Part II, or FMGEMS\(^{68}\)
- Hold a valid Standard ECFMG Certificate

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\(^{68}\) Under the provisions of US *Health Professions Educational Assistance Act* foreign national physicians are required to pass the National Board of Medical Examiners (NBME) Part I and Part II exams or an exam determined to be equivalent for this purpose. The Secretary of Health and Human Services has recognized Step 1 and Step 2 of the United States Medical Licensing Examination (USMLE), as well as the former Visa Qualifying Examination (VQE) and the Foreign Medical Graduate Examination in the Medical Sciences (FMGEMS), as equivalent to NBME Part I and Part II exams for the purposes of PL94-484.
• Hold an official letter of offer for a position in a program of graduate medical education or training affiliated with a medical school

• Provide a statement of need from the Ministry of Health of the country of nationality. This statement must provide written assurance that the country needs specialists in the area in which the Exchange Visitor will receive training.

b) H1B visa: A foreign physician may obtain H-1B visa status either to teach/conduct research at an educational/research institution or to work for a U.S. employer as a physician. If the Foreign physician comes to the US to teach or perform research, the requirements for obtaining a H1B visa are less. For physicians who will primarily be teaching or performing research (with incidental patient care only) the conditions that apply are

• He/she must be licensed to practice medicine in the State of intended employment in the US

• He/she must be a graduate of a foreign or U.S. medical school, and have a full and unrestricted license to practice medicine in a foreign country.

Additionally, foreign physicians intending to perform patient care services must have

• Passed Steps I, II and III of the United States Medical Licensing Examination (USMLE), and have competency in written and oral English. The USMLE Step 3 provides an assessment of physicians for assuming independent responsibility in delivering general medical care. The Step 3 exam fee with the 2004 application is $625 and can only be taken in the US. 69

Foreign physicians must meet very strict licensing requirements for a H1B visa status. For all doctors applying for H-1B visas, the basic requirements for H1B visa still apply, the position must pay the prevailing wage and the employer must file a Labor Condition Application. J1 visas are the most popular visas for physicians since obtaining a work visa for a physician can be difficult. The H-1B visa status requires a medical license from the state where the physician will practice, however nearly all states require foreign medical graduates to complete medical

69 The total application fees for step 3 can vary among states because of license application fees, processing fees etc.
residencies in the United States before issuing a medical license. Most foreign physicians enter the country in J-1 exchange visitor visa status to complete a U.S. residency program.

5. **Apply for medical licensure in individual states**

A foreign physician requires a license to practice medicine. The medical license is specific to the state of the employing hospital. Each state has different licensing requirements for physicians as well as different processing times for granting of the license. All the states do require passing Step 3 of the USMLE and from one to three years of graduate medical education after receipt of the MD. Many states require foreign school graduates to have internship experience in an accredited program in the US. Data from the annual report of the ECFMG reveals that the state of New York had the highest number of foreign medical graduates on J1 visas in 2002. Table 3.4 summarizes the popular states of destination of foreign physicians on J1 visas.

**Table 3.4: States with the highest concentrations of J-1 physicians, 2002**

<table>
<thead>
<tr>
<th>States with Highest Concentrations of J-1 Physicians</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>New York</td>
<td>1,760</td>
</tr>
<tr>
<td>Illinois</td>
<td>607</td>
</tr>
<tr>
<td>Pennsylvania</td>
<td>583</td>
</tr>
<tr>
<td>Texas</td>
<td>498</td>
</tr>
<tr>
<td>Massachusetts</td>
<td>472</td>
</tr>
<tr>
<td>Ohio</td>
<td>470</td>
</tr>
<tr>
<td>Michigan</td>
<td>452</td>
</tr>
<tr>
<td>Florida</td>
<td>275</td>
</tr>
<tr>
<td>Connecticut</td>
<td>271</td>
</tr>
<tr>
<td>New Jersey</td>
<td>263</td>
</tr>
</tbody>
</table>


Although New York had more than double the number of J1 physicians than the second leading state in 2002, physicians in NY can receive a license only if they are United States Citizens or Lawful Permanent Residents. This requirement is waived for a three year limited physician license to practice in a medically underserved area. ECFMG certification required from all foreign graduates for licensure. Graduates of accredited medical programs must also complete 1
year of postgraduate training.\textsuperscript{70} The application fees for New York State licensure is $735 with an additional fee of $135 for a three-year Limited License. The state of Illinois also has temporary licensing provision with fees of $100.

Apart from the above outlined steps, foreign physician also sometimes need to apply for board certification in their specialty. Board certification requires completion of an accredited residency program in the specific specialty. This would require additional time and expense. Although medical graduates have to undertake several steps to temporary practice, it is even harder for health professionals in the areas of dentistry and veterinary medicine. There is no central admissions service or certifying examination administered worldwide for veterinary and dentistry profession like the ECFMG for medicine. There are only 27 schools of veterinary medicine in the United States, all associated with universities. Of these, 25 are largely state-funded and applicants from the home state are given first preference with very few opportunities for students from other countries. Like foreign physicians, foreign dentists need to be licensed in the state of employment.\textsuperscript{71} The requirements for dental license vary from state to state. Many states require graduation from dental schools accredited or approved by the Commission on Dental Accreditation (CDA) of the American Dental Association (ADA). Since the CDA only evaluates schools and programs located in the United States and Canada, all dental schools located outside the United States and Canada are considered non-accredited. Foreign dentists need to fulfill the following requirements.

1. Give the written National Board Dental Examinations.

All foreign graduates need to take the National Board Dental Examinations (NBDE). The NBDE is a licensure requirement in all states. It is also a requirement for admission to a dental education program. To be eligible for NBDE, foreign graduates need to have their dental course transcripts verified by Educational Credential Evaluators (ECE). A general evaluation report from the ECE costs $85. National Board Dental Examinations are organized into two Parts. Part I consists of four sections covering the basic biomedical sciences and dental anatomy. Part II consists of one comprehensive examination covering clinical dental subjects, pharmacology, behavioral science, dental public health and occupational safety. The National Board Dental fee for part I in 2004 is

\textsuperscript{70} Graduates of non-accredited medical program must provide minimum of three years of postgraduate hospital training in an ACGME accredited program

\textsuperscript{71} In rare circumstances, dentists employed by dental schools for teaching or research assignments are sometimes not required to hold a state dental license. Requirements vary from state to state.
$115 and for part II is $150 for a written examination. National Board Examinations are administered only in the United States and Canada, so foreign graduates have to travel to the US to take the exam.

2. Obtain additional education in an accredited dental or advanced dental education program.
   Most states require that foreign dental school graduates obtain additional education from an accredited dental education program in the US. 29 states require foreign dentists to graduate from accredited or dental board-approved 4-year, (or its equivalent), dental programs. 21 states and the District of Columbia, require additional training, typically two years training in a CDA-accredited program for licensure. The cost of tuition and living expenses vary from state to state. The total cost of a 4 year program in the University of Southern California is approximately $169,000, not including books, and miscellaneous fees. The average tuition expense per year for the 4 year programs reported by U.S. dental schools for the 2002 school year is $26,477. The cost of the advanced two year dental programs also varies. The International Dentist Program of the University of Illinois at Chicago charges $85,625 as tuition for the two-year program, with additional costs of $7,200 for a mandatory instrument leasing fee and $800 for required textbooks.

3. Complete clinical examination requirements
   All states require successful completion of a clinical examination to obtain a dental license. Clinical examinations are administered by an individual state board or one of four regional examining boards. The North East Regional Board (NERB) comprised of a consortium of 15 state dental boards charges $675 for one examination and $1,100 for 2 or more examinations.

4. Apply for a license through the state board of dentistry
   After completing the written National Dental Board Examinations, educational requirements and the appropriate clinical examination, foreign dental graduates need to apply for licensure in the state board of dentistry. Several states have additional requirements such as passing a written test on the state dental practice act and regulations, or show proof of malpractice insurance. The fees for licensure vary from state to state. The application fee for the Dental Board of California is

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72 The fees for computerized examination are higher.
73 The regional testing agencies are the Central Regional Dental Testing Services (CRDTS), Northeast Regional Board of Dental Examiners, Inc. (NERB), Southern Regional Testing Agency (SRTA) and the Western Regional Examining Board (WREB).
$100 and the examination fee is $450. The licensure fee for New York is $345 with the fee for a limited permit being $105.  

Foreign dentists also need to apply for a visa to enter the US. As the NBDE exams are held only in the US, dentists often have to enter the US on a tourist visa to sit for the exam. Afterwards, most foreign dentists move to student visas since they require between 2-4 years of additional dental education in the US. The large number of procedures, fees and time required creates several barriers for foreign doctors and dentists to practice in the US. The common barriers are summarized below.

1. **Large estimated costs of practice**

A foreign medical graduate must invest a large sum in order to even start a temporary practice in the US. As pointed out above, there are large costs at every step of the accreditation process starting from the USMLE exam to registering for the national resident match and attaining a state license. The total costs are summarized in Table 3.5.

**Table 3.5: Total estimated costs for a Foreign Medical Graduate from India**

<table>
<thead>
<tr>
<th>Components of Costs</th>
<th>Cost Estimates</th>
<th>Additional Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>USMLE Part I</td>
<td>$675 + $120</td>
<td>Additional costs are incurred due to the delivery surcharge for India</td>
</tr>
<tr>
<td>USMLE Part II</td>
<td>$675 + $130</td>
<td>Additional costs are incurred due to the delivery surcharge for India</td>
</tr>
<tr>
<td>USMLE Part III</td>
<td>$675</td>
<td>Part III can be taken only in US. Additional costs arise for travel to take the exam</td>
</tr>
<tr>
<td>TOEFL</td>
<td>$130</td>
<td></td>
</tr>
<tr>
<td>CSA</td>
<td>$1200</td>
<td>CSA can be taken only in US. Additional costs arise for travel to take the exam</td>
</tr>
<tr>
<td>ERAS</td>
<td>$135</td>
<td>Additional Fees apply when candidates apply for more than one specialty and more than 10 Programs in each specialty</td>
</tr>
<tr>
<td>NRMP</td>
<td>$90</td>
<td></td>
</tr>
<tr>
<td>State License</td>
<td>$735 + $135 (in New York)</td>
<td>The costs of the license varies depending upon</td>
</tr>
</tbody>
</table>

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74 A limited permit is valid for one year and allows a graduate of a dental college who has satisfied the education requirements for licensure to practice dentistry under the supervision of a New York State licensed dentist only. To be licensed as a dentist in New York State, applicants must be United States citizen or permanent residents.
| Travel | $2000 (estimate for two trips to the US from India) | Travel is required for the CSA and UMSLE Part III exams. Foreign doctors also travel for interviews. |

The total cost of processing and fees for the exams for a physician is in excess of $5000. For dentists, the costs are even larger since they have to take mandatory dental education in the US. Apart from the costs outlined above, additional costs are also incurred in visa applications and fees. It may not be possible for many Indian doctors to invest such a large sum before starting practice.

2. Need for Exams to be taken in the US only

Certain certification exams for foreign doctors can only be taken in the US. It is difficult to get a visitors visa from developing countries such as India for the purpose of writing an exam in the US. Thus, doctors and dentists from developing countries often cannot take necessary exams for certification such as the Clinical Skills Assessment (CSA) and the National Board Dental Examinations (NBDE) that are only offered in the US. Before 1998, a medical student could receive the ECFMG certification without traveling to US. Reports suggest that after the CSA has been introduced as part of the ECFMG certification in 1998, the number of certificates has dropped. According to a 2002 report in the Journal of the American Medical Association, in 1995 through 1998, the number of certificates issued by the ECFMG ranged from 9,000 to more than 12,000 per year. However, in 1999, 2000 and 2001, the number fell to 6,000 in each year. The report points out that that this decrease could be due to the changes introduced in 1998, such as the requirement of the CSA, which can only be taken in Philadelphia.  

3. Residency training in the US

All foreign doctors must undertake residency training in the United States before they can obtain a license to practice medicine in the United States even if they were fully trained, licensed, and practicing in another country. It is often very difficult for a foreign doctor to get a residency position in a hospital of his choice. Foreign doctors end up training in medically underserved areas in the US, which may not give them the exposure and experience that they need. Moreover there are a limited number of residency slots and limited funding for residency. The American

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75 The report also suggests other possible factors such as the requirement of proficiency in speaking English in the test, and large examination fee for reduction in number of ECFMG certifications.

76 A very small number of doctors may be eligible for special consideration if they are either “eminent” physicians or are going to serve on the faculty of a medical school or teaching hospital.
Medical Association states that the Balanced Budget Act of 1997 capped residency slots and authorized a series of reductions in the indirect medical education adjustment (IMEA). This reduced the number of residences and also affected funding for resident training from the federal government. Although residency opportunities for foreign-educated physicians are limited, the recent cuts in residency slots make it even more difficult for foreign doctor to fulfill requirements for certification and licensing in the US.

4. Visa requirements for foreign medical graduates

Although foreign doctors can apply for a J-1 visa or H1B visa to enter the U.S., it is virtually impossible for an Indian doctor to receive an H1B visa. The H-1B visa status requires a state medical license. However, foreign doctors in almost all states need to complete medical residencies and pass USMLE part III before they can receive state license. Most doctors have to enter the US on a J-1 visa to complete residency requirements before they can apply for a H1-B visa. Traditionally less than 10% of international medical graduate trainees have held temporary worker or H1B visas. Data also shows that fewer residents are entering U.S. medicine on a J1 visa. According to the AMA's division of graduate medical education, the number of J1 visa holders fell from 38% of all international graduate residents in 1994-1995 to 30% in 1999-2000. At the same time, the percentage of foreign graduates who were permanent residents rose from 29% to 36%. The American College of Physicians report that Medical Program directors generally prefer candidates with permanent resident visas over temporary visa holders in their programs as candidates with J1 visas can run into processing problems. In addition, fewer post-training waiver jobs are available for J1 visa holders now.\footnote{Waiver approvals at the U.S. Department of Agriculture (USDA), which administers the waiver program for health professional shortage areas designated by the Department of Health and Human Services dropped from more than 500 in 1997 to 161 in 2000. Changes in U.S. immigration policies make it harder for Indian doctors to get visas and discourage doctors on temporary visas while encouraging foreign medical graduates who are immigrants.}

3.3.2 Nurses

\footnote{The J-1 visa requires in most cases that, after completing the residency, the foreign IMG must physically reside in his/her home country for a total of two years before being able to work in the U.S. The waiver program allows the home residence requirement is waived for up to 3 years. In a waiver job international
Nursing is the other major health profession involved movement under mode 4. The movement of nurses has fewer barriers than physicians since the shortage of registered nurses (RN) has been recognized by the U.S. Department of Labor (DOL). Registered Nurses (RNs) can skip the lengthy and difficult step of obtaining a labor certification for permanent residence status. However, US law requires all foreign-born nurses, irrespective of where they were educated or trained, to complete a Visa Screen certification. The Visa Screen process is run by the Commission on Graduates of Foreign Nursing Schools (CGFNS). The CGFNS is an independent organization whose task is to ensure that foreign-educated healthcare professionals are eligible and qualified to meet licensure and other U.S. practice requirements. According to the CGFNS data, the top 5 countries of education for CGFNS first time applicants for the July 2004 exam were Philippines, India, Nigeria, China and Kenya. Philippines had the maximum number of VisaScreen Certificates granted for Registered Nurses in the January to March 2004 and April to June 2004. Table 3.6 summarizes the number of VisaScreen certificates issued to major countries in the same period. India has the third highest number of certificates for nursing after the Philippines and Canada in 2004.

graduates must typically spend three years practicing primary care in a federally designated underserved area.

