

FOREIGN PROFESSIONALS IN THE UNITED STATES: REGULATORY IMPEDIMENTS TO TRADE

*Aaditya Mattoo and Deepak Mishra**

ABSTRACT

Changes in demographics and patterns of investment in human capital are creating increased scope for international trade in professional services. India, one of the largest exporters of skilled services, and the United States, one of the largest importers of skilled services, are two countries that mirror these broader global trends. The scope for mutually beneficial trade is today inhibited not only by quotas and discriminatory taxation, but also by a number of domestic regulatory requirements—including qualification and licensing requirements. To illustrate the nature and implications of these regulatory impediments, this article focuses on the regulatory requirements that Indian professionals face in the US market. It explores the consequences of regulatory discrimination and the economic cost of regulations, and presents some illustrative estimates. The article concludes by examining how the trade-inhibiting impact of regulatory requirements could be addressed through bilateral and multilateral negotiations.

I. EMERGING GLOBAL MARKET FOR PROFESSIONALS: THE BROADER TRENDS

Changes in demographics and patterns of investment in human capital are creating considerable scope for international trade in professional services. As populations in rich countries age, developing countries are seeing an increase in the proportion of working-age people. At the same time, the richest countries are investing proportionally less than middle income countries in engineering and technical human capital [Tiago Neves Sequeira,

* World Bank, 1818H Street NW, Washington, DC. E-mail: amattoo@worldbank.org; dmishra@worldbank.org. The views expressed in this article are those of the authors and should not be attributed to the World Bank. The authors are grateful to Ashish Narain for significant contributions to the paper, to Vikas Tiwari for valuable research assistance, and to Sumanta Chaudhuri, Jayant Dasgupta, Carlo Gamberale, Krishna Gupta, Dale Honeck, Abdul-Hamid Mamdouh, Gopal Pillai, Claude Trolliet, an anonymous referee, participants in the OECD-World Bank Expert Group Meeting on Domestic Regulation and Trade in Professional Services, 15–16 February 2007, Paris, and two anonymous referees for their comments.

Table 1. Impediments to the presence of foreign professional service providers

Barriers to trade in professional services	
Quotas and fiscal discrimination	Domestic regulation
Restrictive visa regime	Licensing requirements and procedures
Quotas on foreign providers	Qualification requirements and procedures
Discriminatory taxes and procurement	Other technical regulations

'High-tech Human Capital: Do the Richest Countries Invest the Most?' (2003) 3 B.E. Journals in Macroeconomics, Top Macroecon 13]. These changes in endowments are creating shifts in comparative advantage that are reversing conventional views on 'who can sell what to whom'. India, one of the largest exporters of skilled services, and the United States, the largest importer of skilled services, are two countries that mirror these broader global trends.

The potential for mutually beneficial trade in professional services is huge, but in practice such trade faces a number of impediments in both developed and developing countries. Developments in information and communication technologies have rendered some restrictions redundant, but the dominant modes of delivery, commercial presence and the presence of natural persons, are still subject to numerous restrictions. In particular, the movement of professionals across countries, which is the subject of this article, faces two broad types of impediments (see Chart 1): *quotas and fiscal discrimination*, in the form of restrictive visa regimes, prohibitions and economic needs tests on foreign providers, as well as discriminatory treatment in taxes and government procurement; and *domestic regulations* such as licensing and qualification requirements and procedures, that apply in principle to both domestic and foreign providers, but could be seen as trade impediments when imposed on foreign service providers who have already fulfilled these requirements in another jurisdiction (Table 1).¹

Previous work, including policy papers prepared by the World Bank (2004), has focused on quotas and fiscal discrimination. This article focuses on domestic regulation. As a first step in this analysis, we identify the regulatory requirements and procedures that foreign doctors, engineers, architects and accountants have to meet in order to practice in a particular market. As an example, we consider professionals from India who wish to practice in the United States. We recognize that the regulatory

¹ In terms of the rules of the General Agreement on Trade in Services, quotas fall within the scope of Article XVI on market access while discriminatory taxation falls within the scope of Article XVII on national treatment. Domestic regulations such as licensing and qualification requirements and procedures fall within the scope of Article VI on domestic regulation, but could also fall within the scope of Article XVII if they discriminate in any way against foreign services providers.

requirements in most other countries are similar if not more burdensome, and that many of the requirements imposed on foreign professionals by a particular US state are also imposed on professionals from other US states. Furthermore, current trade and immigration policies imply that what may initially be 'trade in services' through the temporary presence of professionals often ends up as permanent migration. Hence, it is difficult to distinguish between the two forms of foreign presence when we describe regulatory regimes or present data on foreign presence.

The issue of international movement of professionals, while important from a policy perspective, has not provoked much empirical research.² Thus there is not a well-established methodology and little information and data to fall back upon. Much of the work in this article is based on primary data. However, both the data and the estimates must at this stage be seen as a work in progress.

The structure of this article is as follows. Section II provides a brief overview of the extent of foreign and Indian professional presence in the United States as well as an indication of educational capacity in India. Section III summarizes the regulatory requirements that Indian professionals face in the US market. Section IV discusses the implications of regulatory discrimination and illustrates the impact of regulatory heterogeneity at the state level in the United States. Section V provides a rough estimate of the financial cost incurred by Indian professionals in meeting the regulatory requirements. Section VI examines how regulatory impediments to the export of professional services could be addressed through bilateral and multilateral avenues.

II. INDIAN PROFESSIONALS IN THE UNITED STATES AND INDIAN EDUCATIONAL CAPACITY

A discussion on 'trade' in services would ideally focus on foreign professionals working temporarily in the United States—reflecting the fact that multilateral and regional trade agreements treat trade-related labor mobility as distinct from immigration. There is, unfortunately, no data on the number of foreign professionals in the United States on temporary stay visas, but from the US census data it is possible to calculate the number of 'foreign born' professionals.³ We use this latter data to illustrate the significant presence of foreign professionals.

² One exception is the excellent working paper by Debjani Ganguly, 'Barriers to Movement of Natural Persons: A Study of Federal, State and Sector-specific Restrictions to Mode 4 in the United States of America' (ICRIER Working Paper No. 169, September, 2005), which covers ground similar to that in Section III of this article.