78 The occupation of registered nurse is listed by the DOL on "Schedule A" as a known shortage occupation. Schedule A is a determination made by the DOL that foreign workers holding jobs listed on the schedule will not harm the United States workforce or the economy.

79 Earlier the VisaScreen certification was required mainly for nurses on immigrant visas (EB-3), and not necessary for nurses on non-immigrants visas such as H1-B. However from July 26, 2004 applicants for both non-immigrant and immigrant visas are required to have VisaScreen certification.
Table 3.6: Number of VisaScreen Certificates issued to Foreign Registered Nurses, 2004

<table>
<thead>
<tr>
<th>Country</th>
<th>January - March 2004</th>
<th>April - June 2004</th>
</tr>
</thead>
<tbody>
<tr>
<td>Philippines</td>
<td>1895</td>
<td>2006</td>
</tr>
<tr>
<td>Canada</td>
<td>1217</td>
<td>1460</td>
</tr>
<tr>
<td>India</td>
<td>471</td>
<td>688</td>
</tr>
<tr>
<td>South Korea</td>
<td>77</td>
<td>149</td>
</tr>
</tbody>
</table>

Source: Commission on Graduates of Foreign Nursing Schools, 2004

The CGFNS certification process is also a lengthy one and is comprised of three main parts

1) Educational/credentials review of the nurse's education, registration and licensure

The educational review has to ensure that the foreign nurse education meets statutory and regulatory requirements for the US nursing profession. The nurse has to graduate from a government-approved, professional healthcare program in her country and successfully complete a minimum number of credits in specific theoretical and clinical areas. Nurses must also obtain validation for all past and current licenses. The validation must be provided directly to the CGFNS by the licensing institution to confirm that the applicant has completed all practice requirements and that the registration/licensure has no encumbrances

2) CGFNS Qualifying Exam

The CGFNS Qualifying exam is a one-day exam which is conducted in various countries. The CGFNS examination is given in India in March, July and November every year at testing centers located in Bangalore, Cochin and New Delhi. The CGFNS exam was designed to “predict” the future potential of a nurse to pass NCLEX-RN, the official U.S. nursing exam required for permanent licensure. The exam is structured very closely to the NCLEX exam and tests basic nursing knowledge. The cost of the CGFNS exam is $325 plus $30 for forwarding transcript information.

3) English language proficiency exam(s).

Applicants for the CGFNS Certification Program must pass an English language proficiency examination to demonstrate competency in oral and written English. The English language proficiency requirement is not required when the country of nursing education is Australia, Canada (except Quebec), Ireland, New Zealand, the United Kingdom, South Africa or Trinidad and Tobago. Applicants can select from three English proficiency examinations to take as part of the Certification Program. These include Test of English as a Foreign Language (TOEFL), Test of English for International Communication (TOEIC), administered by the Educational

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80 Tobago and Trinidad were recently added and are included in this list at this stage conditionally for a one-year period.
Testing Service (ETS) and International English Language Testing System (IELTS), administered by the Cambridge ESOL Examinations, the British Council and IDP Education Australia. The fee for the TOEFL examination is $130 in India and is the most common English language proficiency test taken by Indian nurses. The IELTS is not administered in India.

After successfully completing all three parts of the Certification Program and receiving passing scores on both the CGFNS Qualifying Exam and the English proficiency exam, an applicant is awarded a CGFNS Certificate. The nurse can apply for a visa to enter the US after receiving the CGFNS certification. A nurse can apply for three types of visas.

- **H-1C Visa:** H-1C visas are available to registered nurses working in designated "health professional shortage areas." The nurse must be fully qualified and eligible under all state laws and regulations to practice as a registered nurse in the state of intended employment immediately upon admission to the US. Only 500 H-1C visas are issued per year.

- **H-1B Visa:** The H-1B is not designed specifically for foreign nurses; however the H-1B visa is available for registered nurses working in positions that require the education or work experience equivalent to a bachelor's degree. The US Citizenship and Immigration Services (CIS) has identified certain kind of nurses such as certified advanced practice RNs (APRNs), nurse managers, and specialists (such as rehabilitation nurses, school care nurses, and critical care nurses) as H-1B eligible.

- **H-3 Visa:** Nurses may also enter the U.S. on H-3 trainee visas if the nursing position offered meets the H-3 requirements. To qualify, the registered nurse must have an unrestricted license in their home country and the nurse must state that he or she is qualified under state law to receive the training. However, H-3 trainees cannot occupy regular positions and they can come to the U.S. for training purposes only.

After arrival in the US, the nurse needs to take another licensing exam to obtain a state license to work as a Registered Nurse. The National Council of State Boards of Nursing (NCSBN) license examination for registered Nurses (NCLEX-RN) is the examination that nurses are required to pass in order to obtain a license in the U.S. Licensure requirements and fees differ from state to state. Most states require foreign nurses to pass the CGFNS examination before taking the NCLEX-RN. To take the NCLEX-RN, a nurse has to submit an application for licensure in the specific state along with the licensure fee. The state education Department must also approve the
nurse’s education, English proficiency and all other application materials. Some states have temporary license provisions. For instance in New York, the licensure fee is $135 and the limited permit fee is $35. Foreign-nurses seeking a limited permit must successfully complete the CGFNS Certification program and must also have their credentials verified by an independent credentials verification organization.

Given the shortage of nurses in the US, the movement of nurses has fewer barriers than other health professions. Despite an estimated cost of $16,000 per nurse and the time and complications of immigration bureaucracy, many hospital administrators favor overseas recruitment of nurses. Accreditation agencies such as the National Council of State Boards of Nursing (NCSBN) have also facilitated the process of recruiting foreign nurses. In June 2004, the NCSBN announced it would offer the NCLEX in three foreign countries, Hong Kong, England, and South Korea so that nurses can potentially avoid the expense and hassle of having to take both the CGFNS predictor examination and the NCLEX examination. However, there are still many barriers faced by foreign nurses.

Firstly, the major barrier faced by nurses from India is the issue of appropriate visa to enter the US. H-1C visas are difficult to obtain due to the burden of evidence placed on the employers. To secure an H-1C visa, the employer must be a hospital located in a designated health professional shortage area and must have at least 190 acute care beds. Additionally, the hospital must show that certain percentages of patients are entitled to Medicare and Medicaid and that the hospital has taken steps to recruit registered nurses who are U.S. citizens or permanent residents. In fact, only a few hospitals in the country have succeeded in being certified to accept H-1C nurses. The H1-B visa requires a bachelor’s degree for employment and is largely unavailable to foreign-educated nurses. Although many US hospitals have filed labor certifications with the DOL to allow the utilization of H1B visas, the INS has been reported to deny the majority of requests by foreign-educated nurses in this category.

Secondly, it is often easier for a foreign nurse to apply for permanent rather than temporary status. Employers wishing to hire qualified foreign nurses can skip labor certification and immediately file an immigrant visa petition, saving months or years of processing. Nurses seeking to qualify for permanent status have to fulfill the same requirements as for receiving a

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81 The H1C visa category is based on the former H1A visa category for nurses, which expired on September 30, 1997. The H1C classification is more restrictive due to its numerical cap on the number of visas issued annually and its application only to underserved areas.
temporary visa such as possessing a valid nursing license in the country of nationality and evidence of passing the NCLEX-RN or a Certificate by the CGFNS Certificate and a VisaScreen Certificate. Hence, US immigration laws tend to favor permanent rather than temporary movement of nurses, both for the hospital employers and nurses. U.S. hospitals need foreign nurses and many foreign nurses want to work in the United States. However, in absence of adequate temporary visas to enter the US, nurses are more likely to permanently immigrate rather than engage in temporary movement under mode 4.

Thirdly, difficulties also arise after entry to the US due to state license requirements. After foreign nurses arrive in the US, they need to sit for the licensing NCLEX-RN examination or apply for limited Permit to practice in state. Many states require re-verification of the nurse credentials before they can sit for the exam, even if the nurse is CFGNS certified. A nurse’s credentials are verified twice by the CGFNS before entry into US, once when the nurse is allowed to take the Certifying Examination and the second time when it issues the Visa Screen Certificate. Although the federal government accepts such verification and allows the nurse to enter and work in the US, the State government does not accept the same and asks for a third re-verification of the same credentials. For instance, state of New York use the CGFNS as their approved credentials evaluation service-provider.  

The CGFNS charges the nurses a fee of $265 to do a third verification of the credentials previously twice verified by them. There have been complaints registered that CGFNS delays the third verification requests and several nurses had to wait for as long as 1 ½ years before they were finally allowed to write the NCLEX RN or obtain a Limited Permit to practice. Re-verification of the credentials of the CGFNS certified nurses by states leads to additional costs and wastage of time for foreign nurses.

The barriers faced by foreign nurses suggest that reforms are required in two main areas, entry visas and licensing rules. Entry visas need to be easier to obtain and also encourage temporary rather than permanent movement. Licensing rules need to be uniform in federal and state

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82 Generally most Registered Nurses are qualified to work based on having completed an Associate (2 year) degree program or a hospital diploma program.

83 Different states use different evaluation services, however most states accept the CGFNS verification.

84 A Letter sent by TR David, Brunswick Hospital Center to Richard P. Mills, New York State Education Department, lists a complaint on behalf of approximately 40 or so foreign registered nurses in his hospital on the problems faced by many immigrant nurses who came to work in the State of New York, but were unable to get permission to practice as nurses because of procedures of the New York State and the CGFNS.
procedures, so that the same verification and procedures do not have to be repeated at state levels. This will enable both hospitals to fill their staffing shortages and nurses to benefit from international experience. The policy directions for visas and licensing arrangements can be modeled on US-Canadian arrangement for nurses and physicians. Graduates of Canadian medical schools are in a favored position as compared with most foreign medical graduates. Canadian nurses and physicians can work in the United States under the TN status and do not need to present a petition approved by the INS, or a labor condition application. \(^{85}\) TN status nurses were also waived from the VisaScreen Certification requirement until July 26, 2004. There are significant benefits accompanying to the TN visa. There are cost savings since there is no $1000 training fee as there is for the H1B visa. Second, eligibility for the TN visa is not predicated on meeting the bar set by the “specialty occupation” requirement for obtaining an H1B visa. Third, time to issuance, in many cases, is shorter for the TN visa. Finally, because there is no statutory limitation on stay, nurses are not restrained by the maximum stay limitations that exist for other nonimmigrant visas. TN visas are valid for 1 year, and are renewable each year. Under current law, there is no limit to the number of annual renewals permitted for a TN visa holder. There are also accreditation and licensing arrangements between US and Canada. The U.S. Department of Education through the Licensing Commission on Medical Education (LCME) has accredited all U.S. and Canadian medical schools. This exempts Canadian physicians from having to complete residencies in the U.S., from obtaining exchange visitor status, and from the two-year foreign residency requirement. Moreover, in over 40 U.S. states, Canadian-licensed physicians need not take U.S. examinations to obtain state medical licenses. These states consider the Licentiate Medical Certificate of Canada (LMCC) examination to be equivalent to the FLEX or USMLE. US arrangements with Canada make the visa, accreditation and licensing requirements less time-consuming and cumbersome in the medical sector. Similar agreements between the US and India are required for greater mode 4 movement between the two countries in the medical sector.

Mutual recognition in the medical sector is critical for any substantial mode 4 movement of health professionals. The system of mutual recognition in the EU has ensured that most health professions benefit from full mutual recognition of national access diplomas. The Community Directives cover qualifications for doctors, dentists, nurses, veterinary surgeons, midwives and pharmacists within the European Union. However, the EC system of mutual recognition is intended to facilitate the free movement of EU nationals and does not extend to other country

\(^{85}\) However, Canadian physicians to pass all three parts of the USMLE examination as a condition of obtaining H-1B temporary working status
nationals. While accreditation of foreign doctors is very minimal in all countries, especially among countries where economic differences are large, there have been some efforts to develop international standards for physicians. The World Federation for Medical Education (WFME) was founded in 1972 and is an umbrella for regional associations for medical education. The members of the WFME Executive Council include the WHO (World Health Organization), WMA (World Medical Association) and the IFMSA (International Federation of Medical Students’ Associations). In 1998, the World Federation of Medical Education (WFME) launched a project on International Standards in Medical Education to formulate global standards in medical education. The project started with Basic (Undergraduate) Medical Education in October 1999 and continued with Postgraduate Medical Education in September 2001 and Continuing Professional Development of Medical Doctors (CPD) in January 2002. The working committee consisted of establishing international task forces with experts from all five continents. The WFME Global Standards are structured according to areas and sub-areas. The chosen areas and the definition of standards, specified for each sub-area using two levels of attainment, basic standards and standard for quality development. The WFME states that these global standards can function as a template for national or regional agencies dealing with recognition/accreditation of medical schools/educational institutions.

The regional associations include AMSA (Association for Medical Schools in Africa), PAFAMS (Pan-American Federation of Associations of Medical Schools), AMEEMR (Association for Medical Education in the Eastern Mediterranean Region), AMEE (Association for Medical Education in Europe), SEARAME (South-East Asian Regional Association for Medical Education) and AMEWPR (Association for Medical Education in the Western Pacific Region).