³ Data is available on the number of individuals entering the United States on specialty occupation (H1B) visas, but this data records the number of entries so that an individual may be

Foreign professionals in the four services considered here, namely, accountants and auditors, architects, engineers, physicians and surgeons, made up 14% of the total professionals of the US economy—which is smaller than the share of foreign goods and foreign capital in the US economy, but higher than the share of foreign professionals in most other countries. In absolute numbers, these five professions accounted for nearly 4.2 million jobs in 2000, of which, nearly 3.38 million were held by US-born professionals and the remaining 0.82 million by foreign-born professionals (many of whom have subsequently become US citizens).

The share of foreign professionals varies considerably across different professions, with professions that are less regulated and more intensive in science and technology-subjects tending to have a larger foreign presence (Figure 1a). Foreign presence is the highest in the field of computer software and medicine, with foreign computer software engineers and physicians and surgeons accounting for 29% and 27% of the total workforce in their respective fields.

Asians make up nearly half of all the foreign professionals in the United States, with India being the largest supplier of professionals to the United States. In 2000, out of the 812 thousand foreign professionals working in the United States, as many as 438 thousand (i.e. 54% of all foreign professionals) were born in Asia. India is the largest supplier of skilled professionals to the United States. In 2000, nearly 131,000 Indian-born professionals were working in the United States in these five professions, implying that one out of every 50 professionals in the United States was an Indian. But there was considerable variation across professions with three of every four Indian professionals working either as a computer software engineer or a physician or surgeon. On the other hand, only 5.8% of the foreign-born architects and 5.9% of foreign accountants and auditors were Indian-born.

India's educated manpower is not only large, it is also growing rapidly (Figure 1b). In 1999/00, though only 5.9% Indians had graduate degrees or above, this translated into 21.4 million graduate workers. The number of highly educated Indian workers is likely to have increased steeply since then, as enrolment in the higher education system has been rapidly rising since the 1990s. By 2005/06, an estimated 10.5 million students were enrolled in institutions of higher learning. India now has the third largest population enrolled in the higher education system in the world, after the United States and China. The number of professional education institutions has also grown rapidly (Figure 1c). Data on total enrollment in professional

counted more than once depending on the number of times he or she leaves and returns to the United States.

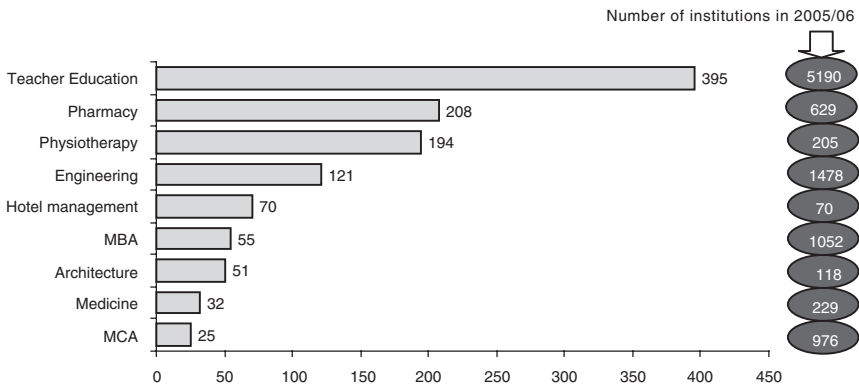
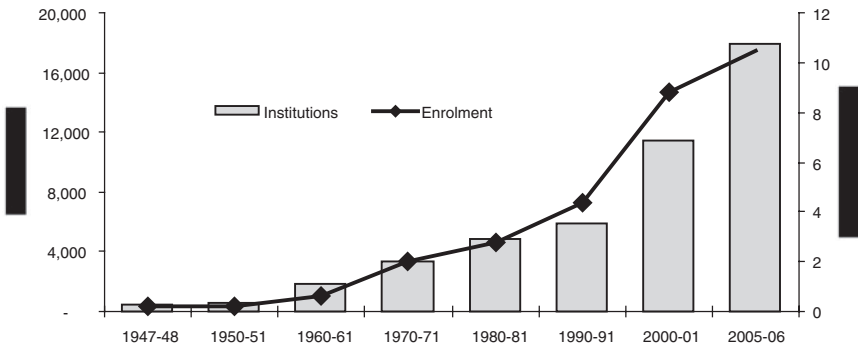
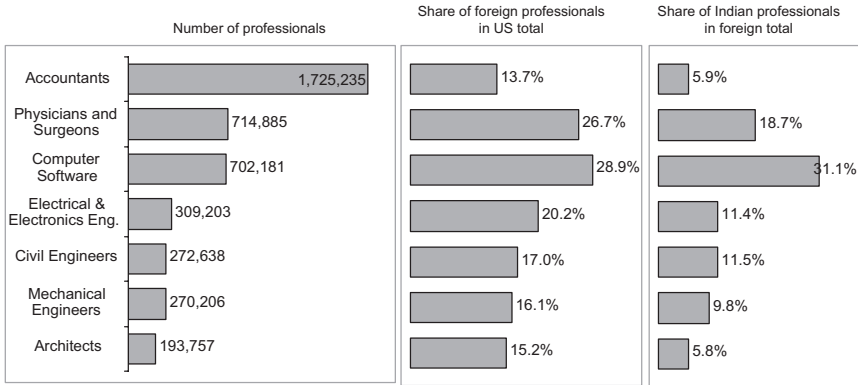


Figure 1. (a) The number of skilled professionals and the share of foreign-born in the US economy (Source: US Census, 2001). (b) Growth of higher education institutions and enrolment in India. (c) Growth (per cent) and number of professional education institutions in India between 1999/00 & 2005/06 (Source: Agarwal, 2006).

educational institutions is not generally available, but according to the All India Council of Technical Education, India produced 464,743 engineers in 2004/05, an increase of 16% over 2003/04 and more than double the number of engineers produced by the United States and Europe combined.