International Medical Education (IIME) also seeks to develop international standards for physicians. The IIME Project Consists of Three Phases: The first phase is to develop a set of ‘global minimum essential requirements’ (‘GMER’). These standards are to include the basic and medical sciences, clinical experiences, knowledge, skills, professional values, behavior and ethical values. In Phase II, the ‘Experimental Implementation’ of the ‘GMER’ will be used to evaluate the graduates of the leading medical schools in China, and aim to identify the strengths and deficiencies found in the schools participating in this experiment. If a school meets all of the 'Essentials', it will be certified accordingly. In the third or 'Dissemination Phase', the lessons learned and the process used will be modified and offer to the global medical education community for its use. The 'essentials' will serve as a tool for improving the quality of medical education and a foundation for an international assessment of medical education programs.
International associations have tried to develop global guidelines and policies for nursing practice and education as well. The International Council of Nurses (ICN) is a federation of national nurses’ associations, representing nurses in more than 120 countries and works towards sound health policies and the advancement of nursing knowledge worldwide. ICN has created a network for regulatory issues affecting the nursing profession. The network aims to be a forum for the exchange of ideas, experience and expertise in regulatory issues and enable the members of the ICN, and interested nurses to identify trends, offer special expertise and disseminate ICN work in regulation.\textsuperscript{89} The ICN has also established a credentialing forum to advise ICN on developments and needs in the field of regulation, credentialing, and quality assurance. However, while developing international standards and credentials in medical education is necessary and will aid mutual recognition of qualifications, such associations have not had any impact on temporary movement of health professionals till date.

Mode 4 in the health services sector has been limited till date. Physicians are usually subject to many more tests and licensing requirements to evaluate their readiness to undertake treatment of patients in a foreign country. Although mode 4 movement of nurses has been greater than physicians, barriers in receiving visas for entry and the state licensing process prevent greater success. The large number of requirements has been justified by countries to protect the well-being and health of their nation. The public has to be assured that they will receive the highest quality of care possible and that their health and safety will be protected under all providers. These factors highlight the need for governments to enforce certain regulatory arrangements and monitoring institutions. However, Governments are grappling with rising health costs and increased demand for health care services. The rapid change in global communications has led to changes in medical practice. Telemedicine makes it possible for physicians and nurses in foreign countries such as India to share their knowledge and expertise to patients in the US, with minimal physical relocation of physicians. This can be of great benefit to patients and doctors in both countries. However, it is clear that in the absence of uniform standards and recognition of qualifications in healthcare, there can be only limited exchange of expertise between countries. Medical establishments need to come together to develop uniformity and mutual acceptability in medical school curricula, residency training programs and licensure requirements. Only multi-nation cooperation in the regulation of medicine can facilitate cross border movement and treatment in the medical sector.

\textsuperscript{89} The ICN registry of credentialing research (ICN-RCR) is a web based resource designed to help disseminate research findings in the field of credentialing.
3.4 Engineering, architecture and construction services

Engineering, architecture and construction services are closely linked in several ways. Many firms offer all of these services and fall in the domain of the Engineering, Architecture and construction (EAC) industry. Firms provide integrated architecture, engineering, planning, environmental and construction/project management services to industrial, commercial, residential, and government institutions. It is widely understood that while architects design buildings, engineers design systems for buildings (structural, electrical, mechanical) and heavy construction, the implementation of the plans designed by architects and engineers is carried out by the construction workers and managers. The background notes prepared by the WTO Secretariat on architectural and engineering services and construction and related engineering services indicates the close link between these services. The focus of the note on architectural and engineering services is on the professional services provided by qualified architects and engineers, while the focus of the note on construction and related engineering services is on the economic activities of physical construction and related engineering works. Both the background notes point out that there is certain overlap between the scopes of the two sectors. Due to the close relationship between these services, they are analyzed here in the same section with separate subsections being devoted to each distinct service.

3.4.1 Architects and engineers

Architectural and engineering services are classified into four sub-sectors in GATS and include architectural services, engineering services, integrated engineering services and urban planning and landscape architectural services. 70 WTO members made commitments in at least one of the four subsectors. The largest number of commitments have been in engineering services (69 Members), followed by architectural services (61 Members). Integrated engineering services, and urban planning and landscape architectural services have been committed by 43 - 44 Members. Analysis of the level of commitments reveals that while a considerable number of countries made full commitments in mode 3, no Member had made full commitments in mode 4 when horizontal measures are taken into account. Although architecture and engineering are considered relatively liberal sectors, with larger number of commitments by countries compared to legal or accounting services, architectural and engineering services also belong to the group of accredited professional services. Hence they face barriers in the form of licensing, standards, and nationality and residency requirements similar to other services for mode 4 movement.
The practice of engineering is regulated by the laws that individually exist in each of the 50 States of the United States and five territorial jurisdictions. These laws are administered and enforced by the independent licensing boards of each of these States and territories. There are also numerous professional bodies corresponding to different disciplines of engineering. For example, the American Society of Civil Engineers represents the largest discipline (by population) of engineering. These professional organizations are not involved in a regulatory or licensing capacity. However, they interact with the National Council of Examiners for Engineering and Surveying (NCEES). The National Council of Examiners for Engineering and Surveying (NCEES) represents the engineering and land surveying licensing boards of all U.S. states and territories. The NCEES regulates and scores the exams required for engineering and land surveying licensure in different states. Although the requirement for each state and territory varies, there is generally a four-step process required to obtain engineering licensure.

1. The first step is for licensure requires graduation from an engineering program accredited by the Accreditation Board for Engineering and Technology (ABET). Since ABET does not accredit engineering programs or degrees offered in other countries, graduates from foreign engineering schools need to have their education credentials evaluated by the Engineering Credential Evaluation International (ECEI) of the ABET. The ECEI evaluation takes six weeks from the date that all documents are filed for the evaluation and charges a fee of $425 for a basic evaluation. Other services such as evaluation of supplemental or new information and additional evaluation reports require additional fees.

2. The first exam in the licensure process is the Fundamentals of Engineering (FE). Candidates need to register to take the exam in a specific state. Rules for eligibility to take the exam vary for each state and jurisdiction. For instance in New York, a total of 6 years of credit is required for admission to the Fundamentals of Engineering examination. Credits are awarded

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91 It should be mentioned however that the ABET has entered into a number of mutual recognition agreements that recognize the “substantial equivalency” of engineering accreditation systems or engineering programs in other countries and recommend that graduates of these systems be accorded the same recognition rights and privileges as those granted to graduates of ABET-accredited programs in the U.S.
on the basis of a combination of education and experience. Foreign engineering school graduates receive a lower credit for their education since they are not from ABET accredited colleges and require more credits in the form of work experience to sit for the FE exam. The fees for the FE exam also vary from state to state. In New York, the application fee for the FE exam is $70 and examination fee is $120.

3. After passing the FE exam, many jurisdictions have specific requirements about the type of engineering experience gained. Most licensing boards require that candidates obtain at least 4 years of experience. Many states require that candidates gain experience under the supervision of someone licensed in the specific state, and that the experience involves increasing levels of responsibility. In-state residency is required for licensure in Idaho, Iowa, Kansas, Maine, Mississippi, Nevada, Oklahoma, South Carolina, South Dakota, Tennessee, Texas, and West Virginia.

4. The second exam is given in a variety of engineering disciplines and titled the Principles and Practice of Engineering (PE) examination. The PE examination is taken once the applicant has attained engineering experience satisfactory for the licensing board, passed the FE examination and, in most jurisdictions received the endorsement of qualified practitioners. The application fee for the PE exam is $345 and exam fee is $170 in New York. In addition to these examinations, individual jurisdictions may exercise their choice to require additional examination, especially for foreign applicants. Most states require TOEFL or other evidence suggesting fluency in English Language.

The licensing procedures and requirements for architects are very similar to that of engineering. Practice of architecture in a U.S. jurisdiction requires a license and each of the 50 states, the District of Columbia, Guam, the Northern Mariana Islands, Puerto Rico, and the Virgin Islands has an architectural registration board which regulates the architecture profession in their jurisdiction. The National Council of Architectural Registration Boards (NCARB) is the national agency which represents state boards and works with its member boards to establish registration or licensing policies for architects. There are four major organizations that play important roles in the registration process. These include the NCARB, the American Institute of Architects (AIA), the Association of Collegiate Schools of Architecture (ACSA), and the National Architectural Accrediting Board (NAAB). The American Institute of Architects (AIA) is the principal professional organization for architects and provides support for structured intern training. The Association of Collegiate Schools of Architecture (ACSA) represents the schools and institutions that train architects in the US, and the National Architectural Accrediting Board (NAAB)
accredits those institutions. Foreign architects need to interact with these organizations to become a registered architect in a U.S jurisdiction. Like engineering, different states and jurisdictions have different procedures for registration; however each jurisdiction evaluates the architects in three major requirements - education, training and examination requirements.

1. Education Evaluation - Most state registration boards require an accredited degree in architecture from the NAAB before registering an applicant. Foreign-educated architects need to have all of their post-secondary education evaluated through the Education Evaluation Services for Architects (EESA) of the NAAB. The evaluation fee for the EESA is $800 with additional fees of $200 for re-consideration (evaluation of any additional materials that have not previously been submitted). The evaluation process takes a minimum of five months after submission of the completed application form and all requested documentation.

2. Training and Experience - Most state member boards have adopted the training requirements established for the Intern Development Program (IDP). IDP involves training under the direct supervision of a registered architect in the US. To apply for the IDP, candidates need to establish a NCARB Council Record which involves an application fee of $285. The time required to establish an NCARB Council Record varies considerably, and the NCARB states that most Council Records take between four and six months to establish. Training is measured in training units; one training unit equals 8 hours of acceptable experience. To satisfy the IDP requirements, a candidate must earn a total of at least 700 training units, with prescribed subtotals in various training areas. The maximum credit allowed for foreign experience in architecture is 235 training units when the candidate is previously supervised by an architect not registered in the U.S. or Canada.

In the state of New York, eligibility for licensure is based on a combination of education and experience for which units of credit are awarded. The credit awarded for education determines the required number of units of experience and if more credits are awarded for education, the number of years of experience required is less. The Board compares content and quality of courses undertaken by foreign candidates with courses required in an NAAB-accredited program and assign points for them. The maximum number of credits granted when the first professional degree is from a non NAAB-accredited program is 8 units. Foreign architect would require a minimum of 4 years of experience before they can sit for the license exam in New York.

92 All U.S. jurisdictions require IDP training for initial registration, with the exceptions of California (effective January 1, 2005), Arizona, Guam, Virgin Islands, and the Northern Mariana Islands.
York also requires documentation of completion of the Intern Development Program (IDP) training criteria as part of their experience component.

3. Examination - Every state member board requires architects to pass NCARB's Architect Registration Examination (ARE). Candidates have to register in a specific state board to take the exam. Each state education department determines the candidate’s eligibility to take the exam based on their education and experience. In New York, an architect can sit for the exam if the combination of education and experience equals at least 12 units. The ARE consists of nine divisions—six multiple-choice divisions and three graphic divisions. All divisions of the examination do not need to be taken at the same time. The fees for each of the multiple choice papers is $92 and fees for each graphic division is $145. In addition to the exam fees, architects also have to pay license fees for the state. Licensure in New York via NCARB licensing examination has a fee of $345.

Several States require continuing education to maintain a license; requirements vary by State, but usually involve the completion of a certain number of credits every year or two through seminars, workshops, formal university classes, conferences, self-study courses, or other sources. Architects and Engineers have to apply for H1B visa to work in the US. They are subject to general restrictions, such as labor certification and numerical quotas that apply to all holders of the H1B visa category. These are outlined in detail in the earlier sections on general federal restrictions. However, apart from the visa issues, the major barrier for both architecture and engineering services seems to be the times and costs involved in securing licensure. The fees involved in licensing procedures for architects and engineers are summarized below. The basic cost of licensure for architects is $2417 and for engineers is $1130. There are also many additional costs involved during training and preparation for the examination.

Table 3.7: License Fees for Engineers and Architects

<table>
<thead>
<tr>
<th>Category of License Fees</th>
<th>Engineer</th>
<th>Architect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education Evaluation</td>
<td>$425</td>
<td>$800 (Possible additional Fees of $200)</td>
</tr>
<tr>
<td>Total Examination Fees</td>
<td>$190 (For the FE exam)</td>
<td>$552 (For the multiple choice papers)</td>
</tr>
<tr>
<td></td>
<td>$515 (For the PE exam)</td>
<td>$435 (For graphic papers)</td>
</tr>
</tbody>
</table>

* Fees stated are for the state of New York.

93 The multiple-choice divisions are: Pre-Design, General Structures, Lateral Forces, Mechanical & Electrical Systems, Building Design, and Construction Documents & Services. The graphic divisions are Site Planning, Building Planning, and Building Technology.
York

| Additional Fees | Costs maybe incurred for TOEFL and in-state residency training in specific states | Training requirements of the IDP require additional fees of $285. The state licensing fee for New York is $345 |

Licensure for architects seem to involve more time and expense than licensing for engineers. Registration for foreign architects in the US requires a long process of education evaluation, two years, work experience, nine exams and thousands of dollars in fees. A study by Boston-based British architect Stephen Stenson, show that UK architects spend over 10 times as much getting registered in the US as American architects do to be registered in the UK. According to the article, the main drain on UK architects' time and money, cited in the report, is that the US does not recognize British architects' "general education" standards and therefore insists applicants gain "general education" qualifications at a US college, which can include English, math, social studies, biology and zoology, and may take up to a year and a half to complete.

The need for licensure is also greater in architecture than engineering. Licensure for engineers is required primarily for those who offer their services directly to the public. While certain levels and titles are restricted to those who hold a P.E. license, licensure for engineering graduates working in industry, government, and education is not yet required in the US. However, in contrast to engineering which is one of the largest and most diverse of professions, architecture is comparatively much smaller and remains predominantly local or regional in the US. Foreign architects cannot call themselves architects or sign and seal drawings until they complete the licensing process. As the architecture profession suffers an economic slowdown, many practices in the US are reported to increasingly demand that foreign architects be registered with the US National Council of Architectural Registration Board. Building design 2003 reports that the stringent requirements of education and examination have led to frustration and registration delay for foreign architects. The report states that there is a need to reduce regulations on architects since it seems to have a large impact on their foreign practice.

There are some measures to facilitate temporary or occasional practice for architectural services. For instance, limited permits to work on a specific project can be issued in New York if the architect does not have an established business and is not a resident of the state. The fee for a limited permit is $315. The requirements for a limited permit include 3 letters of reference, from
3 architects substantiating lawful practice, verification of Out-of-State Licensure and specific description of the project. Limited permits are granted only on recommendation of the state board and entitle the holder to practice architecture in the state but only in connection with the specific project for which it is granted. While the limited permits meet an important niche at present, there is need to expand the scope of temporary permits and provides for limited permits for foreign architects.