Notwithstanding the fact that India is endowed with a large and growing base for skilled professionals, there are serious concerns about the uneven quality of its endowment. According to McKinsey (2005), only 25% of Indian engineers, 15% of its finance and accounting professionals and 10% of Indian professionals with general degrees are suitable to work for multinational companies.⁴ In fact, faced with shortages of relevant skills, Indian firms are beginning to recruit abroad.⁵ Interviews with Indian professionals working in the United States and with human resource managers in Indian companies confirm the heterogeneity in the quality of education and sporadic shortage of professionals with certain skills. There is also broad consensus on the urgent need for reform of higher education in India.⁶

III. REGULATIONS FOR INDIAN PROFESSIONALS IN THE UNITED STATES

A consequence of the federal structure of the US Government is that professional licensing is generally not at the national level but the responsibility of state boards. These boards are specifically formed by the respective state governments for the purpose of regulating different professions. Thus there are State Medical Boards, state Boards of Architecture, State Engineering Boards and State Accounting Boards. In most cases, these Boards are autonomous bodies and possess wide discretion in matters regarding the eligibility to practice professions. These boards establish the rules for licensure in each profession.⁷

The application for licensure to practice a profession must be made to the respective state boards. Then the steps listed below need to be taken—not always clear cut, sometimes fragmented into smaller sub-steps and not always in the same sequence.

Establish eligibility. This involves the verification of educational qualifications, training and experience to establish eligibility to take the professional examination. Since no Indian program is accredited, this is a requirement that has to be fulfilled in all professions.⁸ The process is not expensive but

⁴ This is largely attributed to poor pedagogy, outdated curricula, inadequate interaction between universities and industry, as well as restrictions on the entry of private domestic and foreign education service providers.

⁵ For example, see *Economic Times* (15 June 2006) and *Financial Times* (17 June 2006), *Christian Science Monitor* (May, 2006).

⁶ See Sanat Kaul, 'Higher Education in India: Seizing the Opportunity' (ICRIER Working Paper No. 179, May, 2006) and Pawan Aggarwal, 'Higher Education in India: The Need for Change' (ICRIER Working Paper No. 180, June, 2006).

⁷ However, it is important to note that in so far as these state-level licensing boards in the United States operate under delegated authority of state governments and since their licensing conduct involves measures affecting trade in services, these measures are covered by the GATS and other trade agreements (except those that specifically carve out sub-national measures as some recent US FTAs have done).

⁸ Programs in some other countries are accredited, for example, under the Washington Accord (see footnote 11 subsequently).

is reported in certain areas to be of unpredictable duration and non-transparent.

Remedying gaps in education, training and experience. The remedying of any gaps in education, training and experience before taking (all or part of) the professional examination, and the remedial steps need to be taken in large part in the United States. Doctors take initial examinations held in India followed by a clinical skills examination in the United States, and then a period of mandatory graduate medical education in the United States (irrespective of past education and experience, and, in some states for a longer period than graduates of US institutions), and then qualify for a final examination in the United States. Most Indian architects and engineers in certain fields (including civil and mechanical) choose to pursue a master's degree in the United States, and must then (in certain fields) acquire several years of local experience which makes them eligible to take a professional examination. The experience requirements for graduates of non-accredited institutions are in some states significantly longer than those for graduates of accredited institutions.

Passing examinations. Passing the professional examination(s), held entirely or in significant part in the United States. In each of the regulated professions the final examination must be taken in the United States. In order to take the examination, a candidate needs to obtain a visa and incur the costs of examinations.

Additional requirements. The fulfillment of additional requirements, such as experience or local residency, in order to obtain a professional license. In medicine, a foreign medical graduate on a J1 visa must go through 3 years of work in an underserved area in order to be able to work in the United States. In accountancy, several US states require accountants to be residents in order to be licensed (this not only discriminates against foreign professionals but also against out-of-state domestic professionals).

Obtaining licenses. Licensure rules differ not only across professions but across states. Each state has its own requirements for those who have qualified from the state, from other states of the United States and from a foreign country. For example California requires four years of experience for licensure if an engineer is educated from a non-accredited program, whereas Pennsylvania requires a minimum of 12 years of experience. Similarly, international medical graduates (IMGs) are required to complete 3 years of post-graduate training in states such as Alaska, Colorado, Delaware, Washington DC and Missouri whereas the requirement is only 2 years of post graduate training in states such as California, Florida and Illinois. Architecture is an exception in that it has a centralized and strong national body, the National Council for Architectural Registration Boards (NCARB), which works with State Boards to establish qualification, registration and licensing policies.

IV. IMPLICATIONS OF REGULATORY DISCRIMINATION IN PROFESSIONAL SERVICES

The analysis of discriminatory treatment in professional services differs from conventional trade analysis because of how services are traded and how services trade is regulated. First, since professional services trade often requires proximity between the supplier and the consumer, we need to consider the impact of discrimination not just on services supplied cross-border, but also on the entry into the market of foreign individuals and foreign firms. Secondly, while some forms of discriminatory treatment, like taxes on foreign short-term consultants, are like tariffs in their effect, others such as burdensome licensing and qualification requirements are not. The latter are different because they affect fixed costs of entry (rather than variable costs of service provision) and because they inflict costs on foreigners in some cases without generating rents (as tariffs do).

The implications of discriminatory treatment for the pattern of trade are straightforward. Compared to a non-discriminatory regime, in any market we expect to observe a relatively higher share of services and service providers from jurisdictions that are exempted from burdensome qualification and licensing requirements. For example, the United States' decision, as part of its agreement with Canada, to exempt only chartered accountants trained in Canada from the requirement to duplicate all steps in the licensing process, can be expected to lead to an increase in the proportion of Canadian accountants practicing in the United States. Certain US states impose a shorter residency requirement on doctors trained within the United States than on foreign doctors.

The implications for policy are also fairly simple. When a country like the United States maintains certain regulations that impose a cost on foreign providers without generating any benefit (such as improved quality or revenue for the government or other domestic entities), then welfare is likely to be enhanced by eliminating such regulations even on a preferential basis.⁹ Thus, the mutual recognition agreements which the United States has concluded with some other countries in accountancy and engineering, or the lighter regulatory burden placed by some US states on other states, unambiguously enhance US welfare.

Preferential liberalization does not, however, maximize the potential gains to the United States. First of all, the presumption that the United States (or a particularly US state) will benefit from a preferential liberalization initiative is greater if agreements are not exclusionary—i.e. they do not

⁹ Note that the benefits of preferential liberalization involving tariffs are ambiguous because the gains to consumers from cheaper imports may be offset by the loss in tariff revenue. But if a regulation was generating no revenue, then there is no revenue to lose and only the benefits of cheaper imports remain.

apply restrictive rules of origin.¹⁰ That is, if the United States grants recognition to South Africa in engineering, then an individual from any other country who has qualified in South Africa must also benefit regardless of nationality. Just as in goods trade, a liberal rule of origin enables providers from other countries also to take advantage of preferential liberalization. The greatest benefits arise, however, from the elimination of unnecessary regulatory requirements for providers from all countries. Thus, US recognition agreements should cover all countries with regulations that ensure their providers meet US requirements. For example, if it can be established that India has basically the same educational and training system for engineers as South Africa, then it should also be made party to mutual recognition agreements that include South Africa, such as the Washington Accord.¹¹ The benefits to the United States come from both increased competition and greater diversity of services.

It is possible to illustrate the impact of differential requirements on foreigners at the state level in the United States thanks to the availability of detailed US census data (which, as noted above, captures permanent rather than temporary presence of foreign providers). Econometric tests show the following (see Table 2): (a) First of all, state-specific variables, like per capita income and size of the population have a significant positive influence on a foreign professionals' choice with regard to place or state of work, while the state's geographic location (whether on the coast or on the border) seems to have an influence only on engineers;¹² and (b) Secondly, after controlling for the above variables, regulations governing the recognition of professional qualifications, training and experience and the licensing requirements at the state-level are found to have a significant affect on foreign presence in the state; states with a more stringent regulatory environment have a smaller share of foreign professionals in the total number of professionals than states with more liberal regulatory environment (shown in bold letters in Table 2).

¹⁰ The 'rules of origin' currently applied in professional services trade depend on the mode of supply. With regard to the presence of natural persons, they typically relate to the nationality of the professional or to the jurisdiction in which the professional was licensed or qualified. With regard to commercial presence, they relate to who owns and/or controls the parent firm or to where the parent firm is incorporated and conducts 'substantial business operations'.

¹¹ The Washington Accord, signed in 1989, is an international agreement among bodies responsible for accrediting engineering degree programs. It recognizes the substantial equivalency of programs accredited by those bodies and recommends that graduates of programs accredited by any of the signatory bodies be recognized by the other bodies as having met the academic requirements for entry to the practice of engineering. Signatories are the relevant bodies from Australia, Canada, Chinese Taipei, Hong Kong China, Ireland, Japan, Korea, New Zealand, Singapore, South Africa, United Kingdom and the United States. Bodies from Germany, India, Malaysia, Russia and Sri Lanka hold provisional membership status as they have been identified as having qualification accreditation or recognition procedures that are *potentially* suitable for the purposes of the Accord.

¹² We see no evidence that foreign-born professionals tend to locate in regions where domestic professionals are reluctant to locate, e.g. away from the coast.

Table 2. Regression results

Dependent variable	Accountants and auditors (Column 1)	Physicians and surgeons (Column 2)	Civil, electrical and mechanical engineers (Column 3)
Constant	-0.0918* (-1.912)	-0.006 (-0.139)	-0.134*** (-4.729)
Per capita income (in \$10,000)	0.007*** (4.079)	0.005*** (3.181)	0.007*** (7.061)
Population (in million)	0.005*** (3.435)	0.004*** (3.545)	0.005*** (5.559)
Border or Coastal State Dummy	0.0169 (1.395)	-0.004 (-0.245)	0.029*** (2.867)
R1—Restriction on Residency	-0.0215** (-1.934)	-0.007 (-0.868)	0.021** (2.103)
R2—Restriction at the time of Examination	-0.0109 (-1.026)	-0.024** (-1.965)	-0.001 (-0.059)
R3—Restriction at the time of License	-0.057** (-2.043)	-0.022 (-1.335)	-0.023** (-2.048)
Civil Engineering Fixed Effects			-0.012 (-1.173)
Mechanical Engineering Fixed Effects			0.007 (0.578)
R-square	0.71	0.51	0.55
Mean of the dependent variable	8.04%	15.2%	10.8%

Note: The numbers in the bracket are *t*-statistics; ***, **, * denote statistically significant at 1%, 5% and 10% significant levels, respectively. Dependent Variable: Ratio of Foreign to Total Professionals in the United States.

Observations: 51 (50 US States + District of Columbia). Method: Weighted Least Squares (with white heteroskedasticity-consistent standard errors & covariance).

In case of accountants and auditors, we find that states which require in-state experience while applying for a Certified Public Accountants (CPA) license are likely to have 5.7% less foreign professionals than states that do not impose such a requirement (see the coefficient for variable R3 in Column 1, Table 2). The states that impose restrictions on in-state residency and experience for license and CPA certified experience are likely to have 9% less foreign professionals than states that do not impose any of those restrictions (sum of the coefficients for variables R3 and R1 in Column 1, Table 2). In case of physicians and surgeons, states that require foreign graduates to spend more years in residency program than natives to take the final professional examination, do not recognize Graduate Medical Examination (GME) completed in foreign countries (other than Canada) for credit towards license, and do not grant licenses to foreign eminent physicians, are likely to have 5% less foreign doctors than states that do not impose these restrictions (sum of coefficient for variables R1, R2 and R3 in Column 2, Table 2). Unlike accountants and doctors, the impact of state-level regulations is found to be ambiguous in case of engineers. On the one hand, states that require additional experience to appear

in the Professional Engineering (PE) examination for foreign professionals (with a degree that is not accredited by the Accreditation Board for Engineering and Technology, ABET), are found to have lower foreign presence relative to states that do not impose such restrictions; on the other hand, in-state residency requirements is found to be positively associated with foreign presence (Coefficient for variable R1 is positive, while R3 is negative in Column 3, Table 2).