There are quite a few mutual recognition treaties in engineering and architecture. In engineering, the Washington Accord was signed in 1989. Its members include the professional associations of Australia, Canada, Hong Kong, China, Ireland, New Zealand, South Africa, United Kingdom and US. Under the Accord, institutions which are members agree to recognize the comparability of accreditation processes (i.e., policies, criteria and procedures used to accredit the courses/programs) used by other institutions in relation to engineering qualifications (first professional degree or basic engineering education). However, the Accord does not address the mutual recognition of licensed credentials such as the Professional Engineer (PE) in the US. The US has a mutual recognition agreement for the PE qualification with Canada. The Engineering Accreditation Commission (EAC) of the ABET (Accreditation Board for Engineering and Technology) of the US and the Canadian Engineering Accreditation Board (CEAB) of the Canadian Council of Professional Engineers (CCPE) reached an MRA in 1997 whereby the accreditation decisions rendered by one party are acceptable to the other party.

In architecture, the Barcelona Accord on “Recommended International Standards of Professionalism in Architectural Practice” was adopted by the Union of International Architects (UIA) in June 1999. The UIA has members in over 100 countries in 5 regions of the world and include India. The Accord is a set of guidelines which aims at providing practical guidance for governments and negotiating entities seeking mutual recognition for architectural services. However, the Accord is voluntary and not an agreement with architectural boards of states and countries. The US National Council of Architectural Boards (NCARB) has signed an agreement with the Committee of Canadian Architectural Councils (CCAC) that provides for the reciprocal registration of architects in US and Canada. Most jurisdictions in US and Canada have signed a Letter of Undertaking which provides for the acceptance of the conditions of the NCARB/CCAC.

94 To register in the UK, a US architect only needs to gain one-year work experience, sit for a one-day exam and pay about $1,400. For further details see Building Design May 16, 2003
The agreement also permits the jurisdiction/province to stipulate any special requirements, such as demonstration of knowledge of local laws or other unique requirements for registration.\footnote{To see a list of jurisdictions in US and Canada that are part of the inter-recognition agreement see http://www.ncarb.org/reciprocity/interrecognition.html}

While these mutual recognition treaties have played an important role in developing guidelines for recognizing qualifications of engineers and architects, there is need to develop formal agreements along the lines of the US-Canada agreement. The agreement between the licensing authorities in the US and Canada truly promotes licensed qualifications in both countries being mutually accepted and takes away the necessity of giving multiple exams. Recognition between the US and Canada is facilitated by the fact that applicants in Canada and applicants in US take the same exam. While it may not be feasible for all countries to have the same exam, there can be systems of inspection and accreditation of licensed architectural training in different countries. Such a system can be modeled on the recognition agreements that exist for Commonwealth countries. The Commonwealth Association of Architects (CAA) has established many recognition arrangements between institutes in Commonwealth countries, based on architectural training in specific educational establishments. The validation of courses and examinations for exemption is carried out on behalf of the member institutes by the Royal Institute of British Architects. Qualifications are mutually accepted subject to local interview.\footnote{The CAA consists of 38 member institutes from Commonwealth or former Commonwealth countries and represents an estimated 37,000 architects. The Indian Institute of Architects is also members of the CAA.} Such arrangements are important particularly for architecture given the licensing requirements that exist in its practice in the US.

\subsection*{3.4.2 Construction Services}

The U.S. construction industry is diverse and huge. It ranges from plumbers or electricians who work alone on residential and small commercial projects to engineering and construction companies that design and build giant, complex projects. Construction can be divided roughly into two basic types of projects, buildings and heavy construction. Contractors in the building sector construct buildings such as homes, schools, hospitals, skyscrapers, high-rise and low-rise office buildings, apartment buildings and condominiums whereas contractors in the heavy construction sector build factories, process plants, refineries, power plants, highways, roads, bridges, airports, ports, dams, railroads, and pipelines. Construction services supplied...
internationally typically relate to large-scale projects such as airports, harbors and petrochemical plants, and seem to be primarily in the heavy construction sector. The international construction services also depend on the owner of the project. There are two main types of project owners in the United States, public owners, which include government agencies at all levels of government in the United States (federal, state or local governments) and private owners which include individual persons and business owners. The selection of the contractor in the government projects is strictly controlled by public bidding laws. The government agency must publicly announce that bidding is open on the project and the agency must also ensure that the contractor complies with quality standards in the design and specifications. On the other hand, owners of private projects are free to select their contractors in any way they wish. They can have open bidding and invite several contractors to bid or they can work in private with only one contractor. Public-sector financing and public procurement have played an important role in the consumption and trade of construction services, however due to the stringent requirements on public projects and a global trend towards privatization of state-owned enterprises and activities, the importance of the public sector appears to be declining.\(^\text{97}\)

69 WTO Members have made commitments in 55 schedules for at least one of the sub sectors under construction and related engineering services. 22 schedules cover all the subsectors in the sector, while 8 schedules cover only one sub sector. The average is between 3 and 4 subsectors per schedule, with the largest number of countries making commitments in General Construction Work for Civil Engineering (46 schedules), followed by General Construction Work for Buildings (45). Full commitments were made in 51 - 64 per cent of all commitments made (excluding "other" services) for the supply of services through commercial presence (mode 3). These figures decline substantially to 29 - 36 per cent when horizontal commitments are taken into account. However, in general terms, these figures compare favorably with other service sectors, and seem to indicate that relatively liberal commitments were undertaken for the construction sector.

The construction industry in the United States is heavily regulated. The regulation does not come from one central source, such as a Ministry of Construction. Rather, the regulation results because construction involves a number of important public policies that, in turn, involve a number of public agencies. They include controls on land use, building regulations and technical

\(^{97}\) Public procurement of construction services also seems to be falling as public procurement has sometimes given rise to trade disputes or bilateral discussions between industrialized countries.
requirements, building permits and inspection, registration of proprietors, contractors and professionals, regulation of fees and remunerations, environmental regulations, etc. These measures are applied often not only at the national level, but also at the sub-federal or local government level. Many of these measures are in the interest of the public and are intended to maintain the safety of the building constructed. However such measures often tend to create difficulties for foreign construction suppliers. Difficulties for foreign suppliers may be created not only by the nature of the regulatory restrictions but also by the fact that the required permits and licenses are granted by different national and local authorities and industry associations. As in the case of other sectors, there are problems of recognition of credentials and licensing that affect temporary work by foreign workers. However, since the construction sector involves extensive use of both skilled and unskilled labour, other issues such as unionization, insurance and safety regulations also affect the movement of natural persons in the US. Due to their impact on mode 4, these regulations are examined along with licensing and qualifications barriers in this sector.

There is no federal construction licensing in the United States. Architects and engineers are licensed or registered in all 50 states and in many states, their business entities also must be licensed or registered. However, there is less consistency in contractor licensing. Contractors are licensed in about three-quarters of states. In many states, the licensing focuses on the business entity taking on construction work and not on individual workers. But, licensing requirements also exist for workers. Some states have comprehensive license schemes for individual contractors, some states license only certain trades in construction(electricians, electrical contractors and plumbers in Colorado) and some states have no licensing requirements at all (as with New York State). In many states (for example, California), separate boards oversee the contractor, engineer and architect licensing schemes. In other states (for example, Arizona), one board oversees two or more of the licensing schemes. Again, states such as New York that do not license contractors may allow local governments to require contractor licensing. It is quite apparent that licensing requirements vary by a great deal from state to state.

In the state of California, anyone who acts as a “contractor” must have a contractor’s license. California’s license law broadly defines “contractor” as “any person, who undertakes to or does himself or through others, construct, alter... any building or other structure... whether or not the performance of work described involves the addition to or fabrication into any structure... or improvement described of any material or article of merchandise.” The process consists of three steps: (1) submission of an initial application; (2) an examination; (3) and submission of required
bonds and proof of insurance. California’s Contractors State License Board requires contractors to have at-least four years of experience to qualify to take the examination. There are no education requirements in order to qualify for a contractor’s license. California recognizes three major classifications of contractor’s licenses, Classes A, B and C. Class A is for the “general engineering contractor, the Class B license is for the “general building contractor” and the Class C license is for specialty contractors whose construction work involves a single trade. There are two parts to the examination process: the first test is a standard Law and Business examination and a second test covers the specific trade or certification area for which the contractor is applying. Currently, it costs a total of $400 in fees to obtain a contractor’s license for one classification. This amount includes both the non-refundable application processing fee and the two-year initial license fee. All contractors are required to present proof of workers’ compensation insurance coverage as a condition of licensure, to maintain a license, or to renew a license. Contractors also have to file a bond or cash deposit with the registrar of contractors. Bonds are purchased from insurance agents and may be issued for the length of time that the contractor and the insurance agent agree upon. Most bonds are issued for a period of one to three years.

Most states provide a series of exemptions from license requirements. A contractor’s license is not necessary in California if a contractor does not contract for jobs costing more than $500 and does not advertise themselves as a licensed contractor. Federal courts have ruled that contractors doing work for the federal government are exempt from state contractor’s license laws. A firm that wants to undertake a project outside its home state may be able to take advantage of exemptions from licensing for out-of-state firms. California’s Contractors State License Board may waive the examination if the qualifier has been previously licensed.

Contractor licensing is said to be one of the most arcane areas of American law because it is quite complicated and changes a lot from state to state. It is necessary to identify the appropriate licensing body, the license holder, the licensing category, and the services covered by the license. Some of the licensing laws are considered out-of-date or anti-competitive. In states with no

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98 Credit for experience is given only for experience at a journey level or as a foreman, supervising employee, contractor, or owner-builder
99 California recognizes 42 separate C license classifications, including carpentry, electrical and glazing.
100 Typically, a firm must designate a “qualifier” or an individual who will take the necessary examination to obtain a license. In most states, there are rules concerning the relationship that a qualifier must have to the firm. In California, the qualifier for a contractor’s license must be a “responsible managing employee” of the firm or a “responsible managing officer”.
statewide contractor’s license requirement, the task of ensuring compliance with license requirements can be even more difficult because cities and counties may impose their own requirements. Violation of the laws can bring criminal penalties, including jail time and fines. Most licensing laws provide that unlicensed contractors, engineers and architects cannot sue in court for payments they are owed. California now allows owners to sue unlicensed contractors to recover all payments made to them. Licensing laws also determine the projects that the contractors can undertake and how they are paid in a particular state. Foreign contractors working temporarily need to ascertain the correct licensing requirements and make sure their hiring company complies with them.

Apart from licensing requirements, movement of construction workers is affected by three major regulatory requirements in the US. These include

1. Business Structure- The structure of a construction company often determines whether the company can employ temporary workers from foreign countries. The construction business is conducted by many kinds of entities in the United States, including sole proprietorships, partnerships, joint ventures, limited partnerships, limited liability partnerships, limited liability companies and corporations. The structure of a construction company is closely related to licensing requirements. For example, in California, limited liability partnerships and limited liability companies cannot obtain contractor licenses. Foreign contractors thus can only work in construction companies where the business structure is compatible with licensing laws in the states.

2. Safety and Insurance - The US federal government imposes strict safety regulations for particular industries, such as the construction industry. The regulations are enforced by the federal Occupational Safety and Health Administration or by equivalent state agencies. All U.S. states (as described for California) require businesses, including contractors, to have worker’s compensation insurance, which pays for medical treatment and rehabilitation of injured workers. Premiums for worker’s compensation insurance are determined by the safety record of the particular industry (i.e. construction) and of the particular contractor. A foreign contractor may not have an established safety record and this adversely affects their chances of getting business from project owners. The insurance premiums for foreign contractors are also likely to be greater. Although these regulations are formulated with the workers safety interest in mind, the costs of insurance often make hiring a foreign contractor unviable.\(^\text{101}\)

\(^{101}\) U.S. architects and engineers can obtain malpractice insurance – insurance that pays for their legal defense and any damages resulting from their professional errors and omissions. Such insurance is not
3. Labor-Employee Relations: The U.S. construction industry is heavily unionized. This is particularly true for the Pacific Coast, the Northeast (including New York), in the Midwest and in nearly every major urban area. The National Labor Relations Act and other federal laws govern relations between employers, unions and union workers. The construction industry relies on lawyers to assist employers in negotiating union contracts and complying with them. Unlike other skilled professions such as engineering and architecture, workers may need to be part of a union to secure regular work. While unions serve an important purpose in protecting the rights of the workers, it is difficult for a foreign worker to become part of a union and the heavy unionization of the profession might cause barriers to entry of foreign workers.

Temporary movement in the construction industry faces a number of barriers. Different licensing requirements in different states create confusion and uncertainty for foreign construction workers. Temporary Movement is also affected by the structure of the Construction Company and safety-insurance requirements. The use of both skilled and unskilled labour in construction services creates barriers that are quite different from those faced in other skilled professions such as engineering, medical or legal professions. There is no separate visa category for construction workers to enter the US. The H1B category often does not apply to the workers since it requires professional/college education and a specialized skill. Construction workers need to enter the US on a H2B visa which is granted to temporary or seasonal nonagricultural workers. H2B workers have a quota of 66,000 per year and data on H2B visas reveal that most of the vast majority these visas have been granted to other countries in North America (i.e. Mexico and Canada) with Asia receiving a negligible percentage. Countries such as Mexico have an advantage in providing these services due to their geographical proximity to the US. Past data from India reveal that a large portion of the movement of construction workers from India have been in the Middle East compared to that of the US.

While there are a number of barriers to construction related mode 4 from India, there is scope for improving movement to the US with appropriate policy measures. The nature of the construction industry suggests that policies to improve mode 4 need to be pursued in conjunction with commercial presence (mode 3). Foreign firms need to form a joint operation or a joint venture available to U.S. contractors. However, commercial general liability (CGL) insurance is available to contractors which pay for their legal defense and any damages resulting from property damage and personal injuries to third parties. However contractor often have to hire a lawyers to help obtain CGL insurance coverage for damages caused by construction defects.

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102 See Table 1.3 in Section 1 for the specific volumes.
company with local suppliers in the construction industry due to large financing required in projects as well as assistance with clearing local laws, regulations and practices. US companies have no local staffing conditions for FDI and hence mode 3 investments could be accompanied by large movements of temporary workers at all levels of skill. Mode 3 investments would also help deal with issues of necessary business structure, safety ratings and insurance for the foreign workers. Consistent licensing laws across various states would help reduce uncertainty faced regarding the licensing process. Temporary authorizations to undertake construction work should also be explored.

An effort to harmonize existing standards in the construction industry on a global level is now underway in the European Community (EC). Standards prepared by the European Committee for Standardization (CEN) are being put forth to ISO for adoption as world standards. However, the U.S. Government and U.S. private firms have no input into CEN. Moreover, currently, no international regulatory agency oversees compliance with these standards. Unlike engineering and architecture there are no major mutual recognition treaties of skill in construction. This is probably because the construction industry uses workers at different levels of skill. Mutual recognition agreements can be developed at the level of construction managers. One such agreement exists between the American Council for Construction Education (ACCE) and the Chartered Institute of Building in the United Kingdom. They have a reciprocity agreement whereby ACCE recognizes university degree programs accredited by the Chartered Institute of Building as equivalent to baccalaureate programs accredited by ACCE. 103 Such recognition treaties can be useful for India. However, given that it is experience, not education that is paramount in this field, mutual recognition treaties for education will probably play a limited role in increasing movement of natural persons. 104

3.5 Computer and Related Services

Computer and related services is commonly considered the largest non-licensed sector in the GATS negotiations. Due to the dominance of global firms in the computer services area, the standards of professional accreditation, which have been a major obstacle to the international mobility of other professionals, have been set mainly by major multinational corporations like

103 See http://www.acce-hq.org/ for further information
104 As stated above, states such as California have no minimum education requirement for licensing for contractors.
Microsoft and Oracle rather than by national licensing bodies.\textsuperscript{105} Moreover, the high demand for workers created severe manpower problems in some high tech industries, leading to lobbying by these firms to relax restrictions. Governments were more willing to allow movement as they were concerned about creating a national competitive advantage in an industry that faced a shortage of workers with specialized skills. The global IT industry has gone through three stages, dominated, respectively, by hardware (before the 1970’s), software (1970’s to mid 1990’s) and internet/e-commerce technologies (since the mid 1990’s). The GATS covers trade in all three categories, and classifies computer services in 5 sub-categories, consultancy services related to the installation of computer hardware, software implementation services, data processing services, data base services and other computer services.

In recent years, the computer and related services sector has experienced enormous growth, and has witnessed the introduction of a number of new entrants, interests and types of services. In India, it is amongst the fastest growing sectors and a major area for generating employment and exports. According to OECD, trade in ICT-related services has grown faster than total trade in services. OECD trade in combined communications and computer and information services increased from around USD 29 billion in 1995 to more than USD 49 billion in 2000, and their combined share of total services trade increased from 3.1% to 4.3%. According to official U.S. balance of payments data, cross-border exports/sales of computer and data processing services grew from $776 million in 1992 to $3.2 billion in 2002. During the same period, U.S. cross-border imports of computer services grew from $71 million to $1.1 billion. Thus, during this time period, exports of computer and data processing services to foreign purchasers grew by 287 percent, and imports by 1389 percent. US balance-of-payments data also reveal the exports and imports of computer and data processing services from India. This data capture cross-border trade and revenue from temporary movement of natural persons from India. In 2002, India received 13 million dollars of computer and data processing services from the US and supplied 76 million dollars of computer and data processing to the US. US exports of computer and data processing from India increased by 7500 % from 1992 to 2002 whereas US sales of computer and data processing to India increased by 550 % in the same period. From the export and import data, although the US remains one of the largest producers and exporters of computers and related

\textsuperscript{105} Although there are many professional associations in the computer and related service sectors, such as NASSCOM in India, their nature is very different from professional associations in the licensed sectors. The associations in the computer services area are not responsible for accreditation of professionals or regulation in the sector.
services, India has a large surplus of exports over imports with the US and has also seen larger growth rates in exports. Developing countries like India have lagged behind developed countries in IT spending but have emerged as dynamic exporters of IT services.

The U.S. made substantial commitments in the computer and related services sub-sector during the Uruguay Round. The U.S. commitments cover all computer and related services with the exception of airline computer reservation systems. The U.S. committed to fully open markets (“none”) for both market access and national treatment, except for mode 4 of market access, where the commitment is “unbound, except as indicated in the horizontal section.” The activities of computer services companies are largely free from Federal and State Government regulation, which have been a major barrier in many other sectors. The deregulation of the U.S. telecommunications sector also has supported the growth of computer and related services provided through electronic means. However, the fact that computer and related services face little sector-specific regulation in the GATS commitment schedule does not mean that this sector does not face barriers or government policies that restrict the growth and development of computer services. These sectors often face many informal and intangible barriers, which are harder to address since they are not often captured in existing agreements. The presence of limitations in the horizontal section of the US schedule of specific commitments also restricts the computer services. Some of the restrictive policies and areas have already been outlined in the previous sections. The major barriers faced in computer services are summarized as follows.

1. Labour market policies related to work permits and visas: A report submitted by Parikh (2002) on Joint WTO-World Bank Symposium in Geneva on mode 4 states that Visa related issues are the most critical barriers affecting the Indian software professional. The process of securing a visa involves considerable time, administrative procedures and delay. While these delays are present for all occupations, they are especially costly for a competitive global industry such as computer services that requires considerable timely movement of IT service providers. Some of the major steps in securing a visa include prior adequate search for US persons, wage-parity with US industry standards,

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106 According to OECD, the ratio of exports to imports is an indicator of how well a country performs as a producer and exporter.

107 The Asia Pacific region is ranked 4th in total ICT spending by region, after North America, Western Europe and Japan.
quantitative limits on the number of visas for a certain category, limited duration of stay and other economic needs tests. Many of the visa and work-permit requirements (such as payment of social security taxes) discriminate and raise the costs of hiring a foreign computer professional. Details on these barriers have been examined in an earlier section on federal level restrictions.

2. Policies relating to education and experience: Although the computer services industry does not face any licensing requirement in the US, there are often several work experience requirements. In the US, the qualification requirements for many software professionals are three years post-graduation experience in the occupation and a degree directly related to it. Software personnel from developing countries such as India may have the skills to deliver the service even with 1 to 2 years of experience due to their strong engineering base and background. The discretion and uncertainty in recognizing previous experience and qualifications amounts to a barrier for developing countries.

3. Policies restricting information technology (IT) and business process outsourcing (BPO) services: Restrictions on cross-border trade in IT-enabled is a recent trend that affects the movement of computer professionals. There have been more than 100 bills introduced in the US federal and state legislation that place restrictive measures against outsourcing and employers bringing in temporary workers using L-1 (intra-company transfer) visas. As the US Government is an important purchasers of computer software and services, such federal and State supported legislation impacts movement of computer professionals considerably. The cancellation or cessation of outsourcing contracts to Indian companies will limit the flow of computer professionals who are an essential element of the outsourcing contract. Details on the barriers on BPO services and its effect on mode 4 are examined in further detail in the next section.

4. Policies to protect intellectual property rights and address software piracy /software license enforcement: Many of the internet/e-commerce related concerns such as authentication, encryption, protection of individual privacy, and protection of the consumer has assumed greater importance in recent times. US legislation takes strong objection to foreign workers collecting personal information and aims to safeguard the privacy of personal data. In the absence of laws being considered adequate in developing

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108 Computer Programmers and systems analysts applying to enter the UK are required to have five years or more of experience in a high-level (managerial, analytical, or executive) position or a graduate degree plus two or more years of senior post-graduation work experience. For further details see Chanda (1999).
countries such as India, such contracts and subsequent movement of computer professionals are likely to be lost.

Although the barriers to movement in the computer and related services sector are much less than the other sectors, there is concern about the increased regulation of this industry. The possibility of increased regulation occurs both due to the maturity of the sector and due to convergence. Industry associations point out that the increased regulation of computer and other IT services could stifle trade, innovation, and growth in this sector. The Business Software Alliance (BSA) has described some regulatory initiatives and notes the increasing focus of telecommunications regulatory authorities on IT products and services, citing, for example, proposals to establish government-mandated standards on communications software. The presence of rules and technical standards may have an effect on the real value of market access commitments in computer and related services. These barriers are likely to be felt even more in the future for Indian software firms as they evolve from lower-end, disentangled BPO services to more integrated and expert-based services. Such regulation is likely to affect mode 4 since imposition of stringent standards in the computer services industry may introduce barriers to mode 4 similar to those faced in licensed sectors.

There are several national IT industry associations that deal with regulatory issues and aim to promote IT companies of their respective countries. The Information Technology Association of America (ITAA) is the leading IT trade association of US and has over 500 direct member companies. In India, NASSCOM (National Association of Software and Service Companies) is the leading trade body and the chamber of commerce of the IT software and services, with 819 members at the end of 2003. Industry associations such as ITAA and NASSCOM play a very important role in promoting trade in computer services by advocating IT policies and legislation in the respective federal and state government, engaging in alliances on software quality standards and best practices and providing opportunities for business development and networking. In particular, NASSCOM has acted as an advisor, consultant and coordinating body for the software services industry in India and has played a key national and international role in promoting Indian IT software and services industry. NASSCOM helped the Government in India to develop industry friendly policies and engaged with various overseas governments and industry associations to reduce immigration barriers and promote global sourcing. NASSCOM is also a member of international software alliances such as the Asian Oceanian Computing Industry Organization (ASOCIO) and World Information Technology and Services Alliances (WITSA).
ASOCIO is a group of computing industry associations from the Asian Oceanian Region and comprises representatives from 24 countries.\textsuperscript{109} The World Information Technology and Services Alliance (WITSA) is a consortium of 60 IT industry associations from around the world, with WITSA members representing over 90 percent of the world IT market. International organizations such as the ASOCIO and WITSA aim to advance the IT industry’s growth and development by sharing of knowledge and experience, advocating policies that facilitate international trade in IT products and services and providing members with a network of contacts in nearly every geographic region of the world. WITSA also hosts the World Congress on IT, a global IT event to exchange opinions on matters affecting the computing services industry, and promote cooperation with countries and international organizations on matters of common interest. The WITSA recommend that all countries offer full market access and national treatment commitments in computer and related services on a technology neutral basis and apply these commitments to electronically delivered goods and services. They further recommend liberalization for a range of services that are essential for initiating and completing e-commerce transactions, including advertising services, online payment services, content-based services and express delivery services.

There is no doubt that national and international organizations in the IT services have fostered and promoted trade in computer services. However, in recent years, computer services have become more varied and complex, giving rise to new and unanticipated barriers. For instance, the distinction between computer and related services, and basic and value-added telecommunications services has grown less distinct and has led to some uncertainty about whether existing GATS commitments apply to certain varieties of emerging services such as data warehousing and application hosting. The GATS classification scheme does not include future service activities that have become possible with advances in technology. The weakness in the existing classification and commitments is also apparent in computer services sector. For instance, in BPO services, whereas most countries have included full commitments on data processing, they offer little in categories that are likely to be the most important to guarantee full market access for BPO and support services, such as supply services of office support personnel, and telephone answering services.\textsuperscript{110} The limited coverage of key service activities, including existing and new services, in the classification as well as the commitments in GATS is a concern.

\textsuperscript{109} ASOCIO members are from Japan, Australia, Bangladesh, Hong Kong, India, Indonesia, Korea, Malaysia, Mongolia, Myanmar, Nepal, New Zealand, Pakistan, Philippines, Singapore, Sri Lanka, Taiwan, Thailand, Vietnam, and 5 guest members from USA, UK, Canada, Spain and France.
especially for countries like India with a comparative advantage in computer services. To seek improved and actual access for India in modes 1 and 4 of computer services, it might be necessary to undertake further international negotiations. The most immediate concern is to address the protectionist initiatives in the government procurement contracts of the US. Consultations will also need to address how other complex issues that arise in the context of cross-border services trade and movement of natural persons in computer services can be addressed in the WTO context.

Section 4: Cross modal restrictions on mode 4

Trade in Services takes place through four major modes of supply in GATS. Apart from Mode 4, the three other modes include Mode 1 or cross-border supply (delivery of services across countries), Mode 2 or consumption abroad (physical movement of the consumer of the service), and Mode 3 or commercial presence (establishment of foreign subsidiaries). The link between four modes of supply is well-established. The definition of services trade and modes of supply under the GATS clearly specifies that commercial linkages may exist among all four modes of supply. For example, a foreign company established under mode 3 in country A may employ nationals from country B (mode 4) and business visits into A (mode 4) may prove necessary to complement cross-border supplies into that country (mode 1) or to upgrade the capacity of a locally established office (mode 3). Inter-modal linkages have been seen mostly in Modes 3 (commercial presence) and mode 4. Observations on the Uruguay Round services negotiations often concludes that developing countries are interested in seeking commitments on mode 4 to allow their professionals and workers to work overseas while developed countries, are mainly interested in seeking commitments on mode 3 to allow their banks and companies to set up branches and joint ventures. Developed countries such as the US have often linked concessions under Mode 4 to greater market access under Mode 3.\footnote{See Mattoo and Wunsch (2004) for more details on BPO services under GATS.} Again, restrictions on Mode 3 such as local staffing restrictions, approval from host country professional associations, branching restrictions often translates into barriers to Mode 4.

It is important to examine the effect of restrictions on other modes of supply such as commercial presence on mode 4 since they affect the scope of movement of natural persons indirectly. The

\footnote{For instance, in a recent visit to India, US Secretary of State Colin Powell asked India to further open areas like financial services, retail, telecom and legal profession, i.e. more opportunities under Mode 3.}
next two sections outline the character of commercial presence (mode 3) and cross-border supply (mode 1) in the US, and looks at how restrictions on mode 3 and mode 1 have affected movement of natural persons.