V. IMPLICATIONS OF THE CO-EXISTENCE OF QUOTAS AND OTHER REGULATORY REQUIREMENTS IN THE US MARKET

The fact that more foreign professionals want to come to the United States than are admitted suggests that the binding constraint on their entry is not the other regulatory requirements but the quantitative restrictions imposed by the United States. These quantitative restrictions are implemented through the limitations on the number of specialty occupation visas (H1B) and the number of employment related Green cards. Given the binding quota, the number of foreign professionals in the US market is not affected by the regulatory requirements. Of course, if the United States were to relax the quota, then the burdensome regulatory requirement could become the real deterrent to foreign entry.

The regulatory requirements do matter even now because the cost of complying with these requirements reduces the earnings of foreign professionals. In a sense, fulfilling these requirements leads to a financial transfer from foreign professionals: to the US Government, in the form of license fees or foregone incomes, e.g., for doctors obliged to work for a certain period at relatively low public sector salaries; to US training and educational institutions, in the form of fees for courses needed to re-qualify in the United States; or to pure waste where the measure is a frictional barrier, e.g. delays in granting a license which oblige foreign professionals to remain unemployed or to accept unskilled jobs.

It is possible to obtain a rough estimate of the financial cost of the regulatory requirements on Indian professionals. Thus, on average, every year over the period 1995–2000, 1092 Indian doctors entered the US medical system (Table 3). Each incurred a cost of \$4,640 to obtain a visa, take the three steps of the professional examination and in licensing fee. Each had to go through a period of graduate medical education of between 3 and 6 years depending on the specialty and the state, irrespective of prior qualifications and experience. Then those on a J1 visa (most foreign doctors) were obliged to spend 3 years working in an underserved area at relatively low wages. Given that the average earnings of a doctor is shown by the census to be around \$125,000, the earnings foregone by a foreign doctor are likely to be at least \$100,000. The implication is that all the Indian professionals that entered in a particular year paid a regulatory tax of \$114 million.

Table 3. Estimate of the financial costs of regulations (not accounting for necessary requirements)

Profession	Number of Indian professionals coming to the US annually (average for the 1995–2000 period) (A)	Visa, examination and licensing fess paid per professional (B)	Average income foregone per professional due to differential requirements (C)	Total income/fees paid or lost by Indian professionals due to regulations (US\$ in million) (D)
Physicians and surgeons	1092	\$4,640	\$100,000	114
Civil and mechanical engineers	683	\$2,270	\$60,000	43
Accountants	518	\$5,600	\$30,000	18
Architects	350	\$3,030	\$25,000	10
Total for all professionals	10234	\$60,000–\$75,000		614–768

Similar, conservative estimates suggest that the 10,000 or so Indian professionals that entered just the four professions that we are focusing on, paid a ‘regulatory tax’ of around to \$750 million.

This estimate needs to be qualified in several respects. At least some of the regulatory requirements may be justified by the need to ensure compliance with locally desired levels of competence and to remedy deficiencies in Indian professionals’ education, training and experience. In fact, it is not just foreign professionals but also professionals from other US states who must in some cases fulfill regulatory requirements imposed by a particular US state. The heterogeneity of standards in a source country like India and the difficulty in observing true levels of professional competence, also lends legitimacy to at least some of the regulatory requirements. It is, therefore, hard to establish without further investigation the extent to which these costs are ‘excessive’. One possibility would be to determine the costs of regulatory requirements that are strictly necessary to meet legitimate regulatory objectives (along the lines discussed in Section VI). Then the difference between actual and necessary costs would provide a measure of protection.

Furthermore, the regulatory constraint is not always binding. In particular, the fragmentation of services facilitated by advances in information technology has made it possible to trade unregulated parts of services. In architecture, the preparation of basic plans and designs can be outsourced to individuals who have not been locally licensed, whereas conformity with local requirements and ultimate responsibility rests with the licensed professional. In legal services, research and documentation can be similarly outsourced, whereas representation in courts must be by a local firm. In accounting, bookkeeping can be outsourced, whereas conformity with local

requirements and ultimate responsibility rests with the local professional. Thus, the market for 'intermediate' services is increasingly contestable even though entry into the 'final' stage is still affected by regulatory requirements.

How far can recourse to local 'final' services help overcome regulatory barriers? To a large extent if these services are supplied efficiently and competitively. The efficiency condition relates to whether the host country actually has a comparative advantage in the production of final services. The competitiveness condition would be fulfilled if the host country imposed no unnecessary barriers to entry into the final stage. If either condition is violated, the regulatory obligation to use local final services creates an excessive wedge between international service providers and local consumers, potentially hurting both.

VI. PRIORITIES FOR INTERNATIONAL NEGOTIATIONS AND DOMESTIC REFORM

Since, as noted above, the binding constraint on the entry of foreign professionals into the United States are quantitative restrictions, implemented in particular through limitations on specialty occupation (H1B) visas, the highest priority in the negotiations for exporting countries must be to relax these quotas and to streamline visa issue procedures for professionals. As far as regulatory impediments faced by foreign professionals are concerned, the fundamental problem is the non-recognition of their qualifications, training and experience. All the other problems stem from this: the costly and time-consuming evaluation of prior qualifications, undertaking costly examinations, taking courses that at least in part repeat prior education, undergoing training that duplicates at least in part prior training, acquiring more experience than their US counterparts, with the added burden that all these requirements can in certain cases only be met in US locations, by obtaining US visas. In these circumstances, exporting countries' strategy must be:

- To secure as far as possible recognition for existing qualifications, training and experience.
- To ensure that any additional requirements can be fulfilled in the least burdensome manner.

A. Bilateral approaches

All existing mutual recognition agreements in the world today are bilateral or concluded among a small group of countries. It is inconceivable that a forum with such diverse membership as the WTO can in the foreseeable future deliver meaningful mutual recognition agreements. How difficult it can be to achieve mutual recognition in professional services among a group of even relatively similar countries is demonstrated by the disappointing

experience of the European Union. The most recent initiative could only be accepted once the critical 'country of origin' principle was weakened. Under this principle, a professional licensed in any member country would have been allowed to practice in any other country of the European Union, which would have implied full de facto mutual recognition.