4.1 Commercial Presence/FDI in the US and Mode 4

There are few barriers to commercial presence in the United States. The US has traditionally welcomed investment or commercial presence from abroad and a non-U.S. person can usually establish a U.S. subsidiary or branch without substantial control or review by any federal, state or local governmental authority in the U.S. However, federal laws restrict the percentage of foreign ownership in certain sectors considered particularly sensitive such as radio and television broadcasting, domestic air and marine transportation and fishing. Certain highly regulated industries, such as banking, insurance, electric and gas, and communications, are subject to discretionary governmental action. For instance, both the federal government and the states highly regulate banking, and the initial application for a charter or license requires extensive disclosure of financial information, and frequent audits and reports are required on an ongoing basis. Insurance companies in the U.S. are regulated heavily on the state level. This includes extensive financial disclosure in establishing or acquiring an insurance business in a state as well as approval from the state insurance commissioner. Some states have U.S. citizenship and residency requirements for directors of insurance companies.112

There are a number of informal and intangible impediments to mode 3. The federal "Exon-Florio" law permits the President to suspend or block a foreign acquisition if he finds the acquisition threatens U.S. national security. The interagency Committee on Foreign Investment in the U.S. (CFIUS), chaired by the Treasury Department, has authority to investigate such acquisitions and make recommendations for action. The Exon-Florio law does not clearly define national security and since the September 11, 2001 terrorist attacks, there has been an expansion to what constitutes “national security”. Transactions appropriate for CFIUS review go well beyond the defense industry, particularly into fields such as telecommunications and technology. In October 2001 the U.S. adopted the USA PATRIOT Act, which requires financial institutions to conduct enhanced due diligence on all accounts belonging to non-U.S. persons.113

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112 It should be mentioned that many of these regulations are required for financial and macro stability reasons.
113 The US Patriot Act is an acronym for Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism.
investors in the U.S. have to disclose information regarding ownership status and their affiliations with other organizations.

The barrier to mode 4 linked to commercial presence arise mainly due to the complex set of regulations faced by foreign-owned companies under federal, state and local laws. Movement of natural persons from an investing foreign company is limited due to impediments of transferring foreign service personnel. For instance, Reid and Priest (2003) point out that many foreign owned companies have increasingly been the target of employment discrimination claims brought by American employees with the focus of such claims often being the company's treatment of "rotating" or expatriate staff. These people are nationals of the country of origin and are assigned to work in the U.S. subsidiary and hence constitute intra-company transferees or temporary workers under mode 4. American employees have challenged the alleged "reservation" of certain high-level positions at the U.S. office or subsidiary for rotating staff; or have alleged lack of promotional opportunities for such jobs. American workers have also challenged the termination of their employment with U.S. offices of foreign corporations, alleging that expatriate staff is protected from discharge and this therefore constituted race, sex or national origin discrimination. Such employment discrimination lawsuits are costly for employers. Many juries tend to take a pro-employee attitude in employment cases, particularly where a foreign employer is the defendant and have rendered large monetary verdicts in favor of employees. To minimize the risk of employment discrimination claims, foreign companies may be discouraged from rotating staff, unless essential to a task or project. Such legal issues affect movement of intra-company transferees and professionals. Although there are no formal staffing conditions for commercial presence in the US, many of the labor and employment law issues facing foreign corporations translate into barriers to the transfer and movement of professionals.

Additional regulations also exist for companies that have a large number of employees on temporary visas. For instance, companies are classified as H1B dependent if they have 15% or more employees in H-1B status. H1B-dependent employers must attest that they have taken

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114 For further details on cases against foreign companies by American workers see Reid and Priest (2003).
115 Employers may have to pay for compensatory and punitive damages, back and front pay, reinstatement, injunctions and other equitable relief and an award of attorneys' fees and costs to ex-employees.
116 Determination of H1B-dependency is based upon the ratio of employer’s total full-time equivalent (FTE) employees, and the number of H-1B workers at time the LCA is filed. In general, an employer is H1B-dependent if they have (i) 1-25 FTE employees with 8 or more H-1B workers (ii) 26-50 FTE employees with 16 or more H-1B workers (iii) 51 or more FTE employees, with number of H-1B workers being 15% or more of total number of employees.
good faith steps to recruit U.S. workers using industry-wide standards, and are subject to investigation by the US Department of Justice for failing to hire a comparably qualified U.S. applicant. There are documentation requirements that apply only to H-1B Dependent Employers since they have to maintain copies of all applications, evaluations, interview notes, offers and responses. Violations are subject to $35,000 fine and 3-year debarment filing immigrant and nonimmigrant petitions. Foreign establishments are likely to have nationals from their country on visas such as H1B, to work temporarily in the US. Such restrictions and regulations on recruitment and documentation not only raise costs but also constitute a barrier to mode 4 movement.

4.2 Cross Border Supply of Services and Mode 4

Cross-border trade (mode 1) is another important mode of supplying services that affects movement of professionals. The rapid progress in telecommunications since the Uruguay Round negotiations has seen immense expansion in mode 1 and also changed the dynamics of inter-modal linkages. Mode 1 or cross border supply through business process outsourcing has emerged as the most dynamic form of export of services from developing countries. Countries like India, China and Philippines are now growing hubs for outsourcing and provide low cost options to firms in developed countries. A recent report by the McKinsey Global Institute states that offshoring saves U.S. companies 58 cents for every dollar spent overseas and creates a net additional value of 12-14 cents for the US economy on every dollar offshored. Outsourcing enables companies to operate 24 hours a day and offer customers services they couldn’t afford earlier with the wage rates in developed countries such as the U.S. 117

The relationship between Mode 1 and Mode 4 is complex as Mode 1 has the potential to complement as well as substitute Mode 4. The multi-fold relation between these two modes is best summarized in a recent paper by Chanda (2003). The paper points out that the inter-modal linkages between Mode 1 and Mode 4 are three-fold.

1. Mode 4 can facilitate Mode 1 since the successful performance of Indian companies in providing high-quality onsite services abroad has helped firms to secure offshore service contracts from developed country firms.

117 For further details on the McKinsey Study see “Offshoring: Is It a Win-Win Game?” McKinsey Global Institute, San Francisco, August 2003.
2. Mode 4 substitutes Mode 1. Advances in technology have led to substitution between mode 1 and mode 4 since a number of labor intensive services that were previously only tradable through the movement of providers can now be traded over high-speed connections. Mode 1 seems to substitute for mode 4 in low value and high volume activities like call centre, data entry and processing, and transcription services which can be provided on-line or over the phone.

3. Mode 4 complements Mode 1. As service activities move up the value chain, mode 1 and mode 4 are compliments since outsourcing has to be accompanied by movement of persons for understanding client requirements and execution of outsourcing contracts. High-end outsourced activities like IT consulting, and product development need mode 4 at the level of specialists and domain experts for the purposes of knowledge transfer and customization.

According to Chanda (2003), there are three phases of the outsourcing or Mode 1 contract, “planning phase” when the specifications of the contract need to be worked out, “migration phase” which involves knowledge sharing between the client company and the software firm and the “steady state phase”, which is when the entire process has been transferred to the executing firm in the low cost country and the work is done offshore and delivered through cross border exports. Although the end product is delivered through mode 1, all stages of the preparatory process and also the follow up once cross border delivery takes place, require mode 4. Given the close and complex relationship between mode 4 and mode 1, barriers to either mode have the potential to substantially affect the scope of both Mode 1 and Mode 4 activities. Till date, the bulk of cross border trade involving developing countries has been in information technology (IT) and business process outsourcing (BPO) services. Indian companies have started to move up the value chain from lower-end, disentangled BPO services to more integrated, expert-based and sophisticated services. By focusing on consulting and integrated services, mode 1 has largely become a complement and facilitator to mode 4. It is important to examine barriers and legislations against mode 1 (and its consequent effect on mode 4), particularly for India, since India has been a leader in cross-border trade of IT-enabled services.

118 The computerization of many services as well as improvements in international telecommunications makes it possible to perform many labor intensive services in distant locations, without requiring the physical presence of a service provider in a foreign location.

119 The dominance of India in software development is well known and two-fifths of the Fortune 500 companies are reported to outsource software requirements to India. Work related to the year-2000 problem alone earned Indian companies $2.5 billion. General Electric is reported to save about $350 million per year through the 18,000 offshore employees it has in India. A study by A.T. Kearney confirms that while India remains overall the most attractive location, other countries like China, Malaysia, Brazil and the
In recent times there has been a considerable rise in the barriers to Mode 1 in the US, in spite of the benefits of offshoring to US companies. While offshoring has led to job creation in India and other developing countries, the rapidly gathering pace of outsourcing has also given rise to job losses in the US. The forecasts of Forrester Research and other articles in the media that more than 3 million jobs in the United states will be lost over the next decade has led to a backlash against outsourcing. Popular television talk shows such as CNN's "Lou Dobbs Tonight" titled "Exporting America" and stories in the media such as “The New Global Job Shift: The next round of globalization is sending upscale jobs offshore”, Business Week, February 3, 2003 confirm this trend. The US House of Representatives subcommittee on business in July 2003 discussed the issue of whether American can lose these jobs and still prosper. While lower-level tech jobs in data entry and systems have been shipped abroad for more than a decade, the rising export of highly skilled positions in software development has caused great concern.

The barriers to Mode 1 in the US have taken the form of a series of legislations against outsourcing introduced in various states. Legislators in at least 36 states have introduced more than 100 bills till date to restrict overseas outsourcing. Most of these bills have not yet become law, but at least one has been enacted and the volume of bills seems to indicate that more may become law. A report by the NFAP states that legislation against global sourcing to date has taken three forms.

Firstly, state legislators have sought to restrict overseas call centers by regulating calls that involve residents of their states. The call center legislations require call center operators to disclose their location and prohibit personal and financial information from being sent overseas.

Philippines are close behind. The size of the outsourcing market is expected to grow further in the near future. A survey by Deloitte Research, found that the world’s 100 largest financial services firms expect to transfer $ 350 billion of their cost bases abroad by 2008. The value of medical transcription outsourcing in the US is expected to double by 2005 to $4 billion.


The National Foundation for American Policy (NFAP) maintains an updated list of bills restricting outsourcing and their texts on its web site.
for processing without the permission of the residents. Another restriction at the state level is to allow only U.S.-based employees to work on any contract from a state agency. For instance, a 15.3-million government contract of Tata Consultancy Services by the Indiana State in the US was cancelled due to political pressure and preference for Indiana companies. According to the NFAP, the Tata proposal was $8.1 million less than the next competitive bid and translated into Indiana taxpayers’ spending an extra $162,000 per worker over Tata’s bid.

Secondly, legislation at the federal level has sought to require that federal contractors perform work exclusively in the United States. For example, the Thomas-Voinovich amendment which became law on January 23, 2004, prohibits the awarding of certain federal contracts to a private company that performs any of the work outside the United States. A number of other federal outsourcing-related bills are pending in congress. The United States Workers Protection Act, known as the “Dodd Amendment” is the most widely publicized pending federal outsourcing legislation. The measure would prohibit federal contract work from being performed overseas unless the President deems a contract to be in the national security interests of the United States. The Dodd Amendment also prohibits state contract work from being performed overseas with money received from federal grants.

The third form of legislation against outsourcing restricts U.S. companies from using L-1 (intra-company transferee) visas. There have been four bills till date that place a series of restrictive measures against employers using L-1 (intra-company transfer) visas. L-1 Visa Reform Act of 2003 introduced by Senator Chambliss states that “that individuals shall not be eligible for L-1 visas if the alien will be controlled and supervised principally by an unaffiliated employer”. Although there has been no legislative activity to date, since Sen. Chambliss is the Chairman of

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123 In New Jersey, in response to criticism that a subcontractor for a call center used workers in India for state unemployment services, legislation was introduced that makes it difficult for U.S. companies to maintain call centers in foreign countries. The bill states that “Within the first 30 seconds of answering a telephone call made by a person to an inbound call center, an employee at the call center shall identify: himself, by stating his name; the name of his employer; the location of the municipality, state and country in which he is located; and, if applicable, the name and telephone number of a customer service representative of the entity utilizing the services of his employer.”

124 A similar bill was introduced in Michigan by which Michigan state government agencies will give preference to Michigan entities in procurement.

125 Other federal bills also propose to cut federal funding by making companies that outsourced jobs during the previous five years ineligible for federal funding. For further details on the federal and state bills on outsourcing, see http://www.nfap.net/researchactivities/globalsourcing/appendix.aspx
the Senate Immigration Subcommittee, the NFAP reports that the legislation is more likely to move than other bills on this topic.  

Legislation against Mode 1 affects Mode 4 both directly and indirectly. The legislation against L1 visas directly affects Mode 4 as it seeks to reduce the number of temporary visas granted. Legislation at the State and federal level indirectly impact Mode 4, since the cancellation or cessation of outsourcing contracts to Indian companies will limit the flow of temporary workers who are an essential element of the contract. Legislation on outsourcing also affects movement of professionals across various sectors. The most visible effect can be seen the computer services area. As mentioned before, most Indian IT companies have a global-delivery model and need to send their employees overseas to work temporarily in the client site for most phases of any Mode 1 contract. However, restriction on outsourcing also affects the accounting and the medical sector.

In accounting, a recent trend has been the use of offshore accountants for preparation of U.S. tax returns. Tax experts predicted that Indian chartered accountants have prepared 150,000 to 200,000 US returns in 2004, up from about 20,000 in 2003 and 1,000 in 2002. Concerns about the privacy of and financial information handled abroad have led to legislation against the practice of offshoring IRS tax preparation. Congressman Edward Markey (D-MA) recently appealed to the Internal Revenue Service to hold the tax return preparer responsible when a foreign person hired by a U.S. firm violates the protections which restrict unauthorized disclosure or misuse of personal information.

A new trend in medical care in the US has been the outsourcing of medical services to English-speaking countries overseas such as India. The American Association for Medical Transcription, California estimates that about 4% of the $15 billion to $20 billion American medical transcription industry goes to India. A 12-hour time zone difference with the US makes it possible for India to meet the turn-around-time for Medical Transcription work. Indian

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126 The other bills against use of L-1 visas are S.1452, and its companion bill HR.2849, HR.2702, and HR.2154. The other bills introduced are quite broad and are not specifically targeted like the Chambliss legislation.

127 L-1 visas are in response to cases where Americans are alleged to have been laid off since their jobs have moved overseas. The loss of jobs had also become a central political issue in the US presidential election. US employment is an important issue in the 2004 election with the Democrats, the opposition of the ruling party repeatedly noting that the American economy has lost more than two million jobs since 2001 and that employment growth has been slow despite other signs of economic recovery.

128 This includes services such as billing, transcription, coding, claims review and adjudication, as well as staffing nurse call centers.
workers work at a fraction of the cost, and charge $12 to $15 less an hour.\textsuperscript{130} However, there has been legislation introduced to ban the overseas transfer of medical information. The California Legislature introduced at least three bills to bar physicians and health care entities from outsourcing work that involves sending and handling confidential medical information internationally.\textsuperscript{131} Six others states have also introduced anti-outsourcing bills related to the privacy of medical, financial or personal information, although the three California bills specifically address medical privacy. Senator Hillary Rodham Clinton (D-NY) has called for federal legislation which gives the “patient the right to know” that x-rays or other private healthcare information are being outsourced to countries outside of the U.S.

Another trend in medical care is internet websites that offer the services of foreign physicians who are credentialed to practice medicine in their own country and are available to perform such functions as reading and interpreting X rays, MRIs, and other diagnostic tests at a fraction of the cost that a radiologist would charge in the United States. There have been protests of the use of foreign physicians to diagnose or treat patients. A recent article in the New York Law Journal states that the use of foreign physicians to diagnose or treat a patient is illegal in New York. The New York State Health Department’s Board has stated that a physician who is in any physician-patient relationship must meet New York’s licensure requirements for practicing medicine.\textsuperscript{132} Thus, a foreign physician can only legally practice medicine in the US, including telemedicine by acquiring a license to practice in the specific state.\textsuperscript{133}

\textsuperscript{129} Other estimates state that this percentage may be higher at 10 \%. \\
\textsuperscript{130} The movement of health services offshore was prompted by a shortage of allied health workers in the United States as well as lower labor costs, and convenient time difference. American Medical News, 12/04/03. \\
\textsuperscript{131} Legislation in California was prompted by a widely publicized incident last year in which a woman in Pakistan threatened to post patient records on the Internet unless the University of California San Francisco Medical Center paid her money she claimed a third party owed her. \\
\textsuperscript{132} A foreign physician’s reading and interpretation of the X-ray films of a patient located in New York is considered a physician-patient relationship, since the patient is the recipient of the physician’s “professional advice.” \\
\textsuperscript{133} The process of acquiring a license is similar to the licensing process described before in the medical section and requires the physician to be present in the US. However, some states do endorse foreign licenses. For instance, an applicant’s foreign license may be accepted in the State of New York if he or she is “in possession of the appropriate medical license or certificate from that country,” has at least five years of “satisfactory professional experience, has completed the necessary post graduate training, and passed a competency examination that is acceptable to the department. After a foreign physician meets these requirements, the Board reviews the physician’s application, and makes a final decision regarding the endorsement of the physician’s foreign license. However, the endorsement is a lengthy and cumbersome process, with very few approvals till date.

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Barriers against mode 1 across varied sectors such as accounting, health and computer services indicate that legislation might have a widespread resulting effect on mode 4 workers who are part of the mode 1 contracts. It should be pointed out that the above restrictions on outsourcing apply mainly to government procurement and although the size of government procurement markets of the U.S. is quite large, such measures are not expected to affect the bulk of BPO services and contract jobs that are conducted between companies. However, such legislative barriers are signs of a protectionist tendency that might lead to further trade barriers. As a recent World Bank report points out, this kind of legislation creates a dangerous precedent as it is possible that similar legislation or less transparent regulatory barriers may affect non-government markets. The rise of such legislation related to use of foreign labor, their qualifications, labor standards in multiple sectors would impact mode 4 and raise the raise costs of entry and operation for temporary service providers.

Section 5: Conclusion

Liberalization in mode 4 movement has been modest in the United States. The United States has a large temporary admission system with various visa categories, regulations and certification systems for temporary workers. While the procedural difficulties of obtaining visas are well known, the barriers faced by professionals to actually undertake temporary practice in their specific area are not clear. The US schedule of commitments in GATS does not reflect the difficulties of temporary movement in individual service sectors and only mentions some licensing and residency requirements for providing services. However, licensing and regulation of the professions are a function of the states in the United States, and it is necessary to examine state and professional laws governing temporary practice in different sectors. This paper has documented in detail the nature of the sector, the steps to licensure as well as the regulatory difficulties faced by service providers in various sectors.

134 According to The Economist, 2004, the impact of federal legislation against outsourcing is expected to be minimal in India and represents only a small proportion of the $12 billion-worth of Indian exports of services expected in 2004. Moreover a recent report by the NFAP suggests that proposed federal legislation on outsourcing is at risk of placing the United States in violation of its obligations under a variety of trade agreements, including the World Trade Organization’s Government Procurement Agreement (GPA).

There are a number of barriers to mode 4 that emerge from the study. Many of the barriers are similar in all the sectors analyzed, while some restrictions are sector-specific. A summary of the major barriers across sectors reveals a number of key commonalities and differences between the varied sectors.

Firstly, US regulations governing licensing of professionals vary considerably from state to state. Foreign service providers wishing to practice in the USA must obtain appropriate local recognition by applying individually to state boards. Different State boards have different admission requirements, procedures and fees. Some jurisdictions do not allow foreign graduates to take the qualifying examination for licensing while some jurisdictions require successful completion of an additional course of study at an American approved school, while others require applicants to have practiced before for a minimum period.

Secondly, there are very few schemes for temporary licensing across sectors. Some states in the legal and the architectural professions offer limited or temporary permits for practice. However there are stringent requirements for temporary permits, with permissions necessary from various authorities. Temporary permits also tend to have a very narrow scope of practice that offers little value and learning for foreign workers on return to their home countries.

Thirdly, foreign service providers in all sectors need to incur large expenses for accreditation and licensing. Separate and distinct fees are required at every step ranging from evaluation of credentials, registration with state boards, necessary exams for certification, residency training, state licensing fees and visa applications. The basic costs for temporary practice are well in excess of $1000 for all the licensed sectors.

Fourthly, foreign workers in almost all licensed sectors need to complete accredited residencies in the US before they can receive a state license to practice their profession. Residencies in the accounting, legal, medical and engineering and architecture professions require the foreign worker to be physically present in-state for licensure. The requirements of instate residency also vary from state to state, with many states requiring candidates to gain experience under the supervision of someone licensed in the specific state.

Fifthly, there are limited visa options for foreign workers in all sectors. Workers in almost all sectors in the study, including accounting, legal, medical, engineering, and computer services need to enter the US on a H1B visa. All sectors are subject to general restrictions of the H1B visa category, such as labor certification and the numerical quotas that apply to H1B visas. There are
also sector-specific issues with H1B visas. In the medical sector, although foreign doctors can apply for a J-1 visa or H1B visa to enter the U.S., it is virtually impossible for an Indian doctor to receive an H1B visa. H1B visas also cannot be obtained easily for foreign nurses and for construction services since they do not meet the criteria of “specialty occupation”. Other Visa options such as H-1C visas for registered nurses and H2B for construction workers do exist, however these are difficult to obtain due to stringent requirements and the burden of evidence placed on the employers.

Sixthly, there is preference for certain countries on granting recognition by US state licensing authorities. Almost all sectors, including accounting, legal and medical acknowledge the degrees earned in Canadian schools. Certain schools and degrees from the UK are also granted equivalency in legal and architectural services. There are no clear guidelines on the procedures used for granting recognition from different countries.

Seventhly, international associations that promote accreditation and uniformity in standards exist in almost all sectors. These include the International Bar Association (IBA) and the International Union of Lawyers (UIA) in the legal sector, World Federation for Medical Education (WFME) in the medical sector, International Council of Nurses (ICN) for nurses, and the Commonwealth Association of Architects (CAA) for architects. Although these international associations have tried to develop global guidelines and policies for education, they often do not address the issues of recognition of licensed credentials in sectors. Moreover the rules and principles laid out by these associations have no binding effect on individual states and hence have had little impact on temporary movement of professionals till date.

Lastly, significant barriers to mode 4 arise from restrictions on other modes. Mode 3(commercial presence) causes barriers to mode 4 mainly on account of the employment regulations under US federal, state and local laws. Foreign owned companies are discouraged from transferring their personnel under Mode 4 due to employment discrimination claims that have been brought by American employees. Additional regulations and documentation requirements also exist for companies that have a large number of employees on temporary visas. Mode 1(Cross Border Supply) also has the potential to substantially restrict Mode 4. Recent restrictions and legislations that aim to curb Mode 1 affect Mode 4 both directly and indirectly. The cancellation or cessation of outsourcing contracts to Indian companies limits the flow of temporary workers who are an essential element of the contract. Legislation on mode 1 has also restricted temporary visas such

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136 Foreign doctors cannot apply for the H1B for entry since almost all states require them to complete...
as L1 which directly affects Mode 4. Although the most visible effect of mode 1 related restrictions on mode 4 are seen in the computer services area, it has affected various sectors including accountancy and the medical sector.

Reforms and changes are required to increase temporary movement in the United States. While there is scope for common policy to address the common concerns and needs of temporary workers across sectors, there is also a need for sector-specific policies to address the unique challenges of trading services in the different sectors. The study suggests that there are five broad areas which can be addressed by policy action at the GATS level.

First, mode 4 requires detailed sector specific GATS commitments. All the sectors analyzed in this study, from accounting to legal, medical, engineering, architecture, construction and computer services have different procedures and constraints for entry and practice of temporary workers. Within the medical sectors, doctors, dentists and nurses face different restrictions—dentists have to invest in education for accreditation in the US, while nurses have to go through several re-verification procedures. These restrictions are not apparent from the present GATS commitments. Moreover, horizontal commitments cannot deal with the needs and characteristics of individual sectors. Multilateral discussions in mode 4 need to move away horizontal commitments to sector-specific commitments, with rules, restriction and limitations to each sector and subsector being clearly outlined.

Second, licensing rules for temporary workers need to have some degree of uniformity and standardization across states. The overwhelming number and variety of state regulations for most licensed sectors in US make temporary movement complicated and confusing. Policies at the GATS level could help ensure that mode 4 workers in any profession face consistent set of licensing schemes across different states. Greater co-ordination between the federal and state verification agencies can ensure that certification procedures are not repeated at the state level.

Third, temporary licensing schemes and agreements need to be developed to promote trade in services in licensed sectors. At present, professionals often have to go through the same lengthy process of licensing for both temporary and permanent licensing. Negotiations at the GATS level can help expand the scope of temporary licensing in sectors. This would also help reduce the large costs associated with permanent licensing and requirements of in-state residency.

medical residencies and pass USMLE part III before they can receive state license.
Fourth, entry visas need to be easier to obtain and also encourage temporary rather than permanent movement. The H1B visa is the major entry visa for professionals in almost all sectors. H-1B visas are subject to several restrictions and worldwide quotas. Moreover, although H1B holders are temporary residents, they may apply to adjust their status to become permanent residents. Visas that specifically focus on temporary movement under GATS would help reduce costs and delays that temporary workers face in entering a foreign market. The proposal for a GATS visa has been made, with its merits and complications being elaborated in various studies. While there do remain several considerations to the actual implementation of the GATS Visa, there is need for a special entry system or process to facilitate and expedite the temporary movement of natural persons.

Lastly, GATS negotiating strategies need to take into account the intermodal linkages and restrictions. As pointed out earlier, legislation against mode 1 and mode 3 not only affects outsourcing contracts and foreign companies, but also movement of temporary workers who are part of the contract and employees of the foreign company. Liberalization of other modes such as mode 1 and mode 3 can help increase movement of workers under Mode 4. Similarly, Mode 4 can increase investment inflows and outsourcing contracts by increasing access of Indian workers to overseas markets. Countries need to take into account these mutually complementary roles of different modes and make GATS strategies consistent across modes.

Apart from policies at the GATS level, India also needs to pursue bilateral agreements that focus on temporary workers to ensure greater movement under mode 4. Although, India has consistently been the largest H1B beneficiary from the US, mode 4 has been concentrated largely in computer services, where there are little recognition barriers. India needs to establish mutual recognition system with the US to promote trade in licensed services such as medicine and law. The study identifies several bilateral and multilateral mutual recognition agreements between the US and other countries in the different sectors and points out ways in which India can establish such recognition agreements. In particular, the US-Canadian agreements for most licensed professions can provide several policy directions for India. The U.S. Department of Education accredits the curriculum and degrees of most Canadian programs. This exempts Canadian graduates in the licensed fields of accountancy, medicine, law, engineering and architecture from costly application procedures, giving multiple exams and having to complete residencies in the
U.S. Apart from licensing arrangements, Canadian professionals also do not face many of the visa difficulties of other countries. Canadian professionals work in the United States under the TN status and do not need to present a petition approved by the INS, or a labor condition application.  

It should be noted that recognition and temporary movement between the US and Canada is facilitated by the fact that the two countries have geographical and economic proximity as well as the same examination in most licensed professions. While it is not feasible for India to implement the same pattern of examination for licensed professions, mutual recognition treaties in specific sectors can help validate and accredit Indian courses and training in these professions. Mutually accepted systems of inspection and certification of licensed training in different sectors such as medicine, law, accounting, architecture and engineering, can help reduce the lengthy licensing requirements faced by Indian professionals in these sectors. However, such mutual recognition treaties would require the Indian government and relevant professional industry associations to be more pro-active in regulating standards and quality of training in licensed professions. In particular, Indian professional bodies can play an important role in promoting mutual recognition by coordinating with international professional associations and benchmarking international standards. Services trade between the United States and India will improve when both countries examine domestic standards, recognize foreign degrees and develop a uniform regulatory approach for temporary practice.

This paper highlights barriers faced by Indian professionals in mode 4 at various levels, ranging general barriers to entry, federal and sub-federal level restrictions, sector- specific restrictions, and restrictions arising from other modes. It reflects that there are many real barriers to effective market access, even where GATS commitments have been scheduled. If India is to benefit fully from its skilled manpower and emerging global trends, it is necessary to develop a comprehensive and sector-specific mode 4 strategy, supplemented by appropriate bilateral discussion and domestic policy reform.

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138 As noted before, there are many benefits accompanying to the TN visa, including cost savings (there is no $1000 training fee as there is for the H1B visa), lower eligibility requirements (eligibility for the TN visa is not based on meeting the bar set by the “specialty occupation”), lesser time to issuance and no maximum stay limitations.
APPENDIX
Appendix 1: Significance of States in Mode 4

In the US political system, each of the 50 States of the United States and five territorial jurisdictions state is distinct from the other and is regulated by its specific laws. While decisions over immigration policy are within the jurisdiction of the federal government, the state and local governments determine the services and benefits received by immigrants and temporary workers. The importance of states is visible right from the entry process for temporary workers, as each state has different times for processing labor certification applications in temporary worker programmers such as the H1B programme, as pointed out earlier. 140

Data from the Immigration and Naturalization Service (INS) on non-immigrants reveals that certain states are popular destinations for non-immigrants and temporary workers. Data on non-immigrants admitted by country of citizenship and state of destination for the fiscal year 2002 reveals that Florida is the most popular destination for non-immigrants overall in 2002 (having received 4,482,219 non-immigrants in 2002) and is followed by California (3,609,122) and New York (2,834,198). For Indian non-immigrants, California is the most popular destination (having received 88,684 non-immigrants) and is followed by New York (53,598) and New Jersey (48,904). Table A.1 and Table A.2 summarize the non-immigrants admitted by country of citizenship and state of destination in US overall and for Indians in the fiscal year 2002. While most Indian non-immigrants have come to California in 2002, the share of Indians non-immigrants in overall entry is highest in New Jersey.