There is no doubt that ultimately liberalization depends on full recognition and that countries like India must continue to seek recognition from major trading partners in a bilateral context. But past experience does not provide basis for optimism for this approach. India's overtures in engineering (seeking membership of the Washington Accord), for example, have not met with success.¹³ The key problem in striking a bargain is that foreign professionals have so far had limited interest in securing access to the Indian market, and have felt threatened in their own markets, because of the high level of competitiveness of Indian professionals. And the power of organized professional associations has so far trumped the benefits to diffuse consumer interests. But the situation may be changing. First, India's own economic growth and willingness to contemplate allowing greater access to the protected Indian market to foreign professional *firms* may have created greater commonality of interests. Increased incomes and increasing diversity of preferences may also create the possibility of foreign *professionals* serving some segments of the Indian market. Second, certain developments are leading to the mobilization of consumer interests within the United States. The increased demand for accountants in the wake of the Sarbanes-Oxley Act has induced the large accountancy firms lobby for more liberalized access to the US market. Similarly, the soaring cost of health-care has created an opportunity to mobilize hospitals and health maintenance organizations to lobby for increased trade in health care through all modes.

The second and more legitimate impediment to recognition is the heterogeneity of standards within India which has undermined the case for securing recognition on a national basis. In effect, poor quality institutions penalize the high quality institutions. India must certainly contest excessively burdensome regulations in the US market. But it must also reform its own regulations. Here it may well face a dilemma. Setting domestic standards at a level that enhances the case for foreign recognition may lead to standards

¹³ According to information obtained from the Indian Ministry of Commerce, the major professional bodies in India covering chartered accountants, doctors, dentists and architects have not entered into MRAs with their counterpart bodies in any other country. The major initiative in this field has been with Singapore bodies after the signing of the Comprehensive Economic Cooperation Agreement in 2006. Although the Singapore body of doctors has accorded recognition suo motu to medical degrees obtained from the All India Institute of Medical Sciences (AIIMS) and Christian Medical College (CMC), Vellore they have been reluctant to agree to a broader MRA. In the case of architects, dentists, nurses and accountants, discussions among the bodies of the two countries are still continuing. As mentioned above, India has provisional membership of the Washington Accord on engineering qualifications.

that are inappropriately ‘high’ from a domestic perspective. The tension will be greatest in areas like medicine where sections of the domestic market are underserved. In these circumstances, dual or multiple standards may be a solution. That is one standard is set at a level that creates a credible case for foreign recognition, and another at a level that is appropriate to domestic needs. This would eliminate the conflict arising from trying to meet two objectives with one standard. Furthermore, by accepting a lower standard, a segment of the population would receive the benefit of actual rather than notional service—because there is a lower probability of the provider emigrating abroad or to an urban area. At the same time, ‘export quality’ standard(s) (assigned by examination or institution) can be targeted at specific export markets, and liberated from the need to be locally appropriate. The feasibility and desirability of such an approach, from both the political and regulatory perspective, and the design of domestic regulatory reform, must be a key area for future research.

B. Multilateral approach

Given the difficulty of securing recognition bilaterally, parallel efforts need to be made in the current negotiations under the General Agreement on Trade in Services (GATS) to strengthen commitments and rules on trade in professional services. It is difficult to judge how fruitful such efforts will be given the reluctance of a number of influential WTO Members to assume much deeper disciplines on domestic regulations. Nevertheless, the following avenues are available:

- (a) Leveraging mutual recognition agreements concluded by partner countries through the MFN principle.
- (b) Securing and enforcing national treatment commitments by trading partners.
- (c) Negotiating deeper disciplines on domestic regulations either under Article VI:4 of the GATS or in the form of additional commitments under Article XVIII of the GATS.

- (a) *Leveraging mutual recognition agreements (MRAs) concluded by partner countries through the MFN principle.*

Even with no new multilateral commitments or rules, a country like India may still have an avenue to challenge restrictive regulations faced by its professionals by invoking the fundamental GATS provision of MFN (stipulating that a country may not discriminate between trading partners) as embodied in the GATS provision on recognition agreements (Article VII). This opportunity arises because some of its trading partners have already concluded mutual recognition agreements in professional services. For example, the United States has made four notifications (required under Article VII.4

of the GATS): on accounting with Canada and Australia; on architecture with Canada; and the Washington Accord, on engineering with Australia, Canada, Hong Kong, Ireland, New Zealand, South Africa and the United Kingdom.

However, some foreign professionals interviewed for this study expressed the concern that because the MRAs have been concluded by entities (such as the American Institute of Certified Public Accountants (AICPA) and the Accreditation Board for Engineering and Technology (ABET)) that are neither Government entities nor do they seem to be exercising powers delegated by the Government, they may escape GATS disciplines. Countries like India should, therefore, press for greater clarity in the applicability of Article VII to MRAs concluded by non-Governmental entities which have a de facto monopoly on accreditation.

Another potential difficulty is that mutual recognition of qualifications is also mentioned as an element of several regional integration agreements, notified under GATS Article V:7(a). These agreements include the one establishing the European Union, agreements between the European Union and neighboring countries, and the Closer Economic Relations Treaty between Australia and New Zealand. This raises the question of whether MRAs concluded in the context of a regional integration agreements are still subject to the disciplines in Article VII. One view may be that Article V provides an exception to the fundamental non-discrimination (MFN) obligation in Article II and therefore an exemption also to similar obligations contained in other GATS provisions, including Article VII. Alternatively, it could be argued that all MRAs, regardless of whether they are concluded by parties to a regional integration agreement or other Members, are covered by Article VII and its disciplines cannot be circumvented by appealing to Article V. It would seem to be in the interest of countries like India to push for the latter interpretation.

(b) *Securing and enforcing national treatment commitments by trading partners.*

The cornerstone of the multilateral trading system is the national treatment obligation, GATS Article XVII, which requires Members to offer no less favorable treatment to foreign services and service suppliers than that it accords to its own like services and service suppliers. In goods, under GATT 1994, national treatment is a general obligation not subject to specific commitments. In services, under the GATS, Members can choose whether to make such a commitment in a particular sector under a particular mode. None

of the four large Members of the WTO, Canada, EU, Japan and United States have made commitments to guarantee national treatment under mode 4 (presence of natural persons) in any of the four professions being studied here. National treatment is potentially the most important guard against regulatory protectionism. If a country retains the right to discriminate, then negotiating an elaborate set of rules for domestic regulations would be like creating a building with no edifice. Hence, in addition to pushing for greater market access in professional services, the highest priority in the current negotiations would be to secure commitments from its main trading partners on national treatment.

But the application of national treatment to licensing and qualification requirements is not straightforward, and if Members are to be persuaded to make new commitments, and these commitments are to lead to a more predictable policy environment, then WTO Members need to agree on how the provision is to be interpreted. In order to see the difficulty, consider the hypothetical case of a medical doctor from X who arrives in Y with a view to practicing medicine there. To place the problem in a stark context, imagine that the Y licensing authorities ask him to re-qualify from scratch in order to have the right to practice. Would such a requirement be consistent with national treatment? The national treatment obligation requires that foreign services and service suppliers receive no less favorable treatment than the like national services and suppliers. If we apply the traditional GATT/WTO two-step approach of first establishing likeness and then determining whether 'like' foreign suppliers are receiving less favorable treatment, then we end up in a legal cul-de-sac. If a doctor from X is deemed to be like a doctor from Y, then Y would not have the right to impose even a slightly greater burden on the X doctor. This position is hardly sustainable, and could with some justification be seen as a threat to regulatory autonomy. If, on the other hand, a doctor from X is deemed not to be like a Y doctor, the national treatment discipline simply does not apply, and the licensing authorities in X are given a free rein to do whatever they want. This is also an unsatisfactory outcome, as it may all too easily lead to the (deliberate) enactment of needlessly burdensome regulatory requirements and render the national treatment provision meaningless.

There is a solution to this problem which involves, on the one hand, accepting the right of regulators to pursue a legitimate objective, but on the other hand, ensuring that the objective is not pursued in a manner which unfairly discriminates against foreigners. In effect,

the question of whether two services or service suppliers are treated differently must not be separated from how they are treated differently.

A two-stage test can be suggested:

- (i) Stipulate an a priori definition of like services based on similarity of end-uses, and a clear relationship of substitutability in consumption and direct competition, based on market conditions. The criterion of end-uses serves to demarcate the class of services or service suppliers within which a particular measure may give rise to protection. For example, a higher regulatory burden on doctors than on accountants would clearly not arouse concern in the same way that a higher burden on accountants qualified in one country rather than another would. But, even within the class of similar end-use, a criterion is needed to distinguish between situations in which discriminatory effect is an incidental consequence of a domestic measure and those in which it is not.
- (ii) If a Member takes measures that distinguish between what could be regarded as a priori like services or service suppliers, then that Member must demonstrate that any resultant unfavorable treatment of foreigners is necessary. In other words, that the Member could not have achieved the stated objective through any other reasonably available measure which did not disadvantage foreign services or foreign suppliers, or did not disadvantage them as much.

This approach represents a middle road between extreme intrusiveness and extreme permissiveness. It is based on the reasonable question: what is it that the Y licensing authorities really need to do to ensure that foreign doctors do not constitute a threat to the health of Y citizens? There are, in principle, a range of instruments which could achieve the objective of ensuring adequate quality of medical services. The best instrument would be one which achieved the objective of remedying the problem of asymmetric information about foreign suppliers' abilities at least cost: say through a comprehensive test of competence (possibly coupled with a brief period of internship). Even if Country X's doubts about foreign qualifications are accepted, the instrument chosen, full training in Y, modifies conditions of competition excessively even in the light of the objective, which could be attained through a less discriminatory instrument. Thus, any reasonable application of national treatment will unavoidably pose an excessiveness test in order to determine whether there is *de facto* discrimination. Note that this is quite different from imposing a 'necessity test' on measures that are not discriminatory any way, an issue we address in the next section.

- (c) *Negotiating deeper disciplines on domestic regulations either under Article VI:4 of the GATS or in the form of additional commitments under Article XVIII of the GATS.*

The Council for Trade in Services is currently in the process of negotiating horizontal disciplines on domestic regulations.¹⁴ But these negotiations have so far made little progress, largely due to the reluctance of a number of countries to assume any further disciplines in this area. Chile, India, Mexico, Pakistan and Thailand have pushed for stronger rules, and made a submission on 'Proposed Disciplines on Qualification Requirements and Procedures' (WTO, 1 May 2006). More recently, the Chairman of the Working Party on Domestic Regulation informally circulated Draft Disciplines on Domestic Regulation Pursuant to GATS Article VI:4 (18 April 2007). This draft and the overall political context suggest that the prospects for developing deep disciplines are dim. Nevertheless, given the nature of the regulatory impediments identified in the US market, and the reasonable presumption that foreign professionals face similar impediments in other markets, we would suggest building on existing and proposed disciplines in the following way.

- (i) *A necessity test?*

First of all, it does not seem either feasible or desirable at this stage to create a new necessity test for non-discriminatory measures on the lines of the pilot disciplines for the accountancy sector.¹⁵ First of all, de facto discriminatory measures probably account for a large proportion of trade-friction cases. The empirical significance of strictly non-discriminatory measures that impede trade more than they should has yet to be clearly established.

We conjecture that with regard to licensing and qualification *requirements*, a necessity test under VI:4 may go too far; with regard to licensing and qualification *procedures*, a necessity test may not go far enough. Note an important difference: under XVII, the excessiveness test described above would ask if the regulatory distinction between services or service suppliers was

¹⁴ Cross-sectoral issues arising in designing disciplines for domestic regulations are discussed in Aaditya Mattoo and Pierre Sauve, *Domestic Regulation and Services Trade Liberalization* (Oxford University Press and World Bank, Washington, DC 2003).