140 Labor Certification is not required for all classes of visas for temporary workers. Details on labor certification are outlined in the previous section.
Table A.1: State of Destination of all countries, 2002

<table>
<thead>
<tr>
<th>State of Destination</th>
<th>All Countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Florida</td>
<td>4,482,219</td>
</tr>
<tr>
<td>California</td>
<td>3,609,122</td>
</tr>
<tr>
<td>New York</td>
<td>2,834,198</td>
</tr>
<tr>
<td>Texas</td>
<td>1,872,644</td>
</tr>
<tr>
<td>Illinois</td>
<td>624,546</td>
</tr>
<tr>
<td>Massachusetts</td>
<td>617,303</td>
</tr>
<tr>
<td>New Jersey</td>
<td>601,198</td>
</tr>
<tr>
<td>Georgia</td>
<td>354,007</td>
</tr>
<tr>
<td>Pennsylvania</td>
<td>314,986</td>
</tr>
<tr>
<td>Virginia</td>
<td>302,742</td>
</tr>
<tr>
<td>Michigan</td>
<td>296,837</td>
</tr>
<tr>
<td>Ohio</td>
<td>207,940</td>
</tr>
<tr>
<td>Maryland</td>
<td>252,068</td>
</tr>
</tbody>
</table>

Source: Statistical Yearbook of the Immigration and Naturalization Service, 2002

Table A.2: State of Destination of Indian Non-immigrants, 2002

<table>
<thead>
<tr>
<th>State of Destination</th>
<th>India</th>
<th>Share of India in all countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>California</td>
<td>88,684</td>
<td>2.46%</td>
</tr>
<tr>
<td>New York</td>
<td>53,598</td>
<td>1.89%</td>
</tr>
<tr>
<td>New Jersey</td>
<td>48,904</td>
<td>8.13%</td>
</tr>
<tr>
<td>Texas</td>
<td>36,438</td>
<td>1.95%</td>
</tr>
<tr>
<td>Illinois</td>
<td>26,927</td>
<td>4.31%</td>
</tr>
<tr>
<td>Florida</td>
<td>24,805</td>
<td>0.55%</td>
</tr>
<tr>
<td>Massachusetts</td>
<td>18,876</td>
<td>3.06%</td>
</tr>
<tr>
<td>Michigan</td>
<td>16,532</td>
<td>5.57%</td>
</tr>
<tr>
<td>Pennsylvania</td>
<td>15,600</td>
<td>4.95%</td>
</tr>
<tr>
<td>Virginia</td>
<td>14,662</td>
<td>4.84%</td>
</tr>
<tr>
<td>Ohio</td>
<td>12,290</td>
<td>5.91%</td>
</tr>
<tr>
<td>Georgia</td>
<td>12,237</td>
<td>3.46%</td>
</tr>
<tr>
<td>Maryland</td>
<td>10,432</td>
<td>4.14%</td>
</tr>
</tbody>
</table>

Source: Statistical Yearbook of the Immigration and Naturalization Service, 2002

Data on states of destination of mode 4 categories confirms that California is the most popular destination of all mode 4 categories, with the exceptions of Foreign Media representatives and Exchange visitors. New York, Florida, Texas and New Jersey are also important states of destination for temporary workers and other mode 4 categories. Table A.3 summarizes the state of destination of mode 4 categories, such as temporary workers, intra company transferees in 2002. California received more than 89,000 temporary workers and 40,000 intracompany transferees in 2002. Mode 4 movement in California accounts for 24 % of the movement in all mode 4 categories in 2002 and is followed by Florida (18%) and New York (18%)
Table A.3: State of Destination of Mode 4 categories, 2002

<table>
<thead>
<tr>
<th>State of Destination</th>
<th>Temporary Workers and Trainees</th>
<th>Treaty Traders and Investors</th>
<th>Temporary Visitors for Business</th>
<th>Foreign Media Representative</th>
<th>Exchange Visitors</th>
<th>NAFTA Workers</th>
<th>Intra-company Transferees</th>
</tr>
</thead>
<tbody>
<tr>
<td>California</td>
<td>89,253</td>
<td>681,982</td>
<td>4,967</td>
<td>38,526</td>
<td>10,248</td>
<td>40,084</td>
<td></td>
</tr>
<tr>
<td>New York</td>
<td>87,918</td>
<td>452,004</td>
<td>9,903</td>
<td>45,115</td>
<td>6,974</td>
<td>38,807</td>
<td></td>
</tr>
<tr>
<td>Florida</td>
<td>59,469</td>
<td>533,050</td>
<td>2,957</td>
<td>10,658</td>
<td>3,075</td>
<td>45,177</td>
<td></td>
</tr>
<tr>
<td>Texas</td>
<td>43,146</td>
<td>312,448</td>
<td>647</td>
<td>11,394</td>
<td>4,792</td>
<td>35,661</td>
<td></td>
</tr>
<tr>
<td>New Jersey</td>
<td>29,263</td>
<td>110,570</td>
<td>495</td>
<td>11,671</td>
<td>2,241</td>
<td>19,173</td>
<td></td>
</tr>
<tr>
<td>Massachusetts</td>
<td>24,660</td>
<td>123,920</td>
<td>506</td>
<td>21,721</td>
<td>4,079</td>
<td>9,543</td>
<td></td>
</tr>
<tr>
<td>Illinois</td>
<td>18,783</td>
<td>174,249</td>
<td>448</td>
<td>12,359</td>
<td>2,250</td>
<td>11,897</td>
<td></td>
</tr>
<tr>
<td>Georgia</td>
<td>16,717</td>
<td>102,077</td>
<td>427</td>
<td>6,475</td>
<td>1,233</td>
<td>8,461</td>
<td></td>
</tr>
<tr>
<td>Virginia</td>
<td>15,941</td>
<td>53,173</td>
<td>573</td>
<td>8,524</td>
<td>1,227</td>
<td>4,882</td>
<td></td>
</tr>
<tr>
<td>North Carolina</td>
<td>15,425</td>
<td>55,784</td>
<td>94</td>
<td>7,488</td>
<td>1,793</td>
<td>5,264</td>
<td></td>
</tr>
<tr>
<td>Michigan</td>
<td>13,464</td>
<td>88,120</td>
<td>239</td>
<td>8,706</td>
<td>4,629</td>
<td>11,975</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>414,039</td>
<td>2,687,377</td>
<td>21,256</td>
<td>182,637</td>
<td>42,541</td>
<td>230,924</td>
<td></td>
</tr>
</tbody>
</table>

Source: Statistical Yearbook of the Immigration and Naturalization Service, 2002

Although the non-immigrant and temporary worker population is concentrated in a handful of states, such as California, New York and New Jersey, many states of US have similar barriers to mode 4. The market access and national treatment obligations of almost all states in mode 4 are unbound, except for categories indicated in the horizontal section. The barrier to movement of natural persons at the state level mainly relate to state licensing and residency requirements for providing services. Most of these barriers have been discussed in the sector specific sections.

While licensing requirements are present in all sectors, the licensing and residency requirements are particularly stringent for legal services, health services and accounting services. In legal services, none of the 50 states of the US have guaranteed market access and/or national treatment (i.e. commitments are “Unbound” for all 50 states). The conditions of licensure are similar in many states. However, some states have more strict requirements than others. For instance, while in Alaska, practice of international law, 3rd-country law and host-country law is permitted by a foreign legal consultant (FLC), provided the foreign legal consultant (FLC) meets certain conditions, California only allows foreign lawyers to practice international law, not 3rd country and host-country law. In order to receive a license to practice, many states require an in-state office and US residency. Legal services by a foreign service provider requires an in-state office

141 The category of treaty traders and investors includes spouses and unmarried minor (or dependent) children.
142 Alaska allows practice of international law provided a foreign legal consultant (FLC) is competent, practice of 3rd-country law provided that the FLC obtains written legal advice from an attorney licensed in that jurisdiction, and practice of host-country law, provided that the FLC obtains written legal advice from an attorney licensed to practice in that jurisdiction.
for licensure in the District of Columbia, Indiana, Michigan, Mississippi, New Jersey, Ohio, South Dakota and Tennessee. US residency is required for licensure in legal services in 16 states, i.e. Hawaii, Iowa, Kansas, Massachusetts, Michigan, Minnesota (or maintain an office in Minnesota), Mississippi, Nebraska, New Jersey, New Hampshire, Oklahoma, Rhode Island, South Dakota, Vermont, Virginia, and Wyoming.

Accountancy services have similar residency requirements for practice by a foreign accountant. An in-state office must be maintained for licensure in accounting and book-keeping in Arkansas, Connecticut, Iowa, Kansas, Kentucky, Michigan, Minnesota, Nebraska, New Hampshire, New Mexico, Ohio, Vermont, and Wyoming. The number of states with US residency requirements is higher in accountancy services with 26 states requiring in-state residency for licensure.\footnote{In-state residency is required for licensure in accounting, auditing and bookkeeping services in Arizona, Arkansas, Connecticut, District of Columbia, Idaho, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Michigan, Minnesota, Mississippi, Missouri, Nebraska, New Hampshire, New Mexico, North Carolina, North Dakota, Ohio, Oklahoma, Rhode Island, South Carolina, Tennessee, and West Virginia.}

Engineering services require in-state residency for licensure in 12 states, i.e. Idaho, Iowa, Kansas, Maine, Mississippi, Nevada, Oklahoma, South Carolina, South Dakota, Tennessee, Texas, and West Virginia. In addition, US citizenship is required for any legal services supplied to the US Patent and Trademark Office and also for licensure in accountancy services for the state of North Carolina.

There is no state-specific residency or licensing requirements mentioned in provision of computer-related services, architectural services, and construction related services in US commitments schedule. However, all commitments in these services are unbound in mode 4 except as indicated in the horizontal schedules and hence are subject to limitations at a state level. Many states also have restrictions on purchase of land and eligibility of state subsidies, which indirectly affects mode 4 movement. For instance, ownership and purchase of land by non-US citizens is restricted in South Carolina, Oklahoma, Florida, and Wyoming. In Mississippi, non-US citizens may not purchase more than 5 acres for residential property, or more than 320 acres for industrial development. Purchase of land by non-US citizens is not permitted in the states of Hawaii, Idaho, Montana, and Oregon. The states of Minnesota, Maryland, Pennsylvania and Oregon have laws that require loans to be given only to US citizens, and residents of the respective geographic community. For instance, applicants for the Maryland Small Business Surety Bond Guarantee Program must be US citizens and entities must have their principal places of business in Maryland. While many of these restrictions are meant to encourage local
companies and state residents, they affect the scope for commercial presence in a state and hence also limit the scope for movement of professionals that accompanies capital.

The decisions made by individual states in the GATS sectoral commitments reveal a number of patterns. Most states with large immigrant and temporary worker populations such as California, New York, Texas and Florida have state licensing and residency requirements for providing services. However, states which are not traditional popular destinations for immigrants and temporary workers such as Hawaii, Maine, Oklahoma and Oregon also have made decisions to limit ownership of land and provision of services by non-residents. Most states have made no commitment and followed the federal government’s lead by referring to the horizontal commitments. However, this trend is likely to change. The devolution of authority from the federal government to the states gives states wide ranging governmental power on commercial relations, contracts, business regulation, and professional standards and licensing. Some state legislatures and legislators have expressed concerns about the threat GATS poses to their authority. In a March 24, 2003 letter to Robert Zoellick, President Bush’s U.S. Trade Representative, the National Conference of State Legislatures (NCSL) noted that it supports international trade agreements that generate jobs and economic growth, provided that the agreements respect the constitutional and traditional authority of state and local governments.144 The NCSL states that it is concerned that negotiations are proceeding under GATS “without a full understanding of the impact of GATS on state and local authority”. In the 2003-2004 Policies of the NCSL for the Jurisdiction of the Economic Development, Trade and Cultural Affairs Committee, it clearly states that the NCSL will not support trade or investment agreements that do not preserve the authority of state legislatures.145

The California legislature expressed many of the same concerns in another letter to Mr. Zoellick signed on March 28th, 2003 by 26 Democrat members. The letter states that the far reaching trade agreement of the WTO could have profound implications for the state and municipal lawmakering authority, specifically on the states ability to fulfill their obligations and their authority to govern, legislate and regulate for the benefit of their communities and broader public interest. The case of California is interesting since it receives more temporary workers and provides more assistance to immigrants than almost every other state. However, at the same time, California stands out as a

144 See the Letter to Ambassador Robert Zoellick regarding negotiations proceeding under the General Agreement on Trade on Services (GATS) dated March 24, 2003 in the National Conference of State Legislatures website www.ncsl.org
state that aggressively pursues limiting temporary workers and cutting unqualified immigrants off state and local benefits. According to Zimmerman and Tumlin (1999), this divided approach to immigrant policy reflects the unique politics of immigration in California, where increasing numbers of immigrants are naturalizing in order to vote and immigrant advocacy organizations are growing in strength, yet initiatives such as those limiting immigrants benefits are approved by the public.\textsuperscript{146} The policies and concerns of states such as California reflects the increasingly important role that states will play in shaping the market access and also limiting benefits received by temporary workers and other mode 4 categories in the future.

\textsuperscript{146} See Zimmerman and Tumlin (1999) for details on policy choices of states for immigrants.
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http://www.cpaboard.wa.gov/default.htm
http://www.dca.ca.gov/cba/index.html

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http://www.abanet.org/legaled/accreditation/acinfo.html
http://www.calbar.ca.gov/state/calbar/calbar_home.jsp
http://www.uia.org/uia/profilen.php

**Health Services – Physicians, Dentists and Nurses**
http://www.ecfmg.org/
http://www.usmle.org/
http://www.aamc.org/audienceeras.htm
http://www.nrmp.org/
http://www.fsmb.org/
www.ADA.org
http://www.ada.org/prof/ed/programs/search_index.asp
http://www.cgfns.org/
http://www.icn.ch/index.html

Engineering, architecture and construction services

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http://www.op.nysed.gov/pelic.htm
http://www.bls.gov/oco/print/ocos038.htm
http://www.ncarb.org/reciprocity/interrecognition.html
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Computer Services

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