¹⁵ See Carlo Gamberale and Aaditya Mattoo, 'Domestic Regulations and Liberalization of Trade in Services' in B Hoekman, A Mattoo and P English (eds), *Development, Trade and the WTO: A Handbook* (ch 29 World Bank, Washington, DC 2002) and Claude Trollet and John Hegarty, 'Regulatory Reform and Trade Liberalization in Accountancy Services' in A Mattoo and P Sauvé (eds), *Domestic Regulation and Service Trade Liberalization* (The World Bank and Oxford University Press, Washington, DC 2003) 147–66.

excessive; under VI:4, a necessity test would ask if the measure itself was necessary even though it did not discriminate in any way. Given that any protectionist effect of regulatory requirements will have already come under rigorous scrutiny under Article XVII, the institution of a necessity test for strictly non-discriminatory measures must be based on: (a) establishing empirically that strictly non-discriminatory requirements significantly impede trade, and (b) demonstrating credibly that such a test can be applied in a way that does not threaten legitimate regulatory autonomy.

A deliberately far-fetched example helps to highlight some of the problems that could arise in applying a necessity test to non-discriminatory regulatory measures. Imagine that a WTO member required all taxi drivers to be certified cardiologists because it was socially unacceptable in that country for people to die of heart attacks while trapped in traffic jams. The requirement is highly demanding but it is strictly non-discriminatory. Furthermore, given the ambitious objective, the measure is probably necessary to achieve the objective. Still, one argument could be that a cost-benefit assessment reveals that the measure is excessively burdensome because the additional benefit comes at a huge cost. Could WTO rules prohibit it on these grounds? We doubt it because that would involve the WTO questioning the absolute level of regulatory objective that a country chooses to pursue. Surely questioning the objective would be considered unduly intrusive.

In the case of licensing and qualification procedures, as opposed to substantive requirements, there would seem to be less danger that the application of a necessity test is over-intrusive. Eliminating delays, cumbersome approval procedures and multiplicity of approving agencies is hardly likely to compromise the attainment of regulatory objectives. The problem is that while a necessity test provides a valuable chapeau, it may not on its own be an effective scourge of burdensome procedures. As in the case of a range of WTO agreements, such as the import licensing agreement, ensuring that procedures do not in themselves become an impediment to trade requires detailed and targeted procedural rules—of the kind that have been developed for the accountancy sector.

- (ii) *Ensuring fairness and objectivity in both the evaluation of competence and the recommendations for remedial action*

Note that the main problem in the US market is that none of the Indian degrees are technically recognized by the state boards as

substantial equivalent to American degrees, and a lower or zero weight is attached to training and experience obtained outside the United States. Perceived deficiencies in general education must in some cases be addressed by either working for extra number of years or by taking other courses in the United States. For each of the four professions studied here, all examinations, except the initial licensing examinations for doctors, are held inside the United States creating the need for foreign professionals to obtain visas and travel to the United States even though all the examinations except the USMLE Clinical Skills test for Doctors are computer adaptive and can be held at international locations.

Building on the existing requirement under GATS Article VI:6 to institute procedures to verify the competence of foreign professionals, at least industrial country Members of the WTO should be required to justify the denial of recognition to foreign professionals on objective grounds and identify precisely why they are not deemed competent to practice. This task may be entrusted to the professional regulator or a special body created for the purpose. The key objective of this rule would be to enforce the suggested interpretation of national treatment presented above, in particular the second part of the proposed test, and place the burden of proof on the host country to justify the discriminatory treatment of a priori like service suppliers.

In so far as there are legitimate reasons to doubt the competence of a foreign provider, there would be a presumption in favor of a test of competence as a means of assessing compliance with local requirements. This would strengthen the principle articulated above in the context of national treatment that the least trade restrictive means be used to address perceived differences between national and foreign services providers. Where there are objectively verifiable gaps in education or training, then a foreign service supplier could be required to fill these gaps.

Re-qualification, and substantial repetition of training and experience should only be required if it can be demonstrated to be necessary to ensure the desired quality of a service. Similarly, local residency requirements should be no more burdensome than needed to ensure the desired quality of service and consumer protection. Finally, it should be possible to take any of these remedial actions, including examinations, filling gaps in education, training and experience in the home country of the service provider unless it can be demonstrated that local fulfillment is necessary to ensure the quality of a service.

(iii) *Other procedural disciplines*

Another problem in the US market is that each state has a different set of rules and the information regarding various licensure processes in different states is spread across the codes of respective state boards, the sites of the state boards, sites of the evaluator, sites of the testing agency, and sites of the respective colleges and various other associations and bodies.¹⁶ Obtaining and compiling this information poses a challenge for an applicant. At least industrial country Members should set up a 'one-stop website' for each profession where a foreign professional can obtain all the relevant information on licensing and qualification requirements and procedures.

Furthermore, for the purpose of licensure the State Boards ask the candidates to undertake evaluation of their Degrees. In many cases the procedures for evaluation are costly, time-consuming and non-transparent. Members would ensure that verification and assessment are carried out efficiently and transparently and the processes do not themselves constitute an unnecessary barrier to foreign professionals. Quite apart from the difficulty of obtaining a visa to provide services in the United States (an issue that has been discussed in a previous policy note), the need to fulfill qualification and licensing requirements locally interacts with the restrictive visa regime to create a host of problems for foreign professionals. At least industrial countries should make it possible for examinations to be held in the home countries of foreign professionals or in countries that have less restrictive visa regimes than that of the United States. Where coming to the United States is necessary, a candidate who needs to obtain a visa to fulfill a qualification or licensing requirement or both should be granted one. For doctors the restrictive J1 visa should be replaced by a more efficient and equitable visa, and the problem of providing medical services in underserved areas should be addressed through non-discriminatory measures.

The qualification and licensing procedures in each profession are costly. There is an even greater cost in terms of earnings foregone during the time that it takes a foreign professional to re-qualify. Members shall ensure that fees charged are no higher than those necessary to cover the administrative costs of services, and the licensing process is no longer than that necessary to ensure the competence of foreign professionals.

¹⁶ Article VII of the GATS on mutual recognition agreements and many preferential trade agreements allow variable geometry outcomes between foreign (unitary) countries and sub-national governments so as to deal with sub-national impediments to licensing. Thus the NAFTA foresees the possibility of an MRA between Mexican (nation-wide), Alberta and Iowa-licensed engineers or accountants. This is potentially a useful way to overcome variance in state-level licensing standards